THE SOCIAL VALUATION OF SKILLS. AN ANALYSIS THROUGH LINGUISTIC WORK IN THE NEW ECONOMY

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UNIVERSITAT ROVIRA i VIRGILI

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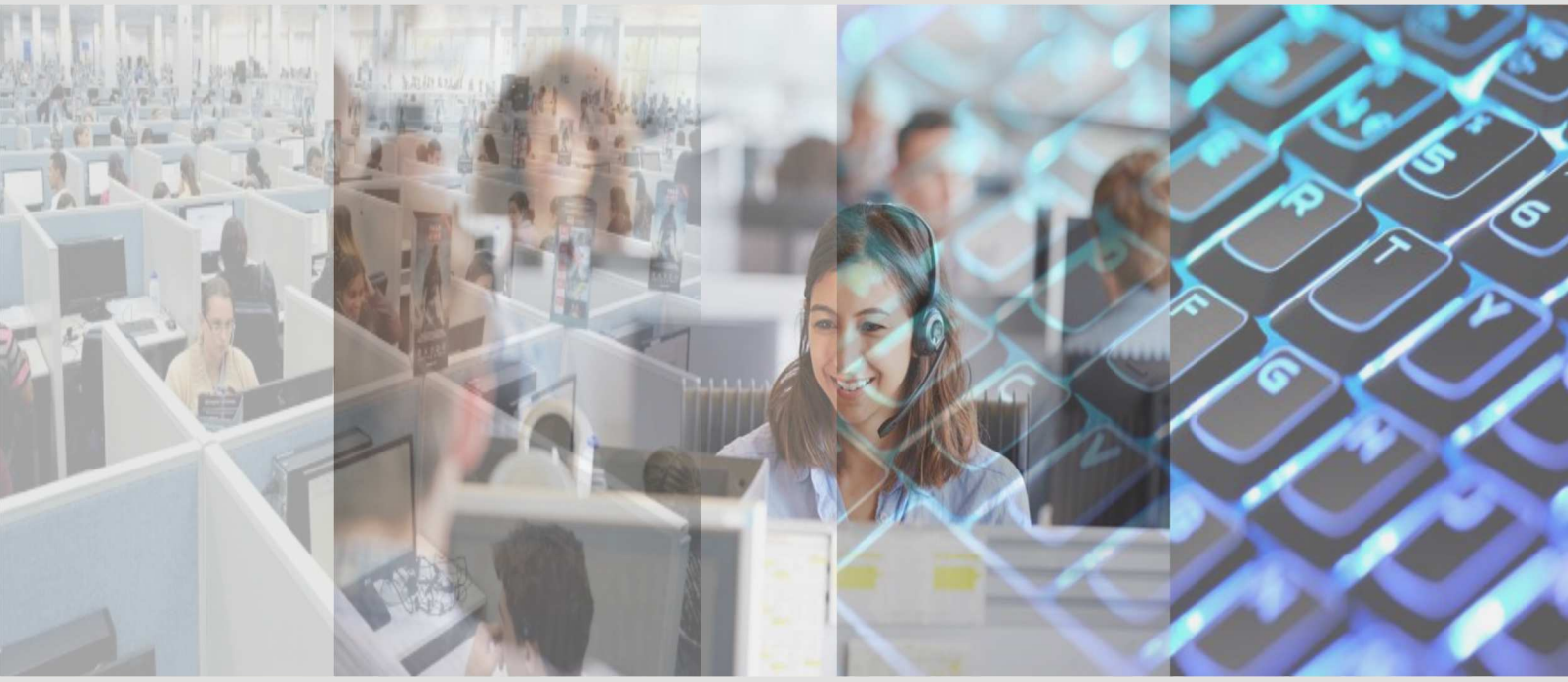
JOSEP UBALDE BUENAFUENTE



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The social valuation of skills. An analysis through linguistic work in the new economy

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Supervised by

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I STATE that the present study, entitled *The social valuation of skills. An analysis through linguistic work in the new economy*, presented by Josep Ubalde Buenafuente for the award of the degree of Doctor, has been carried out under my supervision at the Department of Business and Management of this University, and that it fulfils all the requirements to receive the European/International distinction.

Reus, June 6th 2019

Doctoral thesis supervisor

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Abstract/Resum/Resumen

Abstract: Several debates on how skills should be conceptualised and valued have arisen from changes in the content and relevance of them in the labour markets of the new economy. In mainstream economics, skill is one of the main ingredients of human capital and its value is determined by the supply-demand dynamic of the labour market. According to heterodox views, however, skills are socially constructed. The value of skills results from political negotiation, reflecting the power and status of diverse interest groups, as well as the predominant ideologies of society. The dissertation focuses on the valuation of linguistic skills, a cross-cutting kind of skill that is basic for both cognitive and interactive work in the new economy, but which is involved in controversies regarding the devaluation and deskilling of workers and occupations. From a mixed methods approach, the dissertation presents three papers that study the impact of institutionalized ideologies on linguistic skills valuation. The first paper analyses how the attitudes towards immigrants across European countries is related to the devaluation of their foreign language knowledge. The second paper test whether those linguistic skills which are devaluated for their traditional association with women's work, low-status service sector jobs and ethnicity are unrewarded across occupations in the US labour market. The third and final paper describes the relevance of linguistic work in defining job categories in the call centre sector in Spain and the struggles between employers and workers regarding the valuation of language skills. The thesis concludes that ideologies and social institutions influence the valuation of linguistic skills above and beyond the market dynamic. A serious consideration in political and social action of such ideologies and institutions is required in order to fairly value workers skills in the new economy.

Abstract/Resum/Resumen

Resum: Els canvis en el contingut i la rellevància de les competències en els mercats laborals de la nova economia ha generat diversos debats respecte a la seva conceptualització i valoració. Des del corrent principal de l'economia, la competència és considerada un dels principals ingredients del capital humà, el valor del qual està determinat per la dinàmica de l'oferta i la demanda en el mercat de treball. En canvi, des del punt de vista heterodox, les habilitats estan construïdes socialment. El valor de les competències resulta de la negociació política y reflecteix el poder i estatus de diversos grups d'interès així com les ideologies predominants en la societat. La tesi es centra en la valoració de les competències lingüístiques, un tipus d'habilitat transversal que és bàsica per al treball tant cognitiu com interactiu en la nova economia, però que està involucrada en algunes controvèrsies en relació a la devaluació i la desqualificació de treballadors i ocupacions. Des d'un enfocament de mètodes mixtos, la tesi presenta tres articles que estudien l'impacte de les ideologies i la seva institucionalització en la valoració de les competències lingüístiques. El primer dels articles analitza com les actituds cap als immigrants en diversos països europeus es relacionen amb la devaluació dels seus coneixements de llengües estrangeres. El segon article prova si aquelles habilitats lingüístiques teoritzades com a devaluades degut a la seva associació tradicional amb el treball femení, el sector de serveis de més baix estatus i l'origen ètnic, estan o no recompensades en el mercat laboral dels Estats Units. L'últim article descriu la rellevància del treball lingüístic en la definició de categories laborals en el sector dels *call center* a Espanya i en les lluites entre ocupadors i treballadors en relació amb la valoració de les competències lingüístiques. La tesi conclou que la valoració de les competències lingüístiques està influenciada per ideologies i institucions socials que van més enllà de la dinàmica d'oferta i demanda en el mercat. Aquestes ideologies i institucions han de considerar-se seriosament des de l'acció política i social per a una valoració justa de les competències dels treballadors de la nova economia.

Resumen: Los cambios en el contenido y relevancia de las competencias en los mercados laborales de la nueva economía ha generado diversos debates con respecto a su conceptualización y valoración. Des de la corriente principal de la economía, la competencia es considerada uno de los principales ingredientes del capital humano cuyo

valor está determinado por la dinámica de la oferta y la demanda en el mercado laboral. En cambio, desde el punto de vista heterodoxo, las competencias están construidas socialmente. La valoración de la competencia es resultado de la negocian política y refleja el poder y estatus de diversos grupos de interés, así como las ideologías predominantes en la sociedad. La disertación se centra en la valoración de las competencias lingüísticas, un tipo de habilidad transversal que es básica para el trabajo tanto cognitivo como interactivo en la nueva economía, pero que está involucrada en algunas controversias en torno a la devaluación y la descualificación de trabajadores y ocupaciones. Desde un enfoque de métodos mixtos, la tesis presenta tres artículos que estudian el impacto de las ideologías y su institucionalización en la valoración de las competencias lingüísticas. El primero de ellos analiza cómo las actitudes hacia los inmigrantes en diversos países europeos se relacionan con la devaluación de sus conocimientos de lenguas extranjeras. El segundo artículo prueba si aquellas habilidades lingüísticas teorizadas como devaluadas debido a su asociación tradicional con el trabajo femenino, los empleos del sector de servicios de bajo estatus y el origen étnico, están o no recompensadas en el mercado laboral de los Estados Unidos. El último artículo describe la relevancia del trabajo lingüístico en la definición de categorías laborales en el sector de los *call center* en España y en las luchas entre empleadores y trabajadores en relación con la valoración de las habilidades lingüísticas. La tesis concluye que la valoración de las habilidades lingüísticas está influenciada por ideologías e instituciones sociales que van más allá de la dinámica de oferta y demanda en el mercado. Dichas ideologías e instituciones deben considerarse seriamente des de la acción política y social para una valoración justa de las competencias de los trabajadores en la nueva economía.

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Chapter 1 Introduction

The concept of skill receives great attention in both the academic arena and on the political agenda. Labour market agents, trade unions, employers and governments, are concerned either with supply and demand for skills. This is because skill has been considered one of the main sources of value creation and labour market segmentation (see OECD, 2016a). In the new economy, two main labour processes contribute to intensifying the concerns and debates around skills. Firstly, there is a process of flexible specialization and informationalism. High-tech workplace environments place a premium on a range of advanced technical and cognitive skills (Castells, 2000). Economists refer to "skill-biased technological change" as the process by which technology substitutes routine work and complements highly skilled work (Autor, Levy and Murnane, 2003). Secondly, there is a change from a "high volume" to a "high value" economy. Enterprises response to market saturation by using symbolic resources to add value to standardized products or services (Reich, 1992). With this, comes the need for employees with the requisite of cognitive skills, and especially "soft" or interactive skills to effect positive interaction with customers and clients (Korczynski, 2005; Gatta, 2009).

These labour processes have led to several debates regarding the conceptualisation and valuation of skills. In mainstream economics, skill is one of the main ingredients of human capital, an individual asset which is valued by rational actors in the labour market (Beker, 1964). The value of skills of workers and occupations is thus the result of a dynamic process of supply-demand. Due to the skill-biased technological change of the new economy's labour market, difficult-to-automate skills should result in higher wages (the reverse being true for skills easily substitutable by technology). However, according to heterodox views, this is a simplistic and incomplete understanding. Sociologists argue that skills are socially constructed and politically negotiated over time, reflecting the power and status of diverse interest groups. Some authors have argued that soft skills, as opposed to hard skills, are unrecognised and undervalued because particular

combinations of ideology and power (England, Budig, and Folbre, 2002; Hampson and Junor, 2015). Soft skills are also prone to being related to ethnic, racial and gender discrimination (Moss and Tilly, 2001, p. 85-155; Grugulis and Vincent, 2009, Holbrow, 2018). Moreover, labour process theorists argue that new technologies, rather than enhancing the skills and wages of workers, led to deskilling and loss of discretion, especially remarkable problems in jobs requiring soft skills (Taylor and Bain, 1999; Ikeler, 2016).

This dissertation contributes to the debates on the valuation of skills. Specifically, the research analyses the valuation of linguistic skills, which has become fundamental in work processes of the new economy. Linguistic skills are defined as the collection of skills, abilities and knowledge, of which the mastery of the linguistic code is the essential part. They involve bi/multilingual skills, but also communicative abilities or simply literacy. The thesis argues, and provides empirical evidence, that institutionalized ideologies influence the valuation of linguistic skills beyond market supply-demand dynamic. Such influence led to different valuation of workers and occupations, and therefore to different wages and status based on skill.

Linguistic skills are at the centre of the informationalism and globalisation work processes of the new economy. The spread of ICT, the internationalization of markets, the added value of symbolic resources and the growth of the service sector all involve an increasing need for language. Linguistic skills have a role as inputs to, or outputs of, labour and, as such, have become a basic tool for both managing and producing information and knowledge. Moreover, the transmission of information in the globalised world requires working with several languages and so dealing with linguistically diverse clients, providers, and/or co-workers (Harris, 1998; Dhir, 2005; Grin, Sfreddo and Vaillancourt, 2010; Heller, 2010). This makes the study of linguistic skills in the labour processes of the new economy of great importance.

The relevance of focusing on linguistic skills is even greater considering the controversies raised in the literature regarding the valuation of such skills. In the first place, language diversity is deployed in the labour market both as a kind of human capital

and as an ethnic or racial marker. Foreign language knowledge is, in this sense, a controversial skill which has been theorised as being devalued when associated with race or ethnicity. Quantitative studies point to the possible devaluation of the language of immigrant workers. In the United States and Canada (Pendakur and Pendakur, 2002; Shin and Alba, 2009; Alarcón et al., 2014), despite the need of bilingual workers in the globalized economy, there is evidence of a lack of due reward for the foreign languages of immigrants. In the second place, there is another controversy in the literature regarding the "soft" nature of linguistic skills. Some authors have noticed that there is a lack of recognition and valuation of linguistic skills. This is specially the case of communicative abilities and foreign languages competence, which are halfway between technical and soft skills. Occupations where these linguistic skills are the most important requirement would be low rewarded. This is the case of call centres or tourism industries (i.e. telemarketers, guides, etc.) where language skills have little or no reward despite their requirement for work performance. Employers recruit and made use of workers with such skills without compensating for them (Duchêne, 2009; Alarcón and Heyman, 2013). In the third place, there is the controversy regarding the standardization of linguistic work. This issue has been specially analysed in the case of call centres, where scripts imposed "top-down" are coupled to high-tech monitoring, which ensures workers meet the prescribed standards (Taylor and Bain, 1999; Cameron, 2000). Call centres has been thus generally considered as Taylorist communication factories where workers are deskilled and alienated.

The controversies regarding the valuation of linguistic skills are at the centre of each of the three papers of this dissertation. Such papers analyse how the valuation of linguistic skills is influenced by social ideologies and their institutionalization (either as social norm or regulation), and how this institutionalization is interpreted and negotiated by the main actors in the labour market. Despite the three papers exploring the underlying question of linguistic skills valuation, they are also independent pieces with a distinct object of study and contribution. Because the valuation of skills is produced at different levels, e.g. the worker, the job or the society at large (Littler, 1982; Cockburn, 1983), each paper focuses on a different level of analysis. Taking into account the differences

in the object of study and the level of analysis, the methodology notably differs between the three papers too. The dissertation can thus be considered a mixed method study (Bryman, 1992; Creswell, 2009). It combines quantitative and qualitative methods in order to adapt to the different requirements of each study.

After an initial exposition of the motivation of the study and the current debates around skills valuation and linguistic work controversies in Chapter 2, the three research papers are presented. Chapter 3, "Discrimination and devaluation of immigrants: The role of attitudinal context" analyses the impact of cultural openness towards immigrants on the immigrant-native occupational status gap and on the comparative advantage of their foreign language skills. Because previous research in social science has evidenced the existence of discriminatory behaviours in the labour market, it is hypothesised that immigrants suffer a disadvantage, including a devaluation of their human capital (such as their foreign language skills). It is also hypothesised that the extent of the disadvantage varies according to the attitudinal context or the openness towards immigrants in the social environment. These hypotheses are tested by using combined data from the Adult Education Survey and the European Social Survey and by analysing such databases through country fixed-effect regressions. The results indicate that immigrants are at a disadvantage and that their languages are less valued in comparison to natives. The disadvantage goes against the predictions of human capital, as does the significant effect of attitudinal context (openness towards immigrants) in the reduction of these disadvantages.

Chapter 4, "Well paid or unrewarded? The payoff for linguistic skills in the new economy" changes the focus from worker skills to occupational skills. More specifically, it analyses how workers in an occupation are paid according to the linguistic skills it requires. Because linguistic skills are one of the most difficult human capacities to automate, skill-biased technological change advocates theorise an increase of wages in language-intensive occupations. However, critical views suggest that, despite the need for language in labour processes, some linguistic skills may go unrewarded because of the effects of ideological and social institutions. Communication abilities and foreign language knowledge are skills associated with femininity, which are invisible as soft

skills in interactive service jobs and that are naturalised because language is viewed as a natural human capacity. Given the theoretical centrality of language skills in the new economy's productive processes, an analysis of linguistic skills valuation should be made. In this regard, a complex measurement of linguistic skills requirements is carried out in this chapter, which allows a closer examination of their occupational rewards. The analysis of occupational and individual data from O*NET and the Current Population Survey shows that, in contrast to neoclassical economic theory predictions, those potentially undervalued language skills are unrewarded and or penalized. These results suggest further political attention given the large number of workers who may be unrewarded due to the devaluation of new skills in the informational age.

Chapter 5, "Recognition of language work. The case of call centres in Spain" changes the focus again, in this case analysing skills valuation at the industry or sector level. It offers a more relational perspective of linguistic skills valuation in the context of collective bargaining. Previous research has shown that the processes of informationalism and globalisation have generated a great need of linguistic work and the associated skill sets. This led employers to standardize work in sectors intensive in this kind of work for the purpose of efficiency and gain more benefits. However, the effect of standardization on the recognition of linguistic skills is a little-studied phenomenon. This chapter analyses interviews with workers and managers from three major call centre platforms in Spain regarding the recognition of language work. The results show that negotiations about the recognition of linguistic skills pivoted around two bonuses in collective agreements: the "language knowledge" bonus and the "telephone manager" bonus. Whereas the first does not imply a better job category for knowing languages, the second entails a higher status related to linguistic or communicative autonomy. Workers and unions struggle for better rewards for linguistic skills and contest the views of employers about who may be considered a communicative autonomous worker.

The dissertation concludes with Chapter 6, where the results of the three papers about linguistic skills valuation are summarized. Several social implications and guidelines for political intervention are also discussed, as well as future lines of research regarding the

three major themes of the thesis, that is: linguistic work, skills valuation, and ideological-institutional effects on labour conditions.

Chapter 2 Researching the valuation of linguistic skills

This chapter outlines the theoretical and methodological framework in which the three research papers of the thesis are framed. Based on previous literature, the chapter firstly explores the questions of why some individuals are better rewarded for their skills and why the skills required in some occupations led to higher wages. Secondly, the importance of studying language work in the context of the new economy is discussed, emphasising the potential of language for productivity and the controversies linked to the valuation of linguistic skills. Finally, this chapter presents the methodological challenges that entails a research focusing on linguistic skills valuation. Such challenges rest on the difficulties to gather the different understandings or paradigmatic views of previous research, and specifically the different conceptualisation and measurement of the very concept of skill.

2.1 The valuation of skills

The concept of skill becomes highly relevant in the new economy[1]. Throughout the OECD countries, a general consensus exists on the importance of skills as a lever to boost employee wages, firm productivity, and national growth (see, for example, OECD 2016a). New technologies replace work that can be automated and enhance work that requires complex cognitive, communicative and creative tasks (Castells, 2000). Economists call this process "skill-biased technological change" (Autor, Katz and Kearney, 2008). It implies an increase in the demand for skilled workers that exceeds

[1] The term "skill" used throughout the dissertation encompasses the broad set of skills, abilities and knowledge, and it can be interpreted as a synonym of "competency".

the available supply, increased remuneration for the holders of relevant skills, and consequent inequalities between highly skilled and unskilled workers.

In the new economy, manufacturing industries are being replaced by service and knowledge industries, where wealth is created by the manipulation of intangible inputs to produce intangible outputs. A significant quantitative growth of service industries and occupations can be observed statistically. The United States Bureau of Labour estimates a major concentration of employment in the care, business, and leisure industries for 2016, and predict a continuing increase for them over the next ten years (US Bureau of Labour, 2018). Similarly, according to Eurostat, the European Union service industries have experienced a major increase during the last ten years. Administrative, technical, nurturing, and customer service activities are those with a higher increase of workers (Eurostat, 2018).

In service sector jobs, new skills become relevant. Emotional, communicative, or nurturing skills are some examples which challenge the traditional conceptualisation, assessment and valuation of skill. As opposed to technical skills, these new ones, often known generically as “soft skills”, have been associated with low paid or precarious jobs. In fact, there are important critiques to the optimistic view offered by the theorists of the skill-biased technological change (Borghans et al., 2008; Hampson & Junor, 2015). Mainly because soft skills are not objectified in qualifications, which gives a greater weight to subjective decisions of employers, they are susceptible to being specially related with ethnic, racial and gender discrimination (Moss and Tilly, 2001, p. 85-155; Grugulis and Vincent, 2009). As Castells (2000) points out, social organization interacts with technology. Both societal and technological changes are interconnected in a way that means the resultant processes cannot be predicted in isolation from each other. Thus, technologies can change the social order to increase productivity and wages, but they can also be used as an instrument to exert power and reproduce social inequalities (Marglin, 1974; Braverman, 1974). In the scenario of the new economy, changes in the content of work can be associated with better labour conditions, but it is also possible to find a deterioration. Labour process theorists have argued that technologies enhance

managerial control by deskilling the workforce, especially in jobs characterised by the use of soft skills (Taylor and Bain, 1999; Ikeler, 2016).

In the new economic order, in which technologies and service and knowledge-oriented activities have a leading role, skills have to be placed at the centre of the debate regarding fairness in the labour market. An important question that quickly arise in this context is *what determines the value of skills*. In other words, *how skills are recognised and paid?* If skills are an important reason for workers' wages, position and employability, they are therefore producing inequalities. Thus, researchers should pay close attention to the explanations given for skills valuation. The valuation is made on at least two different levels: the individual and the institutional (i.e. occupation, industry, etc.). The combination of the valuation attributed at each level is the total valuation that a worker receives for his or her skills. This idea can be taken from studies of income differences, in which factors at both the individual or worker, and occupational or industry levels explains wage setting processes (e.g. Mincer, 1974; Parcel and Mueller, 1989, Western and Healy, 1999; England, 2002) –see next section for a more detailed explanation. Cockburn (1983:113) considers that there are three aspects that should be taken into account in the analysis of skill: "There is the skill that resides in the man himself, accumulated over time, each new experience adding something to a total ability. There is the skill demanded by the job – which may or may not match the skill in the worker. And there is the political definition of skill: that which a group of workers or a trade union can successfully defend against the challenge of employers and other groups of workers." Cockburn also suggest that economic, political, social and ideological reasons can operate at each level to produce specific valuations of skills.

2.1.1 Main explanations of skills valuation: supply-demand, structural and critical approaches

For practical reasons, explanations of skills valuation can be distinguished as economic or sociological. While the former mainly focuses on supply-demand mechanism, the second pays more attention to social structures, culture and institutions. However, both approaches led to important insights to this question and both give explanations at

different levels of analysis. These two broad approaches will be taken into account throughout this study as the main drivers of skill valuation.

The basic economic explanation comes from neoclassical theory of human capital (Becker, 1964). It states that differences in labour market outcomes between individuals are due to their human capital, the skills, abilities or other qualities that enhance their productivity. Employers have to pay more for skilled workers if they want them to utilize their skills in the workplace, something that they would not do without compensation. Human capital theory can be formulated as a special case of the theory of value: the supply side contends that the marginal worker requires a return to be encouraged to invest in training and apply his/her potential. The demand side states that profit-maximizing employers will hire more expensive skilled workers only in jobs where these extra skills increase productivity enough to cover the higher labour costs (marginal productivity). Therefore, the payoff for workers' skills (both regarding intensity and type of skill) is due to labour market supply-demand process. By extension, the process could determine the valuation of skills at other levels such as the firm, the occupation, or the industry (Lang and Dickens, 1988).

Of course, supply-demand explanations are not the only ones that give an answer to the question of how skills are valued. Sociologists have emphasized the existence of different structures in the labour market with specific functioning and different outcomes. Occupations, industries and segments are identified as the main sources of variation (Stolzenberg, 1975; Piore, 1980; Sorensen and Kalleberg, 1981). These structures determine the allocation of resources and power in the labour market. The valuation of skills is also influenced by them because of the different demands or requirements of skill and their different institutional settings.

Occupations are considered to be one of the most important structures. As human capital theorists would state, they differ in the demands for both generic and specific skills. But they also vary in the degree of unionization and the kinds of collective agreements that regulate them. Stolzenberg (1975) mentioned unionization as one of the most important institutional factors that varies across occupations and industries, and which affects the

recognition and valuation of skills. Several studies provide evidence of the role unions in regulating wages, job categories, etc. (Linneman, Wachter and Carter, 1990). Through collective bargaining, unions, employers and states work together in setting labour conditions. The recognition and valuation of skills is one of the more important arrangements resulting from unions efforts and collective bargaining in determining the price of labour (Carbonaro, 2006). Thus, unions and collective bargaining affect the price and value of skills beyond the labour market supply-demand dynamic.

A related explanation comes from dual (or segmented) labour market theory (Piore, 1980). It states that the labour market is segmented into parts with very different working conditions. A first, or core, segment with good working conditions can be identified which contrasts in almost every respect with a second, or periphery, segment characterized by poor wages, low stability, and non-existence of job ladders. This duality is persistent in the labour market and explains part of the existing inequalities between groups of workers, being woman, non-whites, the young, or immigrants employed in a great extent in the periphery. The duality emerges due to both the interests and power of employers and workers. Employers want to retain those workers in which have invested in their training, and who are, in turn, interested in maintaining their good working conditions and have more power to negotiate them. On the other hand, employers take advantage of the less powerful workers in the low-paid and insecure jobs who have little opportunity to negotiate. This situation perpetrates a dynamic of disconnected, differently advantaged, labour market segments. According to this theory, it can be said that there is a different pattern of recognition for the work in each sector; the work done in the periphery is less valued than that of the core. Because the instability and precariousness for the workers of the secondary segment, they have limited power to negotiate and struggle for the recognition of their skills.

Research mainly focused on occupations or segments is in fact ignoring the supply side of the labour market, i.e. the workers. Occupations demand or require skills, but workers offer skills to different extents. Therefore, the skills required in occupations, as well as the skills individuals bring to the workplace, have their effects on rewards and status. But the particular combinations of workers and jobs, known as “job matching” (Sorensen

and Kalleberg, 1981; Green, Mcintosh and Vignoles, 2002), also influence the valuation of skills in two interrelated ways. Occupation specificities largely determine the value of worker skills, but worker qualities and traits also influence the value of skills in occupations. The first aspect can be easily understood through job mismatch studies. A mismatch is produced when workers hold unsuitable skills in relation to the actual skills required in their jobs. Mismatch models departs from human capital predictions in considering that labour markets are far from being perfectly competitive, and in recognising the importance of occupational characteristics in setting wages as well as the existence of substantive frictions which restrict job-worker matches[2] (Green et al., 2002). It is common to talk about over-skilled workers, if they are in jobs which require less skills than they hold. For example, if a firm hires an MBA graduate in a secretarial position, that graduate may be no more productive than a less skilled secretary. The graduate's skills will be under-utilized and therefore she or he will receive fewer benefits than they would in a "graduate job". The second aspect of skill valuation related to the supply side is the compositional structure of the occupation, i.e. the valuation of skills according to the characteristics of their workers (Carbonaro, 2005). Occupations with higher proportions of graduates will pay more to their workers than do occupations with few graduates.

The structural explanations of skill valuation outlined above do not draw attention to the relations of production and to a crucial element in them: the control of workers by employers, a form of alienation of the workforce according to Marxist terminology (i.e. the lack of control over the labour process or production activity). The critical theory approach adds another important explanation of skill valuation. Such an explanation is related to the processes of rationalization of work and the standardization of tasks. This sociological school argues that the standardization of work processes is motivated by the scientific organization of work, which results in deskilling and alienation of the workforce while capitalists and managers acquire more power (Braverman, 1974). Routinization and deskilling seem to be exacerbated by the development of new

[2] Lack of information, reservation wages, mobility difficulties and sociocultural factors are examples of such frictions.

technologies and the increase of service sector jobs (Taylor and Bain, 1999; Ikeler, 2016; Felstead, Gallie and Green, 2004). Of course, they imply a devaluation of employees' skills, since these become unimportant in work performance. Thus, the competences of workers in routinized jobs would count less than those in managerial or unsupervised autonomous jobs.

2.2 Culture, labour market and skills valuation

Supply-demand economic process as well as structural and critical sociological approaches provide an important theoretical framework in which to understand skills valuation. These processes and structures, however, are embedded in a cultural setting. They are intertwined with the web of ideologies, norms and customs that forms culture. In addition, markets and their structures are influenced and constrained by norms and institutions emerging from culture and ideologies. In this section, a discussion of the role of culture in economic processes and a review of ideological aspects of skills valuation is provided.

2.2.1 Culture and the labour market

The importance of ideologies in understanding economic settings and processes is well recognized in the social science literature. This issue is already present in the work of the considered founding fathers of sociology, which highlight the importance of culture to understand economic action (Hughes, Sharrock and Martin, 2003). The historical materialism of Marx distinguishes between the infrastructure (or the base) and the superstructure, the former comprised of the forces and relations of production, and the latter of culture and its institutions. Marx's view essentially considers the superstructure as an epiphenomenon of the material relations. However, he rejected a simple determinism and recognised the reciprocal effects between the two structures. A deeper insight in this interrelation was made by Weber. In "The Protestant Ethic and the Spirit of Capitalism", Weber contends that ideologies and, particularly, worldviews, are the drivers of the economic behaviour of individuals. He showed that the reason that led

Protestant capitalists to accumulate, was an anxiety about salvation deriving from their religious beliefs. In other words, their search for profit was not based on instrumental rationality, but made sense given the religious (cultural) universe in which they lived. Finally, Durkheim attached great importance to culture for understanding economic action. In his view, individuals' behaviour is not reducible to a set of predetermined preferences or interests. Rather, preferences as well as the institutions they support, are informed by cultural norms. He emphasised also the effects of tradition and routine in translating institutionalised norms on people consciousness and thereby on representations of what are understood to be "rational actions".

The relationship between culture and economy is a relevant theme because culture is meddled in many areas of economic activity. The labour market is a particularly interesting area to take this into account. As it was discussed above, institutions influence labour market outcomes and processes. But the way in which institutions operate, is conditioned and influenced by the mosaic of cultural manifestations which include ideologies, social norms, values, customs and conventions. What is more, labour market institutions are built on the basis of particular cultural environments —along with, of course, power relations and political negotiation. Di Maggio (1994) considered that culture is related to economic behaviour in two differentiated ways that he called *constitutive* and *regulatory*. The former refers to the way in which the economic behaviour of individuals arises because of the ideologies, values and categorisations that culture provide. This view is usually adopted by those who treat culture and labour markets as mutually generative. The second concept refers to the ways in which norms, values, rules and their institutionalization impose boundaries on the individual's pursuit of self-interest. From this viewpoint, economic behaviour, usually operationalised as rational egoism, is treated as being analytically distinct from culture.

As Di Maggio recognised, the constitutive-regulatory distinction is a simplistic conception of the intricate relationship between cultural elements and economic processes. Multiple dimensions of culture can be considered, which are in turn interacting. Elster (1992) pointed out that the influence of culture, in the form of social norms, may occur because of their differentiated effect on the behaviour of several types

of actors. So, norms are reflected in the actual labour market through a complex interaction between actors with different ideologies, interests, and power. Ideologies, or more specific social norms, can be institutionalized in different ways. In the labour market, minimum wages, job classifications, pay schemas, or protection legislation are examples of institutions, but broader institutions like gender or neoliberal ideologies also affect labour market processes. Institutions guide action, prescribe behaviour, are reproduced, endure, and show resilience towards attempts to change them. Norms and institutions are not, however, immutable entities. Social actors carry them on, but also disrupt them, and create new ones. Many socialized norms or ideologies are transgressed by so-called "institutional entrepreneurs" (Di Maggio, 1988). Agents reflect on the institutional settings when institutions inhibit them in attaining their aims. "New institutions arise when organized actors with sufficient resources see in change an opportunity to realize interests that they value highly" (Di Maggio, 1988, p. 14). This reasoning goes in the direction of the duality theorised by social scientists regarding structure and agency, considered to be mutually constitutive and with "equal ontological status" (Giddens, 1995).

In summary, economic action is embedded in cultural and institutional settings. Either as constitutive or as regulatory effects, culture and its by-products —e.g. ideologies or social norms— should be taken into account to arrive at an understanding of socio-economic processes such as the valuation of skills. In the same way, how institutions and the ideologies or norms that underpin them change is a sociological matter which requires great attention. Labour market research is a relevant case for analysing this, because working conditions depend in a great extent on the capacity of workers to struggle for change in actual institutions that reproduce inequalities.

2.2.2 The socially constructed nature of skills

There is some consensus in sociology about the idea of skill as a social process. According to Littler (1982), tasks and occupations derive their label of "skilled" from particular combinations of ideology and political power. Such an idea is developed from

several scholarships which highlight the political and/or the ideological aspects of the social construction of skill.

The idea that skills are socially constructed and politically negotiated over time and that they reflect the power and status of diverse interest groups has been developed by neo-weberian scholars. They have used the concept of social closure from Weber's work, which refers to the social processes of drawing boundaries in order to monopolize scarce resources for one's own group. According to Weber, occupations act as status groups which compete for power and prestige. Removing labour market competition from an occupation is the most direct method of securing such resources for its members. Occupational groups remove competition settling social and legal boundaries, which allows them to monopolize certain resources. Research found that credentialism, licensure, unionization, lobbying and certification are all mechanisms that restrict supply and conceal the work performed inside occupations. But other forms of closure can be considered such as social networks, private property ownership or undercover discrimination. As Attewell (1990) argues, the valuation of skills is affected by closure mechanisms. Requiring intensive apprenticeship, and hindering the entrance into an occupation, help build a public perception of highly skilled work. Moreover, some practices, such as hiding routine tasks while complex tasks are made visible or using jargon and "technologese" instead of plain language, helps to create a public image of highly skilled work. According to this reasoning, it can be said that the benefits of the members of an occupation depend, in part, on its status and power. This increases the value attached to the skills developed inside the occupation. Lawyers, for example, can make use of closure strategies to restrict access to their occupation and disseminate a public image of a complex job which require high skills. In fact, lawyers are among the most highly rated professionals on occupational prestige scales (for instance, they are in the top ten in the Isei scale). So, part of their skill sets are viewed as complex and valuable, in contrast to the skills performed in less prestigious occupations or jobs, even if both skill sets are of comparable complexity. Thus, skills valuation according to closure theory would be a combination of both market (supply-demand) and ideological processes.

Closure theory helps to understand how the value of skill is constructed from the labour market itself. That is, the social organization of labour, together with the economic dynamic, influences the conception and valuation of skills. However, beyond the labour market, there are institutions and ideologies which influence the conceptualisation, recognition and valuation of skills. Advocates of "Comparable Worth" clearly illustrate this point when, in essence, they argue that the patriarchal ideology predominant in society influences the way in which women's work is valued. Gendered devaluation is manifested in two ways: first, with less rewards for feminized occupations (or relative number of women in an occupation), and second, with a null or even a negative return for skills associated with women (Steinberg, 1990; Kilbourne et al., 1994; England, Thompson and Aman, 2001). Focusing on the skill-based aspect, the theory states that when a kind of skill is generally done by women, whether in outside paid labour, in predominantly female occupations, or even in the labour market at large, the skill itself is made invisible and devalued, so its contribution to organizational or productive goals is not recognized. For example, nurturing and interacting skills are seen as "female" partly because of their relationship to parental nurture, which is traditionally performed by women; even in paid employment, work involving caring, communicating and service functions has been predominantly female.

Ideological frameworks influencing skills valuation, such that of gender, are institutionalized by means of compensating systems, job categorisations and pay schemas. As institutions, they perpetrate the conceptualisation and valuation of skills. For example, job evaluation schemes typically rate fiscal responsibility (such as devising budgets or counting cash) more highly than social responsibility (such as caring for the sick or minding young children). And returning to the example of gender, physical strength (a supposed male natural ability) is often rated higher than dexterity (a supposed female natural ability). Additionally, such institutionalizations influence skills valuation beyond the ideologies that produce them. For example, skills not objectified in qualifications, undocumented, or not codified in such compensating systems or classifications are usually invisible, underrecognized and, eventually, undervalued in the labour market (Hampson and Junnor, 2015).

The valuation of linguistic skills

Skills may be differently recognized and valued according to who holds them. This consideration leads inevitably to the question of discrimination. Labour market discrimination implies a differential treatment by employers for workers in certain social categories. Categories like black, woman, or immigrant are constructed from ideologies based on prejudice (Reskin, 2001). Racism, sexism, or xenophobia are examples of ideologies that act as lenses directly influencing the valuation of skills and preventing, therefore, employers from treating workers equally. Discrimination can modify the value of worker skills in two senses. In the first place, employment barriers or glass ceilings lead discriminated workers to be over skilled. They are forced to take up a less skilled, lower paid, lower status job in which their skills are undervalued (Lopez, 2012). In the second place, unequal reward of skills due to discriminatory ideologies can lead to a devaluation of worker skills. The argument is simple: employers do not recognise or do not appropriately value the skills of discriminated workers. This devaluation, then, lead to lower wages (Holbrow, 2018). Soft skills are susceptible to being especially related to the devaluation of ethnicities, racial minorities, and/or women. This is because soft skills are not objectified in qualifications, which make subjective decisions of employers more relevant regarding decisions like hiring or promoting (Moss and Tilly, 2001; Grugulis and Vincent, 2009).

Labour market agents, either unions or employers, reproduce ideologies and institutional views like gender ideologies, existing pay schemas and/or prestige attachment. However, as discussed in the previous section, both ideologies and institutions can be changed. Social transformations can involve changes affecting individual economic actions as well as labour market institutions. As an example, the civil rights movement in the USA, which transformed ideological and institutional frameworks, culminated in the approval of the Civil Rights Act of 1964. With regard to labour, it prohibits discrimination in employment for race or other ascriptive factors. It provides that, where workers perform equal work in an area requiring "equal skill, effort, and responsibility," they should receive equal pay. This example illustrates how the valuation of skills of minorities is institutionally changed in favour of equality.

The valuation of skill at the job or occupational level can also be changed. As explained just some lines before, there are jobs predominantly held by women which are socially viewed as lower valued. This self-justifies the consent to low payment, which in turn reinforces the perception of low skilled jobs and a lower status than men's jobs. This discriminating vicious circle can be broken by pay equity struggles. Pay equity, also called comparable worth, emerged in the late 1970s as a reform to correct for that portion of the wage gap that results from lack of recognition and inadequate compensation of work performed in historically female jobs (Remick, 1981, England et al., 2002). Comparable worth is an ongoing struggle for changing the gender bias in job evaluation systems and pay hierarchies (Steinberg, 1999). Other attempts to change the valuation of skills in the occupational level can be found. For example, the proposal of the New Zealand (NZ) Department of Labour Pay and Employment Equity Unit, working to develop new techniques for identifying service skills (NZDL, 2009). It is a strategy to help pinpoint the hitherto under-specified and undervalued capabilities in service skills. These are clear examples of how macro-level institutions and even social norms can be changed.

2.3 Linguistic skills in the new economy

The valuation of linguistic[3] skills is the focus of this study. Linguistic skills are particularly relevant in the new economy because informationalism and globalization are generating a great need of language in workplaces. This need of language is translated into the use of several cognitive linguistic-related skills derived from the human ability of symbols processing. However, the increasing use of language raises several questions about skills recognition and valuation in the labour market. This section provides a contextual framework for understanding the relevance of language in

[3] The terms "language" and "linguistic" has been used interchangeably throughout the thesis. Standard definition of language is "the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way" (Oxford English Dictionary, 2018). The adjective "linguistic" connects or relates with this definition of language.

the new economy and outlines the debates that this generates on linguistic work and the valuation of skills.

2.3.1 The need for language on labour processes

Throughout the different periods of capitalism, the interplay between linguistic activity and labour has been subject to different arrangements. According to Boutet (2012), during industrialization, language was outside the world of work. Speaking or talking were forbidden activities, considered a distraction from work, which was mainly manual and routine. Later, until the mid-twentieth century, there was a progressive industrialization of service sector jobs. In the contemporaneity, a full commodification of language has been reached, usually accompanied by a standardization of this kind of labour. The increasing introduction of language in productive processes is due to a need motivated by two basic interrelated social processes: informationalism and globalisation.

The mode of development beginning in the mid quarter of the twentieth century, in which the source of productivity lies in the technology of knowledge generation, information processing and symbol communication has become known as "informationalism" (Castells, 2000). Knowledge and information are critical elements in all modes of development (i.e. pre-industrialism and industrialism). What is specific to the informational age is the augmentation of the human ability of information processing and communication made possible by the revolutions in microelectronics, being computers, software, telecommunications and digital communications at large an example of the informational revolution (2004). These technologies, also known as information and communication technologies (ICT), have had a profound impact on the inputs and outputs of work. And language has a major role in how ICT's is changing labour. Language is a basic tool for both managing and creating information and knowledge, being relevant in informational societies whether as input or as output of labour[4] (Harris, 1998, Dhir, 2005).

[4] Common definitions of information and knowledge implied data and its interpretation to be communicated (see Castells, 2000 and Bell, 1976).

On the one hand, it forms part of practically all work processes, although its need varies according to the occupation considered. The importance of language in work processes can be easily illustrated by considering the great variety of tasks that require some level of language skills as inputs (e.g. teaching, negotiating, counselling, selling, coaching, etc.). This is especially clear in the case of service sector tasks, where communication is necessary to deal with co-workers, clients, and/or providers. In fact, the competitiveness of the manufacturing sector is usually realized by means of the service sector (e.g. marketing, sale etc.). But communicational needs are also relevant for work processes in manufacturing, where giving and following orders require some levels of language understanding and expression. On the other hand, language —or the transmission of information and knowledge— is also an output, the product derived from work and so a final consumer good valued for its own sake. In several jobs within the service sector, language products are the final good or service in several jobs. Discourses, speeches, conversations, negotiations, interpretations and texts such as reports, books, articles, letters or emails are examples of spoken and written linguistic products. Thus, the processing and the creation of information and knowledge requires some degree of language skill, being an input of labour processes and an output of work, which varies by occupation or job.

Information and communication technologies have also changed social organization. Nowadays society is organized in a global network, thanks to digital networks, which know no boundaries in their capacity to (re)configure themselves. The network society is a global society; everybody is affected by the processes that take place in the global networks of the new dominant social structure. This is because the core activities that shape and control human life in every corner of the planet are organized in these global networks: financial markets; transnational production, management, and distribution of goods and services; highly skilled labour; science and technology; communication media, culture, art, sports; international institutions managing the global economy and inter-governmental relations; religion; the criminal economy; and the transnational NGOs that assert the rights and values of a new, global civil society (Castells, 2004). Globalization implies interconnected people from any place and an increase in cross-

border movement of people. In the global world, the diversity that people are confronted with in everyday life is higher than ever before. This is how language become a crucial question in the globalized new economy. [5] The globalization of markets implies working with several languages (i.e. multilingualism) to manage international customers in multinational campaigns and to effectively exchange messages and communicate with foreign subsidiaries and external providers (Fixman, 1990; Hagen, 2006; Fidrmuc and Fidrmuc, 2016).

In the broad literature studying language and work, one sector of activity is thoroughly analysed because the centrality of language in its labour processes. This is the call centre sector, a set of organizations that manage customer service and sales transactions by telephone.[6] It is an expanding sector of activity in several countries and employs millions of workers (see Micheli, 2007). Call centres can be considered communicative factories that arise in the context of a mass consumption society, deregulated and flexible labour markets and expanded information and communication technologies. Call centres clearly illustrate how language becomes relevant both as a means of production and as a product itself. There is a need for language diversity and communication mediated by telephone, which imply linguistic competence and skills. Call centre research have also shown that the commodification of language is produced in this intensive language sectors through tensions between authenticity and standardization of language (Heller, 2005; Duchêne, 2009).

2.3.2 Controversies about linguistic skills

The new economy is characterized by a global interconnected economic system in which information-oriented consumption and production become more relevant than ever. In

[5] Grin, Sfreddo and Vaillancourt (2010) are aware that while linguistic diversity is eroding and that languages are disappearing, there is at the same time an increase of cross-country interaction and mobility that fosters multilingualism. They call objective and subjective linguistic diversity to these apparent contradictory trends.

[6] *Contact centre*s is a broader category involving organizations which provide additional communication services others than telephone (like email, text chat, etc.). However, the bulk of the literature on this sector specifically focus on those where communication is mainly provided by telephone.

this economic context language become central to work processes. The relevance of language in the new economy's work is highlighted by sociolinguists through some witty terms like "wordforce", "language worker" or "parole d'oeuvre" (Boutet, 2001; Heller, 2010; Duchêne, 2009). All of these refer to the increasing communicative transformation of work and the requirement of language-related skills. However, the increasing demand of linguistic skills, like other emerging competences in the new economy, is challenging traditional conceptualisations, assessment and valuations of skill. Language work and associated skills provide the opportunity to study these challenges from a sociologic point of view. And this is because the way in which skills are recognised and valued directly affects labour conditions.

Linguistic work is a multidimensional term that comprises different skills, abilities and knowledge related to the human ability of symbols processing. Several jobs and tasks require an important ensemble of language skills to their performance. Human interaction and social activities as a whole are among the tasks with a higher level of language skill is required. As previously stated, information and knowledge creation and processing require language workers to code and decode through symbols, natural language being the most important tool for doing this task.

The complexity of language work has complicated a detailed analysis of linguistic skills usage in the workplace. So much so that, for some authors, language is inextricably linked to other components of work, and therefore the skills needed to perform the tasks and jobs are intertwined with others in an indistinguishable way (Block, 2017). Fortunately, several attempts to analyse language skills have been carried out, from quantitative indicators to qualitative views. However, they only focus on particular aspects of language work, paying attention to a limited set of skills that set aside other important ones. We can find conceptualizations or even measures of skills related to language work, such as communication skills, literacy, or foreign language competencies. Few studies include all these dimensions in their analysis. Another problem is to consider language work or language skills as a broad dimension without unpacking the different kind of job requirements or skills that comprise them. This is the

case of many qualitative studies, which only partially distinguish the different kinds of skills involved in language work.

The complexity underlying the concept of language work is highly relevant in comprehending how linguistic skills are rewarded in the new economy. Language skills may be called "hard" and "soft" at the same time, or, more properly, may be considered as either depending on the linguistic dimension under consideration. Hard skills refer to techniques or knowledge usually learned through formal education. They are usually quantifiable and teachable, for example, financial procedures, chemical formulas, or building techniques. Soft or tacit skills are a combination of people skills, social skills, communication skills and character. They involve, inter alia, social and emotional intelligence quotients that enable people to navigate their environment, work well with others, perform well, and achieve their goals with complementing hard skills (Lippman et al., 2015). According to these definitions, literacy, grammatical correctness or the ability to manage complex messages would be considered hard skills. In contrast, communicative abilities, i.e. the ability to communicate effectively and to adapt the message to particular situations and contexts, would be considered soft skill. Multilingualism or foreign language knowledge would be in-between in such a categorisation, a hard skill that can be acquired through learning, but also a soft skill because it can be learned in informal contexts and it is usually linked to the one's own cultural background. Soft skills are usually associated with less well remunerated jobs and worse labour conditions.

At this point, the ideological and constructionist views of skills intervene to explain why soft skills, and language skills that fall in this categorization, have lower levels of recognition and valuation than hard skills. Soft skills are not considered in traditional skill conceptualizations. Such conceptualizations are appropriate for the assessment of skills in manufacturing industry but less so for services and interactive work. Soft skills are applied in work processes that are embodied and hard to describe and even to verbalise and which may be unappreciated because of their elusive and dynamic nature. This lack of recognition is translated into a social underappreciation of these skills. Another problem linked with the nature of soft skills is that they are socially viewed as

mundane. They are considered natural skills that everybody has, and therefore employers do not recognise and value. In spite of the theoretical debate about whether soft skills are really skills, it is clear that some of the most studied, such as emotional, communicative or leadership skills, are not equally accessible or well performed by everybody. People have different degrees of soft skills, which can be improved by means of training. Similarly, jobs require different levels of competence in such skills.

The lack of recognition and undervaluation of linguistic skills due to these social understandings and ideologies is discussed in several works. Heller (2005) argues that the bilingual knowledge of workers is commodified, in high demand for work in some linguistic intensive sectors like call centres, and is even advertised as an attraction in cultural tourism. Despite the interest in this linguistic skill, it seems not be rewarded at all. In a similar vein, Duchêne (2009) gives the example of Swiss call centres that need multilingual speakers. His case study shows that bilingual workers are recruited without any compensation for their additional linguistic competences. Languages may be converted into a selling point by employers, but any profit arising from the recruitment of multilingual employees goes to the companies. It goes even further the results of Alarcón and Heyman (2013), which shows how, in the bilingual US-Mexico border area, bilingualism is used by employers but not valued as technical competency. It is used as a sign of cheap and flexible labour, rather than as an economically and socially valued skill —even though in the new information workplace it serves the latter role. Some statistical analyses at the occupation level have shown that different kinds of language skills have different rewards. Literacy and cognitive verbal skills have been found to be highly related with work performance and wages (OECD, 2016b; Barone and van de Werfhorst, 2011; Liu and Grusky, 2013). However, other dimensions of language work like communicative or multilingual competencies have no reward or even a negative payoff (Green, 1998; Subtirelu, 2017).

Language work is also of interest in studying how skills are differentially recognised and valued depending on who holds them. Ethnocentrism and racial ideologies are crucial to understand how skills are valued. Language diversity is deployed in the labour market both as a kind of human capital and as an ethnic or racial marker. This offers an

opportunity to analyse to what extent language knowledge is rewarded and for whom. There is ample evidence of the disadvantages of ethnic minorities and racial groups regarding employment, job positions and wages. What is less clear is whether these disadvantages are the result of discrimination and, more importantly for the matter of this thesis, of devaluation, an undervaluation of the skills of some social groups with respect to others. Foreign language knowledge is, in this sense, a controversial skill which has been considered devalued for its association with ethnicity. The study of Alarcón and Heyman (2013) shows that exist an occupational hierarchy that correlates with the bilingual scale English monolingual-Spanish monolingual. The minority of well positioned Spanish speaking employees who occupy positions as language professionals in the call centres are Latinos educated in the United States. On the other hand, the lower positions are for bilingual Latino workers on the Mexican border, who receive lower payments than monolingual workers in call centres elsewhere in the US. Quantitative studies point to the possible devaluation of the language skills of immigrant workers. Both in the United States and Canada there is evidence of a lack of rewards associated with the foreign languages of immigrants despite the need for bilingual workers in the globalized economy (Pendakur and Pendakur, 2002; Shin and Alba, 2009; Alarcón et al., 2014).

Because the need of language in production processes, employers sought to standardize linguistic work to gain in efficiency and benefits. Standardization of linguistic work has been mainly studied in the case of call centres, where the use of scripts, protocols, the establishment of bridge languages and the limitation of natural diversity reduce the requirements for communicative and multilingual skills (Cameron, 2000; Mirchandani, 2004; Cowie, 2007; Sabaté-Dalmau, 2012). Standardization has been considered a management strategy that break down specialized knowledge into simple, routine tasks; into unqualified work that allows for a greater rotation of workers, lower wages and greater control of the production process by company managers. However, standardization conflicts with the need of skilled and autonomous workers in flexible transnational companies. Local-nationalistic claims and the necessity to adapt to customer needs and demands in a highly competitive environment require multilingual

and communicative abilities for work performance. How the tension between standardization and autonomy is resolved in the labour market clearly affects the valuation of workers' linguistic skills.

2.4 Methodological considerations

In this section, the methodological challenges that entails a research that focuses on linguistic skills valuation are presented. Such challenges rest on the difficulties to combine the different paradigmatic or methodological perspectives of previous research, and specifically the different conceptualisation and measurement of the very concept of skill.

2.4.1 A plurality of perspectives in studying language and work

Skills valuation is a complex issue that requires an integrative approach. This is specially the case of language work because the controversies or debates about the recognition and reward of skills come from several branches of research and schools of thought. For an integration of the several approaches, it is important to note that they work under different methodological perspectives or paradigms. Paradigms are basic belief systems regarding ontological, epistemological, and methodological assumptions. The categorisation of paradigms in social sciences made by Guba and Lincoln (1994) can be applied here to place both theoretical and methodologically the kind of researches which frame this thesis project.

One part of the literature may be placed in the (post-)positivist orientation. Both neoliberal economics and a thick branch of sociology —mainly, although not necessarily, quantitative sociology — engage in this tradition. The subfield of language economics is also placed in positivism, because "The economics of language rests on the paradigm of mainstream theoretical economics and uses the concepts and tools of economics in the study of relationships featuring linguistic variables. It focuses principally, but not exclusively, on those relationships in which economic variables also play a part." (Grin et al., 2010:28). Positivism implies an objective reality independent

of human perception, which can be, although imperfectly, apprehended. Objectivity is an ideal to be reach, which implies a separation between the researcher and the object of study and the aim of a free-value investigation. Emphasis is placed on falsifying hypothesis, preferring experimental research and applying quantitative methods (even though qualitative methods in some contexts are considered adequate).

Another important part of the reviewed research may be placed on the critical and constructivist paradigms. This is the case of labour process theory research and of sociolinguistics, respectively. From the critical paradigm, reality is socially constructed, shaped by political, cultural and economic factors. The researchers and their object of study are linked interactively, being part of the same reality. The dialogue between the two must "…uncover those forms of historical and knowledges that point to experiences of suffering and conflict…" (Giroux, 1988 from Guba and Lincoln 1994). The preferred methods to get this aim are qualitative, especially ethnographic methods. Constructivism goes beyond these premises considering that there is no objective reality, but multiple realities differing from person to person. We are *making* reality through our interactions and our interpretations of those interactions. In that sense, researchers are interested in how people define their realities and how agree or disagree in what is true through dialogic or hermeneutic process. Heller, Pietikäinen and Pujolar (2018) place critical sociolinguistic research on this paradigm: "we see doing research as a fundamentally social experience, in which everything we do is for interlocutors".

Thus, the literature considered in this research may be placed in different methodological paradigms that are essentially contradictory. This is important to note tacking into account that these researches were fundamental in formulating the questions and hypothesis of this work. However, rather than trying to position this research in one of the mentioned paradigms, which would be more a philosophical than a methodological discussion, a pragmatic view is adopted. Regarding theory, all relevant conclusions about skills valuation, and language work in specific, are explanations that are considered independently of the paradigm in which they rely. Despite the incompatibility between paradigms, the results of the researches usually lead to similar conclusions. What is more, their results are in some occasions complementary, providing

knowledge or understandings that go beyond those that we would obtain if only one of them was considered.

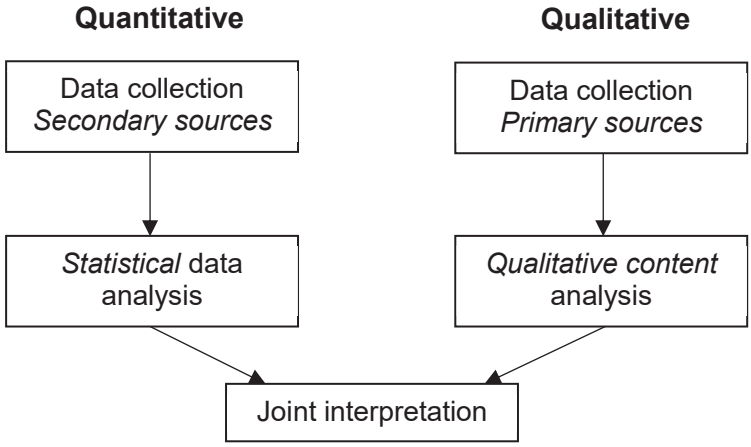
The same argument regarding the methodology of this thesis can be used. Despite the opposed considerations between paradigms regarding the appropriate ways of reach knowledge, several methodologies can be used in a multimethod strategy of research without transgressing the presumptions of any paradigm. This is a common stance in "mixed methods" research (Sale, Lohfeld and Brazil, 2002; Verd and López, 2008). The point of view adopted in this thesis is that there is not a strict correspondence between ontological, epistemological and methodological principles —especially whether methodologies are basically seen as tools with specific aims and procedures to attain knowledge. A given method can be used for answering several questions and in different situations. According to this, the requirements of the object of study is what lead the research design of the thesis. The strategies, methods and specific techniques of the research are the consequence of the questions rather than the cause of the specific paradigm in which the researcher is positioned.

In summary, this thesis made use of both a plurality of theoretical and methodological perspectives, each of one is particularly explained for each of the following chapters (i.e. the three papers of the thesis). Regarding theory, this plurality is concretized by the use of several explanations of skills valuation which lead to integrative or opposing hypothesis. Regarding methodology, a "mixed methods" approach combining quantitative and qualitative methods was employed.

Mixed methodology is a kind research that involves collecting, analysing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon (Bryman, 1992; Creswell, 2009). In the case of this thesis, the phenomenon under scrutiny is the influence of ideologies and its institutionalization in language skills valuation. As informed in the introduction, three specific questions (or controversies) motivate its development. Each question involves a particular level of analysis (individual, occupational, or sectorial) and purpose (explaining outcomes, or understanding processes). The specific objects of study require

the use of both quantitative and qualitative methods. Each methodology provides unique evidence, not attainable applying only the alternative method, which is finally interpreted in combination providing a more complete view regarding the object of study. This combination of methods is called "concurrent" because the simultaneous development of both kinds of methodologies (Figure 1). Although in the methodological literature some adjectives are added to the word concurrent, like "embedded", or "confirmative" (see Creswell, 2009:211-216), they are not appropriate in this case. This is because both methodologies are implemented as equally important (no embeddedness) and with the aim of getting a joint interpretation of the results (no confirmatory purposes).

Figure 1. Drawing of the methodological design of the study



Notes: A concurrent mixed method research design. Adapted from Creswell (2009: Figure 10.2).

A mixed method approach is also desirable considering the "the duality of structure" at the macro and micro levels (Giddens, 1995). These levels are often not distinct research problems but rather different dimensions of unitary problems. Macro-level understanding is obtained by large-scale enquiries into the structural features of a particular phenomenon. Guided by the researcher's concerns and analytical precedents, quantitative methods, tools and instruments can be used to get insight of the structural aspects. In specific, they allow to understand the context of an object of study, describe its characteristics, and to determine the relationships between different variables in order to test theoretical models. Although the researcher might have evidence of associations

at a macro level and infer causal relationships, the way individuals experience the world and justify their own actions, as well as the interactions between them in the construction of the social reality, are aspects that require an analysis at the micro level. Micro level understanding is guided by the words or actions of the individuals themselves in unstructured or semi-structured contexts, including interviews and ethnographic observation. The qualitative methods of gathering and studding data provide a more flexible framework to pick up what has been called the "emic" perspective (i.e. the perspective of the subject). There is thus room for the emergence of new insight into the phenomenon, as participants may make the researcher aware of other factors or explanations for something to occur not easily understandable from a macro level research. In summary, macro level analysis allows understanding patterns and trends, but runs the risk of seeing these trends as abstract entities that exist outside of the individuals who enact them on the ground. Contrary, micro level analysis allows for this on-the-ground analysis, but can fail to consider the larger forces that influence individual behaviour. Because the aim of social scientists is understanding the feedback between large scale structures and processes and the experiences and actions of individuals, both micro and macro level approaches and their respective methods and tools of analysis are necessarily complementary.

2.4.2 Linguistic skills approaches

One important methodological issue in this research is how to approach linguistic skills. This is a noticeable challenge in researches about linguistic skills valuation, but which is extensive to the analysis of any kind of workers' skills. The conceptual debate around what can be considered skilled work in addition to the methodological difficulties of measurement —either regarding objectivity, validity and feasibility— have made that labour researchers put a great deal of effort in operationalize the concept.

Early research on wages, attainment and labour market stratification made use of proxies based on the presumed link between wages and job complexity. Economists have been mainly inspired by human capital theory, which encompasses the individual's fund of skills or competencies obtained by means of education, training and job experience

(Mincer, 1974). However, to what extent is length of education and experience related to a broad set of skill, abilities and knowledge useful in work performance? A major critique to human capital approach is a simplified equivalence between education, skill and reward, where a deepened study of these concepts and their links would prove more fruitful. For their part, sociologists used to analyse skills through the set of competencies that represent occupations (e.g. Gallie, 1991). Quite commonly the rise in proportions of higher status occupational groups such as managers and professionals is given as evidence of rising skills demand. This approach, however, suffers from the same simplification as that of human capital. First, the presumed hierarchy between occupational status and skills content is misleading and, second, the important variability of skills across occupations is not appreciated with such a rough measurement.

Further research made use of more precise approaches. From tests or questionnaires, labour researchers have tried to measure in different ways the skills of workers and occupations. One important attempt is based on the use of literacy skills tests. The International Adult Literacy Surveys pioneered in the 1990s by the OECD (OECD, 1997, 2016b). The focus of these tests has largely been on numeracy and literacy. Their advantage is obtaining an objective measure of skill. However, despite the valuable information and the useful applications of literacy tests, they have some important disadvantages if researchers want regular assessments of a wide range of skills in the workplace. Skills tests have hitherto only been able to tap a relatively narrow range of skills, primarily the basic academic ones. There are likely to be some skills, which are thought to be of distinct value in the labour market, which would be hard to measure using a testing methodology. Communication skills may be a case in point. Moreover, these tests may not capture the usage of skills in the workplace environment. Two other ways for measuring skills from surveys can be found. One is based on self-assessment of skills and the other is based on job requirements. Self-assessment measures allow researchers to investigate an especially wide range of competences (Bynner, 1994). However, precisely because of workers own assessments, such measures are potentially subject to considerable social esteem biases, and also to measurement error if people are unable to judge for themselves how good they are. Finally, the job requirement approach

analyses the contents (i.e. demands or requirements) of jobs or occupations (Felstead et al., 2004; Aedo et al., 2013). The analysis is carried out either by job incumbents (employees), or by job analysists (panel experts). It is however not exempt of critiques, among the most important ones there is the mismatches between the job and the skills workers processes, the criteria for choosing the skills to be considered, and the difficulties to get unbiased assessments of the skill content of jobs. However, the approach provides a close look at a variety of skills and their intensity or load in jobs or occupations.

In the case of linguistic skills, there is a mix of measurements in the literature that denotes the multidimensionality of the concept. The most common way of measurement corresponds to self-reported language fluency or knowledge. It can be found as a single item or detailed set of the typical four abilities, i.e. read, understand, speak and write. It can measure the fluency in the language of the country or foreign languages, as well as first and second languages of the population. Fluency in host country language is a typical indicator of immigrants' integration, which made it widely employed in acculturation studies (e.g. Chiswick and Miller, 1995; Van Tubergen, Maas and Flap, 2004; Van Tubergen and Kalmijn, 2005). For its part, second or foreign language knowledge is used in economic labour studies that tries to obtain the economic advantage associated to this kind of human capital (e.g. Fry and Lowell, 2003; Ginsburg and Proeto-Rodríguez, 2011; Williams, 2011).

Other kinds of language skills' measurements are less common. One of them comes from the assessments of competences in PIAAC (Programme for the International Assessment of Adult Competencies). Among the three broad competences measured by PIAAC, the most important related to language skills is literacy. PIAAC defines literacy as "understanding, evaluating, using and engaging with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential" (OECD, 2013a). Despite this is a valuable measurement, it specifically focusses in written comprehension, which is only one of the multiple dimensions involved in linguistic work. Other relevant measurements come from "multi-skills" models that use job-requirement surveys data (such as the O*NET, the ESS or the BIBB/BAuA). Without

the explicit aim of measure language, studies such as Green (1998, 2012) or Williams and Bol (2018) among others, offer important approaches to linguistic skills. Moving away from the most direct skills of first or second languages, they provide more complex indicators of what may be called "communicative" skills or tasks. They distinguish between professional or horizontal communication, client communication, internal or external, etc. Such measurements correspond to a more interactive dimension of linguistic work, usually distinguished from verbal or literacy skill.

In summary, there are important attempts of linguistic skills measurement in social science literature. However, these measurements are subject to the same critiques and controversies of other skills measurements. In the case of language skills, in addition of this shared problems, there is problems of lack of data. This is especially due to the complex set of skills required in linguistic work, which made current measurements incomplete. For example, second language knowledge (bi/multilingualism) is measured, or communication abilities or verbal skills (literacy) or even communicative skills, but they are rarely measured all together in the same study. In this thesis, an important effort has been made to measure language skills in several ways and trying to approach their multidimensionality.

For qualitative researchers, the concept and operationalisation of language skills are rarely specified. The lack of a definition mainly responds to the understanding of skill as relational and context-specific. Language skills can hardly be considered a measurable asset or human capital because (Block, 2017; Holborow, 2018): Firstly, its inextricable relation with other skills in work performance; secondly, its link with gender, ethnicity and class, which hampers a reliable and rationalistic analysis; and lastly, its value and functions above and beyond the market value (social integration, identification, heritage, etc.).

In qualitative language work studies, behind the concept of language skills there is a mix of considerations about complexity, diversity and autonomy in labour processes (e.g. Cameron, 2000; Duchêne, 2009; Heller, 2010; Alarcón and Heyman, 2013). Linguistic skills become especially complex in a context of high competition and service-oriented

production. Language work is considered to involve a wide range of linguistic-related skills and abilities especially relevant in service sector jobs, but which increasingly complement technical and cognitive jobs. Much of the qualitative studies on language work also equates complexity with autonomy as in the case of Braverman scholarship. Workers that do not decide how and when communicate, they lack not only autonomy but also linguistic skill. Protocols defining inputs and outputs of labour, such us contents of conversation or ways of writing reports (e.g. scripts, forms, decision trees, etc.) constitute technologies aimed to standardize language work and so deskill the workforce. Thus, an important part of this kind of research defines linguistic skills in Marxist terms. Language is commodified, bought and sold in the labour market, which is alienated by employers trying to objectivise and standardize it.

2.4.3 Explanation vs comprehension. The quantitative-qualitative analysis of linguistic skills valuation

As stated in the introduction of this dissertation, three objects of study related with language work controversies has been analysed. The differences in the objects of study have had an effect on the methodological design of each of the three papers carried out. The same happen with the plurality of perspectives of the literature considered in this thesis, which have implied the adoption of very distinct methodologies to connect the results obtained with such literature and allowing, thus, the academic debate. As discussed before, a mixed method strategy that combines quantitative and qualitative methods has been implemented.

The quantitative analyses of the thesis have been of the correlational and uses secondary large-scale surveys in order to infer the results to the whole population. Correlational studies are based on statistic procedures that allow to measure the degree of association (or relationship) between variables or sets of scores. The focus is on test theories and ultimately support or reject them. The use of large-scale, standardized surveys enables the researchers to generalize the results. The real difficulty of this kind of analysis is to measure “true” associations or determine structural relationships or path models.

However, designs with external and internal validity give to quantitative researches the capacity to draw conclusions on "causes and effects."

Several works have analysed the valuation of linguistic skills, giving estimates of the contribution of some dimensions of such kind of skills on earnings, either at the worker or occupational level (e.g. Grin et al. 2010; Green, 2012; Ginsburg and Prieto-Rodriguez, 2011). However, there are little studies that tries to go further into the reasons behind such valuation. Of course, much of the previous works take for granted the market mechanism stated from neoliberal theory of human capital. Contrary, in this study such an explanation is confronted with the ideological/institutional view. Thus, the statistical analysis conducted ought to determine linguistic skills valuation – in relation to both wages and occupational prestige – but also infer the possible economic, structural and ideological/institutional causes of such valuation. This has been done by using secondary sources, mainly from official and public data bases that provide reliable and representative data. Multivariate and regression analysis have been carried out to deal with the high numbers of variables and to get reliable measurements and unbiased estimates of the relationships between them.

The qualitative analysis carried out in this thesis is based on content analysis of interviews and documents. Contrary to quantitative research, qualitative studies tend to collect data at the site where participants experience the issue or problem under study. Usually, there are no standardized procedures for generalize the results. Rather, qualitative methods are flexible with the aim that those who are studied speak for themselves. This flexibility goes to a comprehension of their own perspectives and actions. The interpretative aim of the research is developed tacking a holistic view of the problem under study, identifying the context, actors and situations involved in it.

Qualitative research specifically focusing on linguistic skills valuation is not very common. There are, however, some important works that have analysed such a question from a critical point of view. Questions of discrimination, devaluation and deskilling related with the linguistic skills of workers have been stated. However, there is scant evidence describing the processes of collective bargaining in which predominant views

of skills and their valuation are negotiated. In this thesis such question is tackled, analysing the different views of employers and employees regarding linguistic work and their interpretation of current collective agreements and legal rulings. Through the interviews and documentation in the call centre sector in Spain, the recognition and valuation of linguistic skills of workers is analysed. In call centres, language functions as the raw material, scripts as tools, and conversations as a product, so focus on it allows a closer examination of language work and skills valuation. In addition, as a field, call centres are traversed by tensions between standardization of linguistic work (the famous scripts that call centre representatives are expected to follow, the personae that they are asked to perform), and flexibility (in performing a variety of communicative services for a variety of customers and products) (Heller, 2010). Thus, the qualitative part of this dissertation can be seen as a case study of call centres (in Spain) where a qualitative content analysis of ethnographic material was carried out to understand the discourses around institutionalized views of linguistic skills and, therefore, about their valuation.

Both quantitative and qualitative methods present advantages and limitations in studding complex social questions. With the objective of understanding the valuation of linguistic work and the influence of culture and institutions in such valuation, both kinds of methodologies are of great relevance. Further details on the procedures, techniques and tools used in researching the controversies about linguistic work are detailed in the subsequent chapters.

Chapter 3 Discrimination and devaluation of immigrants. The role of attitudinal context

There is ample evidence of immigrants' disadvantage in the labour market. Previous studies show that discrimination and devaluation are relevant to explaining why immigrants are occupationally segregated. Three kinds of discriminatory behaviours can be distinguished: aversions, cognitive biases, and erroneous attributions. This chapter is part of the debate on the mechanisms that generate inequality and argues that the attitudinal context (social norm) influence on labour market outcomes by moderating the impact of these three discriminatory behaviours. This idea is empirically examined by analysing the role of openness towards immigrants on the immigrant-native occupational status gap and on the comparative advantage of their language skills. To do so, data from the Adult Education Survey is modelled together with contextual data from the European Social Survey using country fixed-effects regressions. The results indicate that immigrants are at a disadvantage, although the extent of this disadvantage varies significantly among countries partly due to the influence of openness towards immigrants.

3.1 Discrimination, devaluation and attitudes: An understudied concern

Labour market inequalities associated to ethnicity or race is a problem that social science is attempting to shed light on. In Europe, there is ample evidence of immigrants' disadvantage, as they occupy the worst positions in the occupational hierarchy. Although occupational segregation may be due to differences in human capital, several studies have shown that discrimination is also present in the labour market. The reasons behind discriminatory behaviour has motivated an academic debate. While some authors believe

it is a problem of uncertainty in the recruiting processes, others believe it is a problem of ethnic prejudice or racial attitudes (OECD, 2013b: chapter 4; Quillian, 2008; Pager and Karafin, 2009). This paper contributes to the debate by analysing the importance of a common denominator which moderate discriminatory behaviours: the attitudinal context.

Although the relationship between the attitudinal environment and discrimination is implicit in many studies, a theoretical framework to explain it has not been developed as well as only limited empirical evidence has been offered. The attitudinal context can be an important moderator of discriminatory behaviour because it lays the base for the legitimation and formation of aversions, prejudice, and erroneous attributions (Sherif and Sherif, 1964; Bobo and Kluegel, 1997; Moss and Tilly, 2001). This paper focuses on immigrant disadvantages, but the approach can be applied to the study of other types of inequalities (gender, race, etc.). Thus, it is framed in that line of studies that tries to understand the "mechanisms of ascriptive inequality" (Reskin, 2003).

The paper empirically analyses this approach by measuring the impact of attitudinal context, operationalized by the construct of openness towards immigrants, on the degree of immigrants' disadvantage. The disadvantage has been measured by the occupational status gap between natives and immigrants and the comparative advantage of their language skills—after controlling for human capital, social demographics, social background, degree of acculturation and social capital. Language skill has been studied because of its importance to the global and service economy but also because of its twofold role in the labour market, since it serves both as human capital and as an ethnic marker. The analysed database combines individual and country-level information from the Adult Education Survey and the European Social Survey respectively. This combination of data is analysed by several fixed-effect regressions to estimate the extent of disadvantage across 25 European countries and determine the influence of attitudinal context at the same time. In line with studies on the differences in income and employability, the findings show that immigrants are penalised and devaluated in the labour market. However, there is considerable variability among countries, which can be partly explained by the attitudinal context or openness towards immigrants.

Below I develop a conceptual framework about the existence and causes of discrimination of immigrants and devaluation of their language competence, and their potential links with attitudinal context (section 3.2). The data, the variables, the analytical strategies and the results are then described and presented (sections 3.3 and 3.4). Finally, the results are discussed with reference to the theoretical background and its implications (section 3.5).

3.2 Theoretical background

3.2.1 Human capital, language and discrimination

In the European context there is evidence of inequality between natives and immigrants, as the latter occupy the worst positions in the occupational hierarchy (Kogan, 2007; OECD/EU, 2015: chapter 6). Studies on neoclassical economics have theorized on inequality with references to the theory of human capital, according to which the persistence of disparity in the labour market is attributable to differences in the productivity of workers (Becker, 1957, 1964). However, a wide range of studies show that human capital by itself does not explain the unequal outcomes and suggest that immigrants are being discriminated against. The most direct evidence of ethnic discrimination in the labour market comes from field experiments (Zschirnt and Ruedin 2016), but evidence pointing in the same direction is also provided by statistical analyses (Heizmann, Heizmann and Holst, 2015; Brynin and Güveli, 2012). A variety of labour outcomes are discussed in both types of studies, whether employment, wages or occupational status.

A specific aspect of discrimination is competence or skill devaluation. Employers do not consider the human capital of immigrants to be comparable to the natives' (Friedberg, 2000; Zeng and Xie, 2004), which opens the debate of whether this is because "quality criteria" or prejudice (Holbrow, 2018). Some scholars point out that the expansion of the service industry has led to a new era of labour discrimination in which the competences of minorities in terms of *interaction with the public* are devalued (Moss and Tilly, 2001).

There is clear evidence of discrimination in the secondary sector of the labour market, where the so-called "soft skills" are required (Pager et al., 2009). One of these skills is communication, a crucial element for the jobs in the service sector. "Languages" are of particular importance as they provide a competitive advantage for workers and business in the globalised economy (Hagen, 2006; Fidrmuc and Fidrmuc, 2016). The question that needs to be asked, then, is whether language competence, so important to the new economy, is devalued in the case of immigrants. Shin and Alba (2009) indicate that, for immigrants and their descendants in the United States, bilingualism is not only not rewarded, but can actually entails penalties. Pendakur and Pendakur (2002) also found negative income differentials associated with a command of minority languages in Canada. These differentials are particularly large when it comes to mother tongues, which is why discrimination is the reason given as an explanation.

Three main arguments in the literature provide a framework that explains why employers would discriminate immigrants and devalue their human capital, such as their language competences. The first one refers to explicit or taste-based discrimination. Formalised by Becker (1957), but widely considered in the social sciences, this argument states that some employers deliberately discriminate because of their aversion or negative attitudes towards immigrants, and their underestimation of immigrants' competences due to ethnic prejudice (Moss and Tilly, 2001). Since the immigrants' languages function as an ethnic marker, the theory assumes that employers associate the languages with an affiliation to the community and its identity, so they undervalue them. The second argument highlights unconscious or implicit discrimination. This sort of discrimination is produced by cognitive biases (Gaertner and Dovidio, 2005). Psychosocial research has shown that social-categorisation processes are key to understanding intergroup relationships. A distinction is automatically generated between the ingroup, to which greater value is attached, and the outgroup, which is generally devalued (Fiske, 1998; Tajfel and Turner, 1986). As far as linguistic capital is concerned, cognitive bias would prompt the employer to give unequal values to this competence: the languages acquired by natives would be remunerable human capital, whereas the languages acquired by immigrants would be seen as a non-remunerable ethnic feature. Finally, the third

argument is about statistical discrimination. This sort of discrimination is produced by rational decisions in situations of uncertainty. Because of the lack of information about employees' productivity, employers use membership to social groups such as race or sex (signals) to infer them (Arrow, 1998). Since immigrants have lower educational levels, they would be discriminated against for this reason. A variant of this argument would be "erroneous discrimination" (England and Lewin, 1989), according to which the information on groups is biased and leads to mistaken inferences. Following this reasoning, language would be a signal of ethnic membership that employers would use to make evaluations for employment or promotion.

The evidence on occupational status gaps and on the relative advantage of language skills in the European countries is limited because of the lack of controls and the kind of human capital analysed, which focuses on formal education and forget about other skills. In this study the difference in occupational status is estimated in 25 European countries disregarding other leading explanations such as human capital, portability (acculturation), social background, social capital and sociodemographic features. Although some differences may be due to these explanations, the discriminatory factors described above (aversions, cognitive biases, and erroneous attributions) can also explain another part of the inequality. The first two hypothesis of this study are that: the occupational status of immigrants will generally be lower than that of locals (hypothesis 1) and that the foreign languages spoken by the immigrants will not be as advantageous to them as those spoken by locals because they are devalued (hypothesis 2).

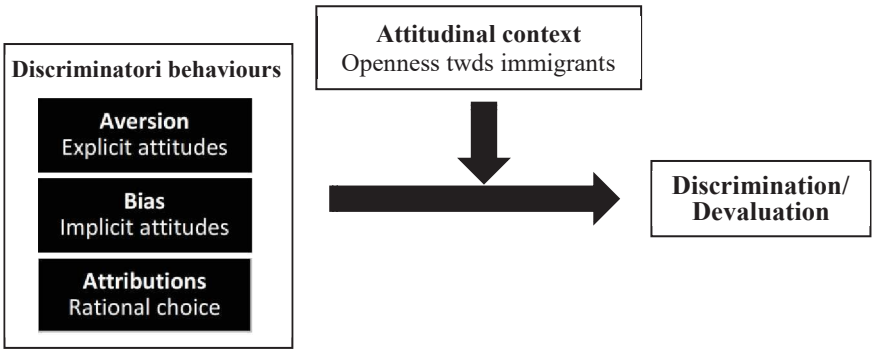
3.2.2 The moderating role of the attitudinal context

Reskin's (2003) conceptual model of the mechanisms leading to ascriptive inequality considers individual, organisational and contextual mechanisms. The three discriminatory factors discussed above—aversion, biases, and erroneous attributions—would be included in Reskin's category of "individual factors". However, these discriminatory factors operate in specific social contexts. The prevailing attitudes towards immigrants in society or, in other words, the degree of openness towards

immigrants moderate the impact of individual discriminatory behaviours on the creation of inequality.

Explicit attitudes are clearly connected to social context, which establishes the conditions that reduce or exacerbate discriminatory intentions. Theories on *symbolic racism* or *laissez-faire racism* (Bobo, Kluegel and Smith, 1997) suggest that there is an attitudinal structure resulting from intergroup relationships which forms attitudes and prejudices with that have direct consequences on perceptions and behaviours (Bobo and Kluegel, 1997). Thus, in social environments with high degrees of interethnic tolerance, it will be harder for xenophobic attitudes to emerge and discriminatory behaviours will be less legitimised. The attitudinal context also has an impact on the formation of subconscious prejudices or implicit attitudes. Social psychology has dealt with this question, and these prejudices and attitudes have been shown to be the result of the internalisation of social norms by socialisation and adaptation to reference groups (Sherif and Sherif, 1964; Crandall et al., 2002). Finally, as far as attributions are concerned, it is easy to believe that the cultural environment affects how employers make assumptions about the productivity of the members of social groups (ethnic or racial in this case). In the process of "Bayesian" evaluation (Pager and Karafin, 2009), employers not only use objective information about groups, but also the biased information and attitudes transmitted through the social environment, being specially influential the information provided by mass media (Klingeren, et al. 2015).

Figure 2. Illustration of the hypothesised moderating role of attitudinal context on discrimination and devaluation



Note: It is hypothesised that the attitudinal context (openness towards immigrants) has an indirect effect on the level of disadvantage by moderating the unobserved discriminatory behaviours (tastes, biases and erroneous attributions).

Most recent and direct evidence comes from the study of Carlsson and Rooth (2012), which shows that call-back rates from a correspondence testing experiment are influenced by municipality immigrant attitudes in Swedish. And how relevant are attitudes toward immigrants in the labour market can be inferred from the study of Heizmann et al. (2015). It suggests a cultural devaluation of immigrants as an explanation of the negative relation between wages and immigrant occupational composition. Despite this evidence, the extent to which attitudinal context affects immigrants' occupational status gap, above and beyond other contextual determiners, is a question that has not been explored. This paper aims to analyse this relationship by hypothesizing that attitudinal context, measured by openness towards immigrants, explains the occupational status gaps (hypothesis 3) and the relative advantage of linguistic skills (hypothesis 4) between natives and immigrants. In greater detail, attitudinal context has an indirect effect on immigrants' disadvantages as a moderator of discriminatory factors (see Figure 1 for a graphic representation of the mechanism theorised). Although attitudinal context is not necessarily the cause of aversions, biases and erroneous attributions of employers, it does have an impact on them by determining the extent to which they are legitimated, and broadening or reducing cognitive bias and the magnitude of the error in attributions.

3.3 Methods

3.3.1 A combination of individual and contextual data

The database has been created with microdata from the Adult Education Survey (AES, 2011/12) together with contextual information from the European Social Survey and the Eurostat. The AES sample used represents the active population[7] between the ages of 16 and 64. A total of 110,305 individuals from 25 European countries gave valid responses to the whole list of variables.[8] The sample was weighted for the analysis in accordance with the survey's technical recommendation. Specifically, the "individual weights" were normalised in such a way that the mean weight was equal to one. The main advantages of AES are the information it provides on linguistic capital (first and second languages), the long list of sociodemographic and human-capital variables, and the fact that it can be used with large samples of both locals and immigrants.

3.3.2 Main variables of the study

Recent studies show that discrimination against immigrants in the labour market is produced more between occupations, in the form of barriers or glass ceilings to better paid jobs, than within occupations. Thus, the outcome analysed is occupational status. It is operationalised by the International Socio-Economic Index of Occupational Status developed by Ganzeboom, De Graaf and Treiman (1992). The values of the index are the result of an optimal-scaling procedure in which the occupation effect as an intervening variable between education and income is maximised. The latest version of the index calculated by the authors from the International Social Survey programme for

[7] Labour market participation might be selective, which might lead to biased estimations. To address this possibility, we ran a two-step Heckman procedure. The results show that there is no problem of selectivity and the correction differs only slightly from the main results (see Appendix IV).

[8] Although the AES survey was conducted in more than 30 countries, only those with information for the contextual variables available were used: Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Greece, Spain, Finland, France, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia.

2002-2007 was used, and the scores were assigned to 2-digit occupations in AES (the maximum disaggregation of occupations allowed by the survey). Since the scale ranges from 10 to 69, the variable was rescaled to give a more intuitive range from 0 to 100.

The independent variables used are "birthplace" and "foreign language fluency", measured individually, and "openness towards immigrants", which was measured at the national level. Its operationalisation is described in detail below:

Immigrant status: This is operationalised as a dichotomous variable: the categories are "native", born in the country in which the survey is carried out, and "immigrant", born in a country other than that in which the survey is carried out. It was decided to use "birthplace" instead of "citizenship" because the definition of the latter varies considerably amongst countries. Although there is a wide variety of immigrant profiles, the AES survey does not enable the various groups to be subject to a detailed analysis. The biggest distinction found is between the categories of European and non-European migrants, which have been used to supplement the results obtained from the basic native-immigrant distinction.

Foreign language fluency. This is defined as fluency in languages other than the official (and co-official ones) of the survey in the country. For example, those fluent in English in Spain – where Castilian, Catalan, Basque and Galician are the official languages – are attributed with foreign language competence (FL=1). However, those who speak one or more of the official languages – for example, Castilian and Basque – are not (FL=0). Fluency is determined by two questions in the AES. In one question, the respondents are asked about their first languages or mother tongues. And in another question the respondents are asked about which other languages they can use and the corresponding level of the two best. These levels range from proficiency to vantage to basic knowledge.[9] This study regards natives and respondents with at least a vantage level as being fluent.

[9] The different levels of language competence that the respondent can choose in the AES survey are presented as a description and not as labels. The survey handbook converts these classifications into levels on the Council of Europe scale. We establish the following attribution for this study: Proficient: I can understand a wide range of demanding texts and use the language

Openness towards immigrants. This is the contextual result of individual attitudes towards immigrants. It is an operationalisation of what the authors studying racial/ethnic prejudice have generically referred to as "social norm" (Christ et al., 2014). It is measured with three questions conducted by the European Social Survey in 2008/9 (round 4), three years before the AES survey was carried out: "Would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries?", "Would you say it is generally bad or good for [country]'s economy that people come to live here from other countries?" and "Is [country] made a worse or a better place to live by people coming to live here from other countries?" The three questions are scored on an 11-point scale defined by the two poles of each question: "undermined-enriched", "bad-good" and "worse-better", respectively. In this study, the scores of the three scales are averaged, with a resulting scale of high internal consistency (α=0.87). Finally, the aggregation at the contextual level (country-level) is done through the average of the weighted sample of each country and a subsequent standardization (z scores).

3.3.3 Control variables

- The net gap between natives and immigrants: As far as the individual variables are concerned (see operationalisation and descriptive statistics in Appendix I and Table 4 in Appendix II), both those referring to human capital and the sociodemographic, and those referring to portability (acculturation) and social capital have been considered. The basic human capital variables are educational level and potential experience (operationalised as age and its square). The sociodemographic variables used are those typically affect wage regressions, that is sex, marital status, urbanicity, and household size. Together with these variables, we have also considered specific controls, such as IT experience, social background, social capital (as a proxy for influence networks) and variables of human-capital portability. A considerable number of studies have theorised and proved

flexibly. I master the language almost completely. Vantage: I can understand the essential of clear language and produce simple text. I can describe experiences and events and communicate fairly fluently. And Basic: I can understand and use the most common everyday expressions. I use the language in relation to familiar things and situations.

that there is social polarisation due to "skill-biased technological change" (Autor et al., 1998). In fact, the differences in employment between immigrants and natives may be the result of the digital gap and not of the theorized discrimination. This is the reason why an index on IT experience, calculated as the sum of various IT tasks that the respondent can perform, is included. Social background is also key to understanding mobility and attainment processes (Goldthorpe, Payne and Oewellyn, 1987). The differences between immigrants and natives may be due to a question of social class and not to ethnic group or race. Since the AES survey did not provide complete information about parents' employment, family status has been measured using the parents' educational level (averaging form a scale of three levels: 1=secondary or lower, 2=upper-secondary and 3=tertiary). Another variable used in the literature to explain status differences is social capital. This variable has been operationalised with a battery of survey questions on participation in leisure, professional, religious, political, and caring (volunteering) activities. The total sum of activities is interpreted scale of social capital. Finally, two variables that are used as key predictors of immigrant human-capital portability have also been obtained (Chiswick, 1978; Chiswick and Miller, 1995): time of residence in the country of destination (years since migration) and fluency in the language of the country.

- Alternative Contextual Explanations: The extent of discrimination and devaluation in countries does not solely depend on the attitudinal context, so several non-observed variables that correlate with openness towards immigrants and employment outcomes may lead to an erroneous estimation. Therefore, alternative contextual explanations in the literature have been considered in the models. Some authors discuss the problem of the inequality between immigrants and locals as part of a process of searching for information. In this process, the greater cost and/or the lower utility of looking for work determines the immigrants' employment situations. Employment structures and institutional arrangements are factors that determine utility or the reservation wage (the lowest wage rate at which a worker would be willing to accept a particular type of job) (Kogan, 2007). The relative size of the secondary sector of the labour market and the level of social protection have been included as control variables linked to the

reservation wage. According to the dual labour market theory, immigrants tend to be employed in the secondary sector with limited possibilities of internal promotion and higher job turnover. It can be assumed that the greater the capacity of this sector to absorb immigrants, the more difficult they will find it to have the same occupational status as the natives. The concept is operationalised by the percentage of workers employed in occupations in the bottom fourth of the occupational hierarchy. The occupational status scale ISEI and the data from the AES survey were used to obtain the scores for the 25 countries. As far as the second variable is concerned, it is expected that the more social protection there is in a country, the more immigrants will be able to invest their time in training so that they can find higher-status jobs. This variable was measured as the expenditure on social protection[10] (% of GDP) with data from Eurostat. The economic context is also important in understanding the situation of immigrant workers. In strong economies with little unemployment, which means less pressure in the labour market, immigrants will be more likely to find a job and get promoted (OECD, 2001). The quintessential indicator for measuring economic growth is the GDP, which is used as a control in many studies because it is strongly correlated with other social indicators (educational level, unemployment, etc.). This study has used the GDP per capita in PPS calculated by Eurostat. All the contextual variables were obtained for the same years as the variable "openness towards immigrants", i.e. 2008/2009. Likewise, they were all standardised (z scores) to facilitate the comparison of their relative effects (see operationalisation and descriptive statistics in appendix I).

3.3.4 Analysis

To test the hypotheses that there is discrimination and competence devaluation in the labour market (hypotheses 1 and 2) and that interethnic tolerance influences the extent to which these disadvantages are generated (hypotheses 3 and 4), several country fixed-effect regressions have been used. The model used is an ordinary-least-squares in which

[iv]According to Eurostat (2017), social protection "encompasses interventions from public or private bodies intended to relieve households and individuals of the burden of a defined set of risks or needs (…)".

country indicator variables are controlled for. The inclusion of country effects is especially interesting because all non-observed characteristics of the country are removed. This procedure exhausts all degrees of freedom and makes it impossible to estimate the contextual-predictor effects. However, cross-level interactions can be estimated as they vary between and within countries (Allison, 2009).

The modelling carried out determined the degree of discrimination using the difference in occupational status (ISEI) between immigrants and locals after controlling the individual variables. The moderating effect of openness towards immigrants is determined by its interaction with immigrant status and also by controlling the interaction with other contextual variables. This model can be formulated in the following way:

$$Y_{ij} = \beta' X_{ij} + \eta I_{ij} + \gamma\left(I_{ij} A_j\right) + \delta'\left(I_{ij} W_j\right) + \alpha_j + \varepsilon_{ij} \qquad (1)$$

where i and j indexes individuals and countries; Y refers to occupational status (ISEI); $\beta' X_{ij}$ is the vector of estimations of individual-level variables; ηI_{ij} refers to the immigrant effect, $\gamma\left(I_{ij} A_j\right)$ to the interaction with openness towards immigrants (attitudes) and $\delta'\left(I_{ij} W_j\right)$ to the vector of estimations of the interactions with the other contextual variables; α_j refers to the country effects and ε_{ij} are *iid* $N(0, \sigma^2)$ random errors.

Similarly, the degree of language-competence devaluation is determined from the differential effect of foreign languages on the occupational status after controlling for the set of individual variables. Thus, discrimination is represented by the simple effect of immigrant status, while linguistic-competence devaluation is derived from the interaction between immigrant status and foreign-language fluency. In this case, the effect of interethnic tolerance is analysed as a three-way interaction. It is an extension of equation 1 to which the interactive effect of foreign-language knowledge has been added.

An alternative to this procedure would be random effects modelling. However, recent studies have suggested that in cross-country analysis with few contextual observations (n<25), the application of this regression procedure results in unreliable estimates for country-level variables and cross-level interaction effects (Bryan and Jenkins, 2016; Van der Meer et al., 2010). Thus, in cross-country comparative studies in which the aim is to estimate cross-level interactions, the fixed-level effects are presented as a desirable option and provide more reliable estimations of the moderator variables by controlling for country heterogeneity.

3.4 Findings

Table 1 presents the results of the regression models that examine the penalty and devaluation of immigrants in accessing better jobs in Europe. Despite all models include basic control variables and country effects, they only report the coefficients of the main variables of the study (full models are reported in Table 5 of Appendix II). Model 1 explores the status gap between natives and immigrants (main effect of immigrant status). The difference on the ISEI scale between them is -10.6 points. By way of comparison, the negative effect of being an immigrant would be of nearly the same magnitude as having post-secondary education or ISCED 3. Model 2 examines the "immigrant" effect by making distinctions according to origin, comparing natives with European and non-European immigrants. Both European and non-European immigrants are at a significant disadvantage, but this disadvantage is greater for the latter group (-8.8 vs -12.1). Immigrants are also at a disadvantage in terms of the potential of their languages in providing higher occupational status. Model 3 shows that he potential of linguistic capital for obtaining better jobs is reduced by 1.4 points for them. Model 4 analyse linguistic skills relative advantage by distinguishing between European and non-European immigrants as well as the five most spoken languages in Europe, i.e. English, French, German, Spanish and Russian (see European Commission, 2012). There is a significant disadvantage in the case of Non-European Immigrants regarding fluency in French, Spanish and Russian (the exception is fluency in German, associated with an advantage over natives). In other words, the effect of one of these languages on

occupational status is more relevant for natives than for non-European immigrants. In the case of European Immigrants, the disadvantage is only significant for Russian speakers. Contrary, Spanish and English speakers are acknowledged in the labour market as being above that of the natives. Taking these results as a whole, it can be said that language is a proxy for origin. Languages provide less advantage for immigrants than for natives when they signal ethnic origins from developing countries.

Despite the evidence of penalty and devaluation of immigrants in Europe, the variability on these outcomes between countries is considerable. The native-immigrant occupational status gap is negative in all countries (fig. 3 A), but while it is only small or nearly absent in some (e.g. Finland, Poland, Norway), in others it much higher than the average (e.g. Ireland, Italy, Greece). In terms of language devaluation (fig. 3 B), in almost half of the countries, language relative advantage is positive (i.e. immigrants' languages have a greater potential than the native' languages). However, the other half of countries present a negative differential which puts immigrants at a significant disadvantage. Figure 3 also reveals that there is a positive linear tendency across countries between the status gap and the linguistic devaluation with the degree of openness towards immigrants (R^2 around 0.2 in both cases).

Table 1. Results of country fixed-effects models for occupational status (ISEI 2008)

	Model 1	Model 2	Model 3[a]	Model 4[a]
Intercept	32.850***	33.065***	32.974***	37.914***
	(1.137)	(1.136)	(1.138)	(1.225)
Immigrant	-10.55***		-9.410***	
	(0.585)		(0.762)	
Non-European Immigrant		-12.137***		-8.223***
		(0.613)		(0.695)
European Immigrant		-8.764***		-5.767***
		(0.621)		(0.748)
Immigrant x Foreign lang.			-1.349*	
			(0.598)	
English x Non-EU immigrant				1.312
				(0.671)
French x Non-EU immigrant				-4.323***
				(1.191)

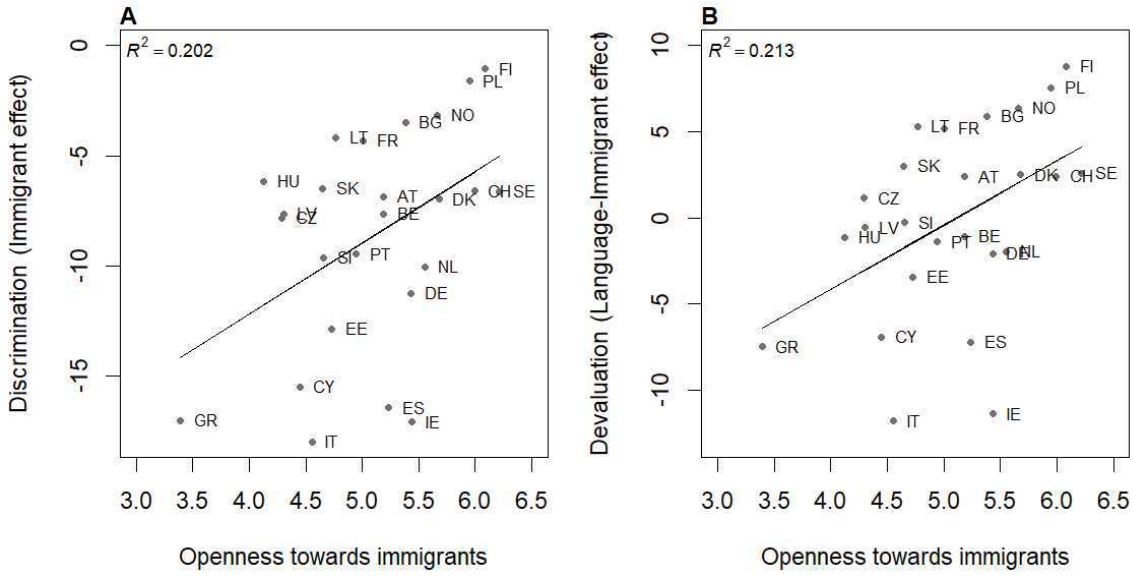
German x Non-EU immigrant				3.913*
				(1.798)
Spanish x Non-EU immigrant				-3.180**
				(1.161)
Russian x Non-EU immigrant				-4.386***
				(0.778)
English x EU immigrant				3.359***
				(0.695)
French x EU immigrant				1.036
				(1.378)
German x EU immigrant				1.285
				(1.482)
Spanish x EU immigrant				5.407***
				(1.323)
Russian x EU immigrant				-9.083***
				(1.583)
R^2	0.401	0.401	0.401	0.409
Individuals	110,358	110,358	110, 358	110, 358
Countries	25	25	25	25

Notes: Control variables are: Sex, marital status, urbanicity, educational level, age and age squared, parents' educational level, years since migration, household size, official language fluency and country fixed-effects. Numbers in parentheses are standard errors. Full results of this model can be requested from authors. [a] Main effect(s) of language(s) are included in model 3 and 4. $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$.

Openness towards immigrants reduces both discrimination and devaluation whether or not there are contextual controls. The coefficient of openness towards immigrants over discrimination (immigrants' status gap) is approximately 1.8 in both models. In greater detail, an increase of one standard deviation in openness towards immigrants reduces the degree of discrimination (it increases the equity between natives and immigrants) by 1.8 in the occupational scale. Only the level of social protection has a larger effect than openness towards immigrants. The impact of the secondary-sector size is unexpectedly positive, albeit slight, and the GDP per capita does not play a significant role. As far as linguistic devaluation is concerned, an increase of one standard deviation in openness towards immigrants improves the disadvantage in occupational status provided by a command of the immigrants' languages by 3.7. This coefficient increases to 8.8 when the interactions of the remaining contextual variables are included. However, this last

result needs to be considered carefully, since including all the interactions and lower order terms in the equation considerably reduces the country/variable ratio.

Figure 3. Discrimination and devaluation across countries plotted against openness towards immigrants



Note: The degree of discrimination and devaluation in every country is determined using models 1 and 3, respectively, but the country fixed-effect interacts with immigrant status and foreign-language fluency. AT: Austria; BE: Belgium; BG: Bulgaria; CH: Switzerland; CY: Cyprus; CZ: Czech Republic; DE: Germany; DK: Denmark; EE: Estonia; GR: Greece; ES: Spain; FI: Finland; FR: France; HU: Hungary; IE: Ireland; IT: Italy; LV: Latvia; NL: Netherlands; NO: Norway; PL: Poland; PT: Portugal; SE: Sweden; SI: Slovenia; SK: Slovakia.

Tables 2 and 3 explore the role of the attitudinal context in discrimination and devaluation towards immigrants in greater depth (only the coefficients of the main variables of the study are reported. See Table 5 in Appendix II for full results). Models 5 and 6 examine the moderating effect of openness towards immigrants on discrimination, whereas models 7 and 8 examine this effect for the specific case of linguistic devaluation (see Table 2). Both cases apply this contextual variable first and then control for the alternative explanations (social expenditure, secondary-sector size and GDP). This strategy makes it possible to control the moderating effect of the variable of interest and compare the potential of the country variables in reducing inequality.

Openness towards immigrants reduces both discrimination and devaluation whether or not there are contextual controls. The coefficient of openness towards immigrants over discrimination (immigrants' status gap) is approximately 1.8 in both models. In greater detail, an increase of one standard deviation in openness towards immigrants reduces the degree of discrimination (it increases the equity between natives and immigrants) by 1.8 in the occupational scale. Only the level of social protection has a larger effect than openness towards immigrants. The impact of the secondary-sector size is unexpectedly positive, albeit slight, and the GDP per capita does not play a significant role. As far as linguistic devaluation is concerned, an increase of one standard deviation in openness towards immigrants improves the disadvantage in occupational status provided by a command of the immigrants' languages by 3.7. This coefficient increases to 8.8 when the interactions of the remaining contextual variables are included. However, this last result needs to be considered carefully, since including all the interactions and lower order terms in the equation considerably reduces the country/variable ratio.

Table 2. Cross-level interaction results (country fixed-effects regressions for occupational status [ISEI 2008])

	Model 5	Model 6	Model 7	Model 8
Intercept	33.06***	32.355***	33.258***	32.898***
	(1.137)	(1.143)	(1.138)	(1.152)
Immigrant	-10.31***	-12.665***	-8.971***	-11.088***
	(0.567)	(0.644)	(0.782)	(1.194)
Foreign language	6.209***	6.274***	5.846***	6.213***
	(0.158)	(0.159)	(0.168)	(0.194)
Languages fluency x immigrant			-1.607**	-1.607
			(0.607)	(1.153)
Openness x immigrant	1.792***	1.801***	-2.054	-6.461**
	(0.31)	(0.437)	(1.055)	(2.414)
Social expenditure x immigrant		2.880***		4.991***
		(0.31)		(1.482)
2nd sector size x immigrant		0.980*		-4.454
		(0.462)		(2.458)
GDP x immigrant		0.260		2.453
		(0.634)		(3.395)
Openness x immigrant x FL			3.673***	8.843***
			(1.096)	(2.453)
Social expenditure x Immigrant x FL				-2.297

	(1.517)
2nd sector size x Immigrant x FL	6.648**
	(2.505)
GDP x Immigrant x FL	-2.344
	(3.448)

Notes: In all models, the number of individuals is equal to 110,305 (nested in 25 countries). Control variables are the same as in Table 1. All lower order terms of the interactions are included. Numbers in parentheses are standard errors. $^{*}p<0.05$; $^{*}p<0.01$; $^{***}p<0.001$.

Openness towards immigrants reduces both discrimination and devaluation whether or not there are contextual controls. The coefficient of openness towards immigrants over discrimination (immigrants' status gap) is approximately 1.8 in both models. In greater detail, an increase of one standard deviation in openness towards immigrants reduces the degree of discrimination (it increases the equity between natives and immigrants) by 1.8 in the occupational scale. Only the level of social protection has a larger effect than openness towards immigrants. The impact of the secondary-sector size is unexpectedly positive, albeit slight, and the GDP per capita does not play a significant role. As far as linguistic devaluation is concerned, an increase of one standard deviation in openness towards immigrants improves the disadvantage in occupational status provided by a command of the immigrants' languages by 3.7. This coefficient increases to 8.8 when the interactions of the remaining contextual variables are included. However, this last result needs to be considered carefully, since including all the interactions and lower order terms in the equation considerably reduces the country/variable ratio.

Further analyses were undertaken to see whether the finding that there is a penalty and a disadvantage for immigrants is robust, and to provide additional insights about the effects of attitudinal context on labour market disadvantages. Regression results for immigrant subsamples and for models with an extend set of control variables are provided in Table 3. Because, as previous models highlight, context significantly influence the occupational status gap and the comparative advantage of language skills, next models have been derived from the previous 5 and 7 (occupational level were not included in order to estimate less parameters). In these regressions, simple effects have to be interpreted as conditional to both the reference groups and the attitudinal mean. Models 5.1, 5.2, 7.1 and 7.2 are the estimates for females and males' subsamples. From

this separated analysis, it becomes clear that openness towards immigrants specially influence women disadvantage. The impact of the attitudinal context on the occupational gap in the case of females is more than two times higher than in the case of males (2.6 vs 1). And the impact on the relative advantage of linguistic skills is only significant in the case of woman (the disadvantage for linguistic capital remain in the case of males, but openness towards immigrants does not reduce it). Models 5.3 and 7.3 add two control variables more, IT experience and social capital, which are only available in a subset of countries (N=13). Including them in the equations does not change the previous conclusions in a substantive way, remaining the impact of openness towards immigrants significant on both the occupational status gap and the relative advantage of language skills. Finally, models 5.4 and 7.4 distinguish between European and Non-European immigrants. The impact of the attitudinal context is statistically significant in both cases. However, it is almost twice as high for non-European as for European immigrants (1.9 vs 1). And a similar result can be observed regarding the impact of attitudes on language devaluation (3 vs 6.7).

Estimates from models 5 and 7 are not exempt from the possibility of sampling bias. Occupational status is only observed among the employed population, which leads to selectivity bias because access to employment is linked to unobserved factors that may also affect the position attained in the occupational hierarchy. Heckman's two-step procedure is applied to analyse any possible bias (see Table 6 in appendix II). Labour force participation is first modelled by probit regression. The regression includes the same variables as previous models, as well as an exclusion variable: the amount of instruction in the most recent educational activity (measured as teaching hours). The selection likelihood is subsequently incorporated into the occupational status regressions as the inverse Mills ratio (IMR). This ratio is not significant in any case and the correlation between the selection error and the prediction error (rho) is very low, so the hypothesis of sampling bias is rejected. This is why the coefficients obtained differ only slightly from the previous models.

Table 3 Cross-level interaction results (extended)

	Model 5.1[a]	Model 5.2[b]	Model 5.3[c]	Model 5.4[d]	Model 7.1[a]	Model 7.2[b]	Model 7.3[c]	Model 7.4[d]
Immigrant	-13.383***	-7.677***	-9.030***		-12.655***	-4.157***	-2.929*	
	(0.833)	(0.816)	(0.953)		(1.081)	(1.129)	(1.499)	
EU immigrant				-8.767***				-2.663*
				(0.626)				(1.282)
Non-EU immigrant				-12.07***				-11.139***
				(0.614)				(0.835)
Immigrant x Foreign lang.					-0.528	-3.777***	-5.798***	
					(0.841)	(0.875)	(1.118)	
EU immigrant x Foreign lang.								-6.250***
								(1.191)
Non-EU immigrant x Foreign lang.								-0.647
								(0.171)
Openness x Immigrant	2.557***	1.046*	3.203***		-2.851	-0.946	-0.590	
	(0.455)	(0.420)	(0.389)		(1.521)	(1.454)	(1.791)	
Openness x EU immigrant				1.031*				-2.113
				(0.493)				(1.322)
Openness x Non-EU immigrant				1.943***				-4.936*
				(0.381)				(1.782)
Openness x Immigrant x FL					5.333***	1.736	3.649*	
					(1.582)	(1.510)	(1.832)	
Openness x EU immigrant x FL								2.992*
								(1.411)
Openness xNon-EU immigrantxFL								6.698***
								(1.823)
R^2	0.430	0.384	0.447		0.430	0.385	0.450	0.402
Individuals	52,711	57,649	60,365	110, 358	52,711	57,649	60,365	110, 358
Countries	25	25	13	25	25	25	13	25

Notes: Control variables are the same as in Table 1. Main effect of language is included in model 7 and its derivates (6.1- 6.5). Numbers in parentheses are standard errors. *p<0.05; *p<0.01; ***p<0.001. [a]Subsample of females; [b]Subsample of males; [c]Subsample of countries with extended set of controls (social capital and IT experience); [d]Immigrant origin differential effects.

3.5 Summary and conclusion

Immigrants' disadvantage is a problem that social sciences are attempting to clarify. The persistence of the problem, which is almost endemic in the labour market, has been constantly discussed in the academic literature. Various explanations have been put forward for discriminating behaviour, but they often contradict each other (tastes and attitudes versus rational choice). This paper suggests that all the discriminatory behaviours are moderated by the social norm or attitudinal context, increasing or decreasing the impact discriminatory behaviour has on labour outcomes. The issue has been analysed by focusing on the occupational status gap between natives and immigrants and the comparative advantage of their language skills in 25 European countries. Modelling country data with fixed-effects has enabled the magnitude of ethnic disadvantage to be estimated, and the effect of attitudinal context to be tested.

In line with other studies that show that immigrants are at a disadvantage when it comes to employment or wages, this study reveals that immigrants also have lower occupational status than locals. More specifically, a difference of -10.6 points on the ISEI scale has been found, which increases to -12 points when the immigrants are non-European. A further disadvantage has been observed in relation to their language capital. The immigrants' languages bring, on the whole, 1.4 points less advantage in the occupational hierarchy than in the case of the natives. This disadvantage is also observed regarding some of the five most spoken languages in Europe, such as French, Spanish or Russian. Basically, languages provide less advantage for immigrants than for natives when they signal ethnic origins from developing countries. These are net differentials between natives and immigrants, which were obtained after controlling for a wide range of variables, including human capital, portability (acculturation), social background and sociodemographic features. The results confirm hypotheses 1 and 2 discussed above, which indicate the existence of discriminatory factors in the European labour market (since main alternative explanations have been discounted). Of course, other explanations cannot be dismissed based on a correlational analysis like the one performed. However, the attitudinal context, operationalised as openness towards

immigrants, has been shown to be an important variable for understanding cross-country variation in immigrants' disadvantages. The moderating effect of the contextual attitudes is specially relevant in the case of females and non-European immigrants. The estimates are unbiased because all country characteristics are controlled for by the inclusion of country fixed-effects. Moreover, the results have been proof to be robust to sample bias. This lead to confirm hypotheses 3 and 4, and to conclude about the importance of social norm on the generation of inequality.

The impact of attitudes towards immigrants on labour market disadvantages has been analysed as an indirect effect when the actual hypothesis is that it moderates individual discriminatory behaviours (i.e. aversions, biases and erroneous attributions not observed in this study). Although this paper presents evidence of the importance of attitudinal context through this indirect effect, the immediate impact exerted by the attitudinal context on each of these three causes of discrimination should be analysed. The relative advantage of the worker's linguistic competences has been analysed because of the importance that this human capital has in the global and service economy. However, analysing other competences in the light of the openness towards immigrants would provide a clearer picture of the problem of discrimination. These issues remain open for future research.

This paper is part of the debate on mechanisms that generate labour inequality and, more specifically, ethnic or racial disadvantages. A considerable amount of literature has focused on determining the impact and the reasons of discriminatory behaviours. Despite that different studies have considered the attitudes and prejudices of the social context as a powerful barrier to the economic integration of immigrants, a theoretical framework has not been developed nor has empirical evidence been provided about this generative mechanism of inequality. This paper concludes that openness towards immigrants has a considerable influence on the level of inequalities across countries, regardless whether it is due to conscious or unconscious prejudices or rational attributions. Although ethnic or racial discrimination is prohibited in numerous jurisdictions – for example, in the European Union (e.g. Racial Equality Directive [2004-43]) – the problem persists. Prohibition is fundamental to solving the problem, but prevailing attitudes in the social

environment have a significant impact on reducing or enhancing discrimination and devaluation against immigrants. A society that tolerates discriminatory behaviours instead of reporting them, that accepts ethnic prejudice instead of rejecting it, and that legitimises the barriers facing immigrants instead of criticizing them will have great difficulty in doing away with all the discriminatory behaviours in the labour market. In this regard, the promotion of policies encouraging inter-ethnic tolerance and openness toward ethnic diversity is another essential step to eradicate the problem.

3.6 Appendix

Appendix I. Variables of the study

Dependent variable (labour market outcome):

Occupational status – ISEI 2008 score of the occupation in which the respondent is employed (ISCO two level)

Individual-level variables:

Age – Age of the respondent in years

Age^2 – Age squared

Educational level – set of dummy variables from the ISCED classification: 1: No formal education is the reference category; 2: ISCED 1 (Primary); 3: ISCED 2 (Lower secondary); 4: ISCED 3 (Upper secondary); 5: ISCED 4 (Post-secondary, non-tertiary); 6: ISCED 5 and 6 (Post-secondary to Tertiary)

Foreign language fluency – dichotomous variable equal to one if the respondent is fluent in at least one non-official language

Household size – total number of household members

Immigrant – dichotomous variable equal to one if the respondent is foreign born

Informatics experience – Total number of tasks that the respondent is able to do from a list of nine (copying or moving a file or folder, using copy and paste tools, using basic arithmetic formulas in a spreadsheet, compressing files, connecting and installing new devices, programming, transferring files to other devices, creating electronic presentations, installing software)

Male – dichotomous variable equal to one if the respondent is male

Married – dichotomous variable equal to one if the respondent is married

Official language fluency – dichotomous variable equal one if the respondent is fluent in at least one of the official languages in the country of the survey

Parents' educational level: Average level – for the mother and father of the respondent (or equivalents) – computed from an ordinal scale: 1=Secondary or less; 2=Upper secondary; 3=Tertiary

Social capital –Total number of social activities in which the respondent is involved from a list of six (political parties or trade unions, professional associations, recreational groups or organisations, charitable organisations, informal volunteering, religious organisations)

Urban – dichotomous variable equal to one if the individual lives in a densely populated area

Years since migration – year of observation minus year of migration

Country-level variables:

Openness towards immigrants – average score for three 10-point scales measuring attitudes towards immigrants

Social protection expenditure – Percentage of GDP destined to social protection (sickness, unemployment, etc.)

GDP per capita – PPP-adjusted

Second sector size of the labour market – Percentage of individuals of the labour force employed in occupations from the bottom quarter of the ISEI scale.

Appendix II. Figures and tables

Table 4. Descriptive statistics for natives and immigrants

	Natives		Immigrants	
	Mean	SD	Mean	SD
ISEI 2008	43.388	15.290	38.040	15.707
Male	0.545	0.498	0.546	0.498
Urbanicity	0.415	0.493	0.571	0.495
Married	0.582	0.493	0.635	0.481
Household size	2.997	1.354	3.155	1.590
Educ. Level: ISCED 1	0.041	0.199	0.083	0.275
Educ. Level: ISCED 2	0.163	0.370	0.218	0.413
Educ. Level: ISCED 3	0.450	0.498	0.383	0.486
Educ. Level: ISCED 4	0.042	0.201	0.034	0.181
Educ. Level: ISCED 5-6	0.299	0.458	0.260	0.438
Age	41.510	11.097	40.543	10.581
$Age^2/100$	18.462	9.256	17.557	8.807
Parents education	1.498	0.610	1.441	0.652
Years since migration	-	-	9.246	2.923
Official language fluency	0.997	0.051	0.914	0.280
Foreign language fluency	0.505	0.500	0.873	0.333
Computer experience[a]	4.791	2.975	4.157	3.117

Social Participation[a]	0.660	1.005	0.540	0.876
N		100772		9533

[a] Se calcula en base a la submuestra de países en los que se recogió dicha información.

Table 5. Full results from Chapter 3 (Models 1, 3, 5, 6, 7 and 8)

	Model 1	Model 3	Model 5	Model 6	Model 7	Model 8
Intercept	32.85	32.974	33.06	32.355	33.246	32.898
	(1.137)	(1.138)	(1.137)	(1.143)	(1.138)	(1.152)
Male	3.714	3.719	3.709	3.695	3.711	3.693
	(0.123)	(0.123)	(0.123)	(0.123)	(0.123)	(0.123)
Married	1.862	1.874	1.859	1.836	1.844	1.806
	(0.147)	(0.147)	(0.147)	(0.147)	(0.147)	(0.147)
Urbanicity	3.284	3.283	3.284	3.220	3.271	3.221
	(0.128)	(0.128)	(0.128)	(0.128)	(0.128)	(0.128)
Educ. level (ISCED1)	-4.292	-4.286	-4.285	-3.995	-4.186	-3.868
	(0.924)	(0.924)	(0.924)	(0.924)	(0.924)	(0.923)
Educ. level (ISCED2)	2.172	2.172	2.213	2.590	2.212	2.520
	(0.889)	(0.889)	(0.889)	(0.889)	(0.889)	(0.889)
Educ. level (ISCED3)	11.313	11.297	11.368	11.817	11.50	11.947
	(0.88)	(0.88)	(0.88)	(0.88)	(0.879)	(0.880)
Educ. level (ISCED4)	18.582	18.558	18.655	19.086	18.757	19.189
	(0.928)	(0.928)	(0.928)	(0.929)	(0.928)	(0.928)
Educ. level (ISCED≥5)	36.57	36.549	36.629	37.032	36.719	37.045
	(0.884)	(0.884)	(0.884)	(0.884)	(0.883)	(0.884)
Age	0.175	0.175	0.177	0.177	0.178	0.178
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Age2	-0.429	-0.428	-0.427	-0.435	-0.419	-0.434
	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)	(0.052)
Parents education	4.965	4.960	4.974	4.995	4.960	4.980
	(0.117)	(0.117)	(0.117)	(0.117)	(0.117)	(0.117)
YSM	0.170	0.170	0.131	0.137	0.119	0.091
	(0.059)	(0.059)	(0.057)	(0.058)	(0.057)	(0.058)
Household size	-0.572	-0.574	-0.573	-0.587	-0.574	-0.575
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Official language fluency	3.148	3.012	2.899	3.105	2.77	3.225
	(0.64)	(0.643)	(0.641)	(0.648)	(0.644)	(0.654)
Immigrant	-10.551	-9.405	-10.31	-12.665	-8.714	-11.088
	(0.585)	(0.774)	(0.567)	(0.644)	(0.77)	(1.194)
Foreign language fluency	6.244	6.322	6.209	6.274	5.847	6.213

	(0.158)	(0.162)	(0.158)	(0.159)	(0.168)	(0.194)
Foreign language fluency x Immigrant		-1.349			-1.603	-0.814
		(0.598)			(0.607)	(1.153)
Openness x Immigrant			1.792	1.801	-2.064	-6.461
			(0.310)	(0.437)	(1.055)	(2.414)
Social expenditure x Immigrant				2.880		4.991
				(0.310)		(1.482)
2n sector size x Immigrant				1.176		-4.454
				(0.462)		(2.458)
GDP x Immigrant				0.260		2.453
				(0.634)		(3.395)
Openness x Immigrant x FL					3.684	8.853
					(1.096)	(2.453)
Social expenditure x Immigrant x FL						-2.297
						(1.517)
2n sector size x Immigrant x FL						6.648
						(2.505)
GDP x Immigrant x FL						-2.344
						(3.448)

Table 6. Heckman two-step estimates: ISEI score conditioned on the probability of being employed

	Model 1	Model 5	Model 7	Model 9
Intercept	32.411***	32.524***	32.567***	32.694***
	(1.326)	(1.325)	(1.326)	(1.326)
Immigrant	-10.683***	-9.510***	-10.703***	-9.080***
	(0.661)	(0.842)	(0.661)	(0.853)
Foreign language	6.249***	6,330***	6.213***	6.270***
	(0.161)	(0.165)	(0.161)	(0.165)
FL x Immigrant		-1.386*		-1.796**
		(0.621)		(0.637)
Openness x Immigrant			1.752***	-2.872***
			(0.247)	(0.784)
Openness x Immigrant x FL				4.989***
				(0.811)
Rho	0.029	0.030	0.033	0.035

Notes: In all models, sample size is equal to 175,470 (65165 censored and 110305 observed). The models include the same variables as in previous models plus the IMR. *p<0.05; **p<0.01; ***p<0.001.

Chapter 4 Well paid or unrewarded? The payoff for linguistic skills in the new economy

Skills that are difficult to automate are expected to increase in demand and reward according to recent empirical studies that analyse cognitive and social skills. However, such broad skill categories involve numerous essential competencies which can be differentially rewarded. This chapter analyses the demand for and payment of linguistic competency, a cross-cutting kind of skill that is basic for both cognitive and interactive work and which is central to the work processes of the new economy. While human capital theory predicts an increase in wages as the demand for linguistic skills rises, cultural/institutional perspectives states that some linguistic skills are undervalued. The analysis of occupational and individual data from O*NET and the CPS shows that, in contrast to what neoclassical economic theory predicts, the potentially undervalued language skills are unrewarded and even penalized. This evidence requires further political attention given the large number of workers who may be unrewarded.

4.1 Linguistic skills valuation across occupations

Linguistic skills are important to many jobs, but especially to those in which complex messages need to be processed, affinities have to be established and influence exerted, or knowledge of several codes has to be used. In the context of the new economy, the demand for language in the labour market is greater than ever before due to the processes of informationalism and globalization. The symbolic work characteristic of post-industrial societies fundamentally requires mastery of linguistic code(s) to produce and manage information and knowledge (Castells, 2000; Dhir, 2005). Moreover, the internationalization of markets has generated a greater need to work in several languages (Grin et al., 2010: 11-27, Heller, 2010), just as the expansion of the interactive service

sector requires more effective communication skills (Boutet, 2001; Gatta, 2009). Occupations with relatively higher increases in employment perform a considerable amount of cognitive and social or interactive work. This growth has recently been attributed to the difficulties of automating these tasks through computers or robots (Autor, 2015). Linguistic competency, defined in this paper as the collection of skills, abilities and knowledge that basically involve mastery of linguistic code(s), is an important component of these higher-order constructs and one of the human capacities that is most difficult to automate. Despite the rapid progress in the new technologies, understanding and producing complex messages, communicating in persuasive ways or managing several linguistic codes (i.e. languages) are still largely dependent on the human ability to process language in specific contexts (Levy and Murnane, 2005).

Given the potential of linguistic skills in the new economy, whether in terms of productivity or employability, the question arises as to how they are rewarded. From an economic point of view, language is a kind of human capital because it enhances productivity, and should therefore be rewarded as such (Becker, 1964). This argument is taken for granted among advocates of "skill-biased technological change", who have given evidence of higher rewards for automation-resistant skills such as the cognitive and social ones and of which language is an essential component (Autor, 2003; Deming and Kahn, 2018). However, some authors suggest that despite the need for language in labour processes, linguistic skills may go unrewarded because of the effects of cultural and social institutions: communicative abilities (listening, speaking, etc.) are theorised as devalued abilities because their association with femininity (Steinberg, 1990; England et al., 2001) as well as unrecognised competencies in interactive service work (Korczynski, 2005; Hampson and Junor, 2015). Along the same lines, foreign language knowledge (bi/multilingualism) is regarded by employers as an innate talent or non-technical skill that is unworthy of compensation (Alarcón and Heyman, 2013; Alarcón et al., 2014). This paper aims to contribute to this discussion by contrasting the extent to which occupational demand for linguistic competencies with signs of devaluation has, in effect, a null or even a negative impact on salaries. Our results sheds light on the fairness of the labour market regarding the payment of one of the most relevant kind of

competencies on the threshold of the fourth industrial revolution.

There is, however, little direct evidence of the extent of the demand for linguistic skills and the benefits these competencies have for workers. Whereas some major studies have focused on social and interactive skills or the more general category of soft skills (Steinberg et al., 1986; Balcar, 2016; Deming, 2017), they subsume language skills into these higher-order categories. The studies that make multi-dimensional measurements of skill (Green, 2012; Liu and Grusky, 2013; Deming and Kahn, 2018) do not clearly distinguish or accurately measure linguistic skills, scattering them across broad categories or the tangle of skills that tasks represent. And works that explicitly measure linguistic skills usually focus on one type, mainly multilingualism or foreign language knowledge, and disregard the rest (Fry and Lowell, 2003; Ginsburg and Rodriguez, 2011). If we want to understand the payoff for skills in the new economy, we should identify the essential ones by using much finer-grained measurements. This paper aims to provide a more accurate definition and complete measurement of linguistic skills so that demand and reward can be analysed, because different theories predict different valuation for each of its dimensions (see section 2.2). This is done here by focusing on purely linguistic competencies. In greater detail, a complex measurement of occupational skills from O*NET database is made to separate the linguistic skills from the other non-manual, cognitive skills. These occupational requirements are then linked to data on person-year earnings from the Current Population Survey (CPS). A regression analysis is then carried out to determine the rewards for linguistic competencies by removing the influence of invariant and time-related individual characteristics, and competency-based, compositional and institutional occupation level variables.

The paper is organised as follows. Firstly, the literature is reviewed, where the importance of studying linguistic competences in the context of the new economy is justified and the main theories on skill rewards are presented. Afterwards, the methodological strategy is described: that is, the collection and combination of multi-level data (individual-occupation), the measurement of skills and other relevant variables, and the subsequent regression analysis. Finally, the results are given and the paper concludes with a discussion of the main findings on the payoff for linguistic skills

and the implications for fairness in the labour market.

4.2 Conceptualisation of language skills and theories of its valuation

4.2.1 Linguistic skills in the context of the new economy

The interplay between linguistic activity and professional activity has undergone various transformations during the different phases of capitalism (Boutet, 2001). During Taylorism and Fordism, language was outside the world of work. Speaking was forbidden, a distraction from work that was mainly manual and routine. The idea that language can also be a component of work that enhance productivity first started to be entertained during the crisis of Taylorism in the 80s mainly because of the emergence of the service sector. Nowadays, specific features of the new economy such us the spread of ICT, the globalization of markets, the responses to the saturation of markets through symbolic resources and the growth of the service sector involve an increasing need for language.

Language is now a basic tool for both managing and producing information and knowledge, and can be either the input to, or the output of, labour (Harris, 1998; Castells, 2000; Dhir, 2005). Linguistic skills are necessary inputs to perform communicative tasks and to process complex messages. They are fundamental to a wide range of tasks such as teaching, negotiating, counselling, selling, coaching, etc. Linguistic skills can be directly converted into output – that is, the product of work – and, therefore, a final consumer good valued for its own sake. The production of discourses, speeches, conversations or texts such as reports, books, articles, letters or posts are examples of spoken and written linguistic products. In fact, employers consider that they need more linguistic skills – communicative or verbal skills – than the workforce can provide (The Conference Board, 2006; NACE, 2015). Globalisation has had a direct impact on increasing the demand for language (Grin et al., 2010:11-27; Heller, 2010) because an interconnected world implies greater cross-border movement of information, goods and

people. Transnational markets and international campaigns involve working with several languages (i.e. multilingualism) to manage the diversity of customers and to effectively receive and communicate messages with foreign subsidiaries and external providers (Fixman, 1990; Hagen, 2006; American Economist, 2017). To sum up, and following Feely and Harzing (2003), globalization and informationalism generate three kinds of linguistic needs in business – or linguistic barriers to overcome –, which can occur separately or together: diversity, or number of languages necessary; penetration, or communicative requirements across areas and functions; and sophistication, or complexity in processing language.

Of course, many tasks and outputs require not only linguistic, but also other cognitive or social skills. While other studies have analysed language as part of these higher-order constructs, this paper focuses on linguistic skills themselves, considering that their intrinsic features are distinguishable from other competencies. Evidence for this comes from the important research being carried out on multiple intelligences in parallel to research on cognitive skills (Gardner, 1993). According to this line of research, intelligence is a multidimensional construct consisting of eight domains (i.e. linguistic, spatial, logical, interpersonal, etc.). Linguistic intelligence is defined as the capacity to think in words and to use them to accomplish goals, to study language itself and to learn new languages. Although the various domains reflect general intelligence, they are also internally consistent and independent from each other (Visser, Ashton and Vernon, 2006). Thus, in the labour market the linguistic domain should be analysed separately from, for example, the interpersonal or social domain. While intelligence involves innateness or "potential", skills are acquired by learning or training. Linguistic competencies can also be distinguished from psychological traits and other predispositions usually called non-cognitive abilities. For example, as Balcar (2016: 454) said: "The difference between [cognitive and non-cognitive skills] can be illustrated by the distinction between communicativeness (a predisposition) and the ability to communicate effectively in a work environment (a skill) because even a person with a low degree of communicativeness can be a very good communicator (owing to knowledge of appropriate methods and tools)."

Thus, we are going to analyse the demand for linguistic competence, defined in terms of diversity, penetration and complexity. The next section discusses what previous research says about the reward for linguistic skills, abilities and knowledge.

4.2.2 Is there a reward for linguistic skills? Conflicting evidence from labour research

It has been theorised that a skill-biased technological change (SBTC) is increasing the demand and reward for highly skilled jobs and making routine low-skilled jobs redundant. The continued innovations in computer power, artificial intelligence and robotics are rapidly expanding the set of work activities that can be automated. However, the scope of automation is limited because many tasks require skills for which computer programmers cannot enunciate the explicit rules or procedures (Autor et al., 2003). Cognitive and, especially, social or interactive activities are difficult to automate, which means that they are in high demand and reward (Autor et al., 2003; Deming and Kahn, 2018). The limitation of these studies is that they use broad categories of skills that do not allow closer examination of the demand and reward associated with the skills they are made up of. This is the case of linguistic skills, which are split up and subsumed into higher-order constructs. Verbal skills are considered a cognitive skill learned through education (Liu and Grusky, 2018); communicative abilities are usually treated as a part of the more complex concept of "soft skills" (Balacar, 2016; Klein, DeRouin and Salas, 2006); and multilingualism or foreign language knowledge is something in between, a hard skill that can be acquired through learning, but also a soft skill because it can be learned in informal contexts.

These different linguistic skills can have their own particular payoff in the labour market, which is not appreciable if they are subsumed into broad categories. Two schools of research give a possible answer to the question of how linguistic skill are rewarded in the new economy: the neoclassical economic theory of human capital and the cultural/institutional theories of labour markets.

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According to human capital theory (Becker, 1964), different jobs require different competencies, which implies, in turn, different wage rewards. The differences in the payoff for skills is the result of the supply-demand mechanism in the labour market. The supply side contends that marginal workers require a return to be encouraged to invest in training and apply their skills. The demand side states that profit-maximizing employers will hire more expensive skilled workers only in jobs in which these extra skills increase productivity enough to cover the higher labour costs. This reasoning is adopted by SBTC advocates, according to whom demand for cognitive and social skills is on the increase because they are so difficult to substitute with technology. Thus, according to human capital theory, it can be hypothesized that: *Other things being equal, the greater the demand for linguistic skills, abilities or knowledge in an occupation, the greater the pay associated with them* (hypothesis 1).

However, in the human capital and SBTC framework, empirical evidence regarding the return on linguistic skills is mixed. Cognitive competencies, of which verbal skills are an important part, are usually well paid. There is more controversy regarding interactive or social skills, for which communicative skills are central. Balcar (2016) found that almost three-quarters of the variability of a set of soft skills is accounted for by effective communication. And the whole combination of soft skills appears to have a positive impact on wages that is comparable to that of hard skills. Deming and Kahn (2018) found large positive correlations between wages and whether a job vacancy requires cognitive and social skills. In their research, job ads were classified into 10 skill categories, with keywords such as “communication”, “negotiation” or “collaboration” being grouped under the category of social skills. Contrary, focusing on task intensity rather than skills, Green (2012) reveals that not all kinds of linguistically demanding activities would be rewarded. While tasks named “influence communication” are positively associated with wages, those categorised as “external communication” are not significantly rewarded (or are penalized in some models). However, the role of linguistic competencies is unclear because these categories include a variety of different activities. While teaching, persuading and active listening belong to the former, selling, counselling and advising belong to the later. Finally, the literature also shows contradictory results about language

diversity. Proficiency in several official languages in multilingual countries has been shown to be rewardable on an individual and corporate level (Grin et al., 2010). This is not so clear in the case of foreign language knowledge. Whereas Fry and Lowell (2003), Pendakur and Pendakur (2002) or Morris et al. (2015) found no reward for language knowledge, Saiz and Zoido (2005) and Ginsburgh and Prieto-Rodríguez (2011) found positive rewards.

Many labour researchers consider that cultural and social institutions (i.e. ideologies, regulations, etc.) influence the recognition of skills and the returns they give. Various studies in this line of reasoning provide a framework for understanding the contradictory results of economic literature on the payoff for linguistic skills. Three arguments explain why communicative and bi/multilingual competencies would be unrewarded and even penalized:

Devaluation of women's work. There is considerable evidence to suggest that some activities associated with femininity are deprecated and devalued (Steinberg, 1990; England et al., 2001). The studies on this question focus on what has been called "interactive service work", jobs that involve face-to-face interaction with clients or customers. This work pays less than other work with comparable requirements for education, training and skills. Kilbourne et al. (1994) developed a scale to measure nurturant work that involves dealing with people but also requires talking and listening. Their results show a wage penalty for both male and female workers. More specifically, Steinberg et al. (1986: 152) found that jobs involving communication with the public and group facilitation paid less than other jobs, regardless of other skill demands.

Unrecognised skills in service jobs. Lower-status service-sector jobs mainly require emotional work, caring labour and interpersonal tasks, for which linguistic skills are crucial to effective communication (Gatta, 2009). However, these activities mainly require tacit skills, which are derived from experience and not objectified in qualifications. As a consequence, they are exploited by employers as invisible skills (Korczynski, 2005; Hampson and Junor, 2015). The lack of union representation in this type of job allows employers to exploit the skills of their employees without rewarding

them appropriately (Thompson, Warhurst and Callaghan, 2000). The lack of recognition would be extended to professional jobs, in which other competencies are more important and used as a mechanism of closure, so that communicative skills remain undervalued because of their association with low-paid service jobs.

Naturalized competence. Naturalization refers to the consideration that certain competencies are a natural capacity that is embodied in the worker. From an employer's perspective, these naturalized competencies are not considered dimensions of human capital because they do not require training, and are regarded, therefore, as not requiring reward. Linguistic skills are especially susceptible to being regarded as such. For example, Alarcón and Heyman (2013) show how foreign language skills are used by employers but not valued as a technical competency. Bilingualism, in the context of the US Border, is used by employers as a sign of cheap and flexible labour, rather than as an economically and socially valued "skill". A similar conclusion can be derived from Duchene (2009), which found no extra benefits for multilingual workers in call centres. Employers recruit multilingual workers hoping to benefit from such skill at specific times. Works based on large scale surveys also report null or negative rewards for language knowledge, mainly in the case of immigrants (Shin and Alba, 2009; Alarcón et al., 2014, Robinson-Cimpian, 2014).

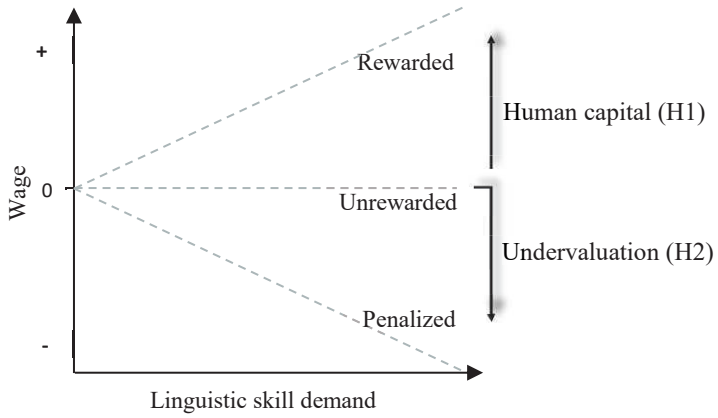
According to these studies, some linguistic skills (communicative and multilingual) are undervalued because of ideological and institutional factors. In this respect, it can be hypothesised that: *Communicative abilities and foreign language competencies are undervalued and thus have either no return or a negative return after removing individual and occupational heterogeneity* (hypothesis 2).

4.3 Methodology

The conflicting evidence from the reviewed literature gives rise to two competing hypotheses (see Figure 4): one derived from human capital theory (H1) and the other from explanations of the undervaluation of skill (H2). The methodological design

presented in this section has focused on testing these hypotheses, which have not yet been formally compared from a quantitative point of view.

Figure 4. Graphical representation of the hypothesis of occupational skills valuation



Notes: Human capital theory (H1) establishes that the greater the demand for linguistic competency across occupations, the higher the rewards will be. On the contrary, undervaluation (H2) means that increasing demand for linguistic skills has no rewards or even negative rewards (penalty).

4.3.1 A match of occupational and worker data

Two public databases from the United States were used to study the rewards for linguistic skills. They supply information on wages and individual control variables, as well as the linguistic requirements and controls at the occupational level. The first database – the 2013-18 March Supplement of the Current Population Survey (CPS) – provides information for a model of individual earnings. [11] The analysis was carried out for the civilian work force aged between 16 and 65. A second database from the Occupational Information Network (O*NET, version 20.1) was used to measure linguistic and other skill demands. Developed by the US Department of Labor, it provides ratings of more than one thousand occupations in the US labour market on several occupational aspects. These ratings come from questionnaire responses by sampled workers and occupational experts and are reported in the O*NET database as average values of all informants. In this study, skill and ability-related demands were used, as was knowledge from occupation experts and job incumbents. Information from

[11] We used the IPUMS identifiers to link repeated observations and variables from the ASEC.

both data sources (CPS and O*NET) was combined using SOC codes and their corresponding crosswalks. The total unified sample with non-missing wage values was 72,655 observations linked to 470 census occupation codes.[12]

4.3.2 Measuring wages, competencies, compositional and institutional variables of occupations

Wages: Earnings are measured as hourly wages. The hourly wages for non-hourly workers were computed by dividing the weekly wage by the number of hours worked per week. The wages were adjusted for inflation using the Consumer Price Index and expressed in 2018 dollars. Truncated wages of highly paid workers were multiplied by 1.4[13]. Finally, the logarithmic transformation of the variable was applied to reduce the positive asymmetry of the variable. The resulting outcome was modelled according to: years of schooling, experience and its square, civil status, region, urbanicity, industry, sector, type of contract, union membership, and person and year fixed-effects. In the appendix the main demographic variables are presented along with its averages and standard deviations.

Linguistic demand: Linguistic competence is defined as the collection of linguistic skills, abilities and knowledge, of which the mastery of the linguistic code is the essential part. The term "linguistic" refers to the use of natural language.[14] This is made up of signs, or a collection of abstract symbols codified to carry out complex communication. Of the long list of required skills in the O*NET database, all those that fitted this definition were selected, either in terms of complexity, penetration or diversity: reading and writing abilities, speaking and active listening skills, as well as knowledge of English and other languages (compound skills such as "negotiation" or "instructing" was not included in

[12] Although O*NET provides detailed information about the different occupations of the SOC, it has only been possible to match 470 census occupations between the two databases. For the codes with various correspondences in the O*NET database, the average has been taken.
[13] This is one of the solutions used by Card and DiNardo, 2002.
[14] By "natural language" we mean any language that has evolved in humans through use and repetition without conscious planning or premeditation. Natural languages can take different forms, such as speech or signing (but not formal languages such as computing or logic).

the measurement, because although they have an important linguistic component, they also require other essential competencies). These variables were factorialised together with a list of competencies from Liu and Grusky's model (2013), one of the most complete models of cognitive demand in post-industrial labour markets.[15] Both *importance* (5-point scale) and *level* (7-point scale) items are considered, normalised to range between 0 and 1.[16] Principal component analysis (PCA) was applied to reduce the dimensionality of all items to a few dimensions according to the patterns of correlation between them. This enables competency demands to be better understood, and the income models to be estimated avoiding the problem of multicollinearity. The number of factors with eigenvalues higher than 1 were retained and the factor loadings were reported using an orthogonal equamax rotation.

The result is nine factors with similar variances and a structure comparable to that of Liu and Grusky's work but enhanced in terms of linguistic competencies (Table 7). The first factor expresses the demand for scientific and engineering knowledge, and the second for numerical and quantitative competencies. The third factor is a collection of competencies which could be called verbal-reasoning. These include deductive and inductive reasoning skills and the ability to identify and solve complex problems. Linguistic ability relating to the level of written comprehension and expression is also relevant to this factor. The fourth factor expresses the demand for communicative competencies, with important loads for items related to efficient communication such as clarity of speech, active listening and speaking. The fifth factor focuses on creative abilities, the sixth factor on electronic and computer skills and the seventh on managerial skills. The eighth clearly express knowledge of foreign languages and the ninth nurturing skills.

[15] While the sociological and economic literature describes other complex measures of cognitive skills (e.g. Green, 2012; Felstead et al., 2007; Deming and Kahn, 2018; etc.), we consider that this is the one which covers the broadest range of competencies. In any case, they usually provide a core set of common factors or groups of skills.

[16] The decision to use both scales was made for conceptual and empirical reasons. Importance was considered just as relevant as level. Moreover, both scales are strongly correlated (average inter-item correlation r=0.93).

Table 7. Cognitive skill requirements with PCA rotated factor loadings (r >0.5)

Item	Loading	Item	Loading	Item	Loading
S&E Knowledge		Deductive reasoning	0.54	Innovation	0.61
Engineering	0.85	Inductive reasoning	0.61	Operations analysis	0.60
Design	0.74	Critical thinking	0.58	**Computer skills & knowl.**	
Mechanical	0.87	Active learning	0.57	Programming	0.70
Physics	0.91	Info. ordering	0.50	Electronics	0.80
Chemistry	0.80	**Communicative abilities**		Computers interact.	0.77
Numerical Skills		Oral comprehension	0.63	**Managerial skills**	
Numerical reasoning	0.82	Oral expression	0.67	Financial Resources	0.69
Number facility	0.85	Speech clarity	0.63	Personnel Resources	0.70
Mathematics	0.85	Active listening	0.61	Management	0.83
Verbal-reasoning skills		Speaking	0.64	**FL Knowledge**	
Written comprehen.	0.51	**Creative abilities**		Foreign languages	0.94
Written expression	0.50	Fluency of ideas	0.59	**Nurturing skills**	
Problem sensitivity	0.60	Originality	0.64	Service orientation	0.67
Problem solving	0.51	Thinking creatively	0.77	Assisting and caring	0.92

Notes: Data are from O*NET (N=470 SOC occupations). For ease of exposition, the table shows which items primarily loaded on the 9 factors. Moreover, considering that most "level" and "importance" scales load on the same factor, only the higher load between the two is reported. The complete factor loading matrix can be requested from the authors.

Competency-based, compositional and institutional variables: At the occupational level, three types of control variable were included: competency-based, compositional and institutional (Carbonaro, 2005). The first refers to demands for cognitive work, indispensable control variables for estimating the effects of the demand for linguistic skills. The measurement of this demand using the factorialisation of the O*NET items was described in the previous section. The demand for knowledge of English is also included within this collection of variables but not in the factor analysis as it is basic knowledge in the US context, a requirement for any job and, therefore, correlated to some degree with all linguistic demands. There is also evidence that the autonomy to make decisions is as important as many other skills, or even more important, so an O*NET item was included about the "degree of freedom to make decisions without supervision".

The proportion of women and black workers within each occupational category has been included among the compositional variables. The most feminised occupations typically have lower salaries than those dominated by men, and the same occurs in occupations

with greater proportions of black workers. The percentage of qualified employees has also been included. Unlike previous variables, salaries tend to increase with the level of credentialism. Of the institutional variables, the rate of unemployment and the degree of unionization are key. The first reflects the relationship between work supply and demand. The occupations with the greatest rates of unemployment (more supply than demand) tend to offer low salaries. However, the occupations with more unionization tend to provide higher salaries because of the defensive role trade unions perform in wage negotiations. All these variables were obtained from aggregations of data from the CPS 2013-18 sample (see Table 8 in section 4.4).

4.3.3 Skill requirement in predicting wages: A "within" regression

Fixed-effects regressions were carried out to analyse CPS (2013-18) wage data. This data is arranged in a pooled two-wave panel. Non-repeated observations are disregarded in this analysis, so the final sample was of 40,386 observations that correspond to 20,193 workers. The coefficients of occupational variables are estimated by controlling for person and year fixed-effects as well as observed time-varying individual variables. Person fixed-effects are useful for eliminating omitted-variable bias created by the failure to include controls for unmeasured, unchanging personal characteristics. Workers may have different unmeasured productivity-related factors such as skills and personality traits. These are important in the context of this study, where linguistic skills effects on wages can be confounded with personality traits (e.g. sociability or communicativeness) and other intellectual skills. After individual heterogeneity had been removed in this way, occupational variance was modelled using competency-based, compositional and institutional variables. The model, which is estimated with the "first difference" approach, can be summarized with the following equation:

$$\Delta \log(W)_{it} = \Delta L_{it}\beta_1 + \Delta O_{it}\beta_2 + \Delta X_{it}\beta_3 + \Delta \varepsilon_{it} \qquad (2)$$

where *i* indexes individuals at time *t*. Δ is the first difference operator (z_t-z_{t-1}), log(*W*) is logged hourly wages, *L* is the vector of linguistic competencies of the occupation at

which workers belong, O is the vector of the other occupational covariates, X is the vector of individual covariates, and ε is the residual.

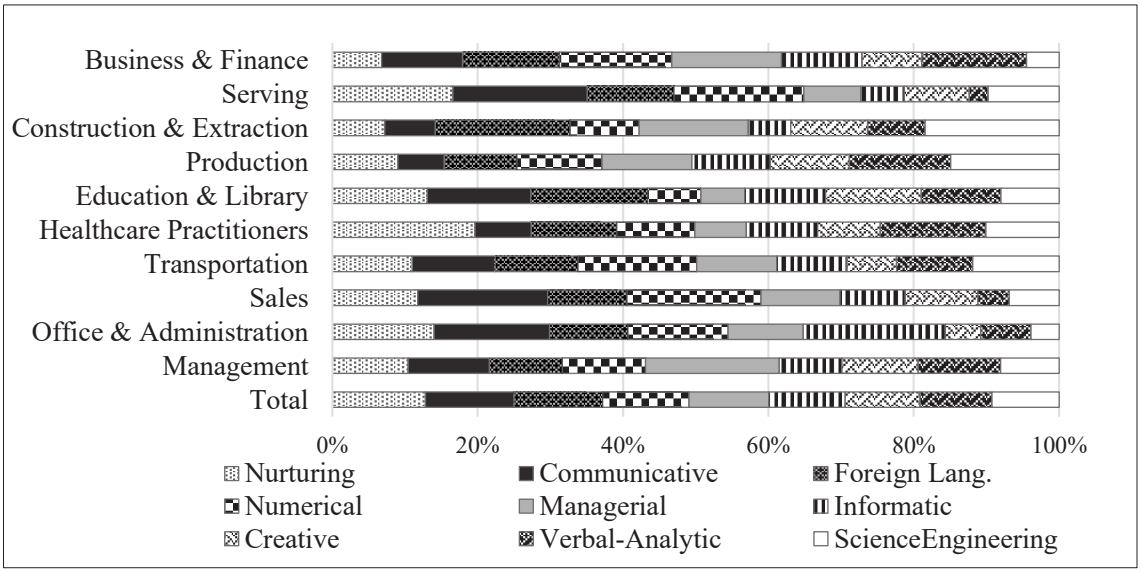
The model from equation 1 allows us to statistically test whether there is a wage compensation or a devaluation for language skills. However, extended models with interactions between linguistic demand variables and major occupational groups were also estimated. Although the hypothesis of this study presents two conflicting, general claims about rewards for linguistic skills, other occupational characteristics may reduce or intensify the main effects of these competencies.

4.4 Results

According to the PCA results, demand for linguistic skills can be analysed through three basic components: verbal-reasoning skills for processing complex messages, the ability to effectively communicative and the knowledge of foreign languages (Figure 6 in the appendix shows the occupational dispersion in the three-dimensional space defined by these three components). To analyse demand, factor scores were "destandardized" to restore the metric of the input variables, ranged between 0 and 1. This metric indicates the "cognitive load" of each skill across occupations.

Figure 5 shows the mean proportion of each required skill in relation to the total cognitive load for the 470 occupations (weighted by the total number of workers). The mean proportion is also computed for the ten occupational groups with highest employment in 2018. After nurturing skills, communicative abilities and foreign language knowledge are the second most required across occupations (12.2% of the total skill load). Verbal-reasoning skills have a lower load across occupations (9%). The mean load of linguistic competencies as a whole is, therefore, one third. However, this distribution varies notably between groups of occupations. Communicative abilities are particularly important in office and administration, sales and serving occupations. Foreign languages are a major requirement in education and, curiously, in construction. And verbal-reasoning skills predominate in business, production and healthcare occupations.

Figure 5. Average cognitive skill loads for the ten major occupational groups



Notes: Average skill load by total occupations and the ten major occupational groups with highest employment in 2018. N=470 (data weighted by occupation size).

Table 8 shows the means and standard deviations of occupational variables (competency-based, compositional, institutional and average salary) as well as the correlation between them. The mean values for the demand of competencies have a pattern that is similar to the one discussed above. The means of the compositional and institutional variables are close to those of the official statistics. The correlations between competency-based variables are practically non-existent, given that they are derived from a factor analysis that produces independent components. Compositionally, there is a gender bias on skill requirements. Occupations with a greater demand for communicative and foreign-language competence, but especially nurturing, are most feminised; conversely, in technical occupations males are overrepresented (the exception is informatic skills, probably because interaction with computers in office jobs). Non-white workers are notably less present in occupations which demand both managerial and communicative competencies, whereas they are significantly linked with nurturing skills. The correlation with the proportion of highly qualified workers is highest for verbal-reasoning and negative with nurturing skills. Of the institutional variables, unionization mostly correlate with foreign language knowledge, whereas unemployment negatively correlates with verbal analytic skills indicating more demand than supply. Finally, the correlations with mean log wage show a strong association with

the demand for verbal-reasoning and managerial skills, whereas the correlation with nurturing competencies is the lowest. As in previous studies, the proportion of women and non-white workers is negatively related to salaries, while the proportion of qualified workers is positively correlated to a great extent.

In Table 9 the results of three models from equation 1 are presented. Coefficients are only shown for the occupational variables, given that they are the focus of the paper (see full results in Table 12 in the Appendix). Nevertheless, year fixed-effects as well as time-varying individual variables have been incorporated in all models. The first model in column 1 only includes individual variables. It was computed to contrast the proportion of variance in logged wages attributable to occupational variables, which is of 5.5% (R^2 model 4 - R^2 model 1). Model 2 (second column) shows the estimates of occupational control variables. As can be seen, feminization of occupations has a negative association with wages, whereas credentialism impact wages positively. Unionization and unemployment both have a significant impact but with a different sign. Model 3 (third column) shows the estimates of competency-based variables, including linguistic ones (all of them expressed as standardized factor scores). All the regression coefficients of skill requirements are significant with the exception of communicative abilities and nurturing skills. The third model (column 3) presents the full model with all the occupational variables. Although at different levels of importance, most of the competency-based variables are statistically significant. The exceptions are foreign-language knowledge, which become non-significant, and nurturing skills, already non-significant in the previous model, and, therefore, their rewards are not different from zero at any level. On the other hand, communicative abilities become significant but with a negative effect. A one standard deviation increase in communicative abilities reduces wages by nearly 1.7%. In contrast, verbal-reasoning demand is the best paid of all competencies, with an increase in wages of nearly 2.5% for each standard deviation. It is worth noting that all compositional and institutional variables are non-significant in the full model, including the proportion of woman and qualified workers as well as unionization and unemployment.

Table 8. Descriptive statistics and correlations of occupational variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. S&E	0.30	0.21	1														
2. Numerical	0.38	0.22	-0.13	1													
3. Verbal-reasoning	0.35	0.25	0.02	-0.06	1												
4. Communicative	0.41	0.23	-0.06	0.03	-0.02	1											
5. Creative	0.36	0.25	0.02	-0.04	*0.15*	0.07	1										
6. Informatic	0.36	0.23	-0.07	-0.06	0.01	0.00	0.02	1									
7. Managerial	0.39	0.28	0.04	*0.15*	*0.21*	0.06	0.06	-0.05	1								
8. Foreign language	0.39	0.22	0.09	*-0.18*	0.07	-0.08	-0.07	0.02	0.00	1							
9. Nurturing	0.42	0.24	-0.09	-0.06	0.07	0.03	0.07	0.01	*-0.11*	-0.04	1						
10. Prop. female	0.48	0.29	*-0.58*	0.02	-0.06	0.18	-0.09	*0.13*	*-0.24*	*0.13*	*0.50*	1					
11. Prop. non-white	0.18	0.07	*-0.29*	0.01	*-0.13*	*-0.30*	-0.08	0.07	*-0.36*	-0.03	*0.23*	*0.26*	1				
12. Prop. qualified	0.35	0.29	*-0.12*	*0.12*	*0.58*	*0.30*	*0.42*	*0.34*	*0.23*	*0.34*	0.09	*0.18*	*-0.16*	1			
13. Unionization	0.12	0.13	*0.19*	*-0.29*	*0.17*	-0.05	-0.04	0.06	*-0.19*	*0.22*	*0.14*	-0.02	-0.06	*0.16*	1		
14. Unemployment	5.23	3.53	0.09	*-0.19*	*-0.47*	*-0.31*	*-0.33*	*-0.29*	*-0.27*	-0.07	*-0.28*	*-0.21*	*0.13*	*-0.67*	*-0.17*	1	
15. log hourly wage	2.90	0.38	*0.12*	*0.14*	*0.62*	*0.24*	*0.42*	*0.34*	*0.47*	*0.19*	-0.05	*-0.18*	*-0.32*	*0.83*	*0.10*	*-0.69*	1

Notes: The coefficients in italics are significant at $p<0.05$. N=470 (data weighted by occupation size). Source: CPS, 2013–18 and O*NET v.20.1.

Table 9. Estimated effects of occupational variables on logged wages

Variables	Model 1	Model 2	Model 3	Model 4
Verbal-reasoning			**0.038*** **	**0.025*** **
			(0.006)	**(0.008)**
Communicative			**-0.003**	**-0.017** **
			(0.006)	**(0.008)**
Foreign languages			**0.022**	**0.003**
			(0.006)	**(0.009)**
Science & engineering			0.010*	0.014*
			(0.006)	(0.008)
Numerical			0.020***	0.016**
			(0.006)	(0.007)
Creative			0.032***	0.023***
			(0.006)	(0.008)
Informatics			0.028***	0.015*
			(0.006)	(0.008)
Managerial			0.024***	0.017**
			(0.005)	(0.006)
Nurturing			0.001	-0.001
			(0.006)	(0.007)
Proportion female		-0.065**		0.007
		(0.026)		(0.033)
Proportion non-white		-0.051		-0.054
		(0.084)		(0.091)
Proportion qualified		0.163***		0.067
		(0.032)		(0.042)
Unionization		0.002		0.073
		(0.054)		(0.059)
Unemployment		-0.003		0.002
		(0.002)		(0.002)
English		0.174***		0.186**
		(0.067)		(0.083)
Autonomy		0.004		0.000
		(0.013)		(0.014)
Overall R^2	0.280	0.325	0.335	0.335

Notes: CPS, 2013–18 and O*NET v.20.1. N=40,392 observations corresponding to 20,196 workers. Dependent variable: Log adjusted hourly wages. All regression models include: years of schooling, experience, experience^2, marital status, region, urbanicity, industry, sector, type of contract, membership of trade unions and year fixed-effects. Linguistic variables and their coefficients are highlighted in bold. *p<0.1; **p<0.05; ***p<0.01.

Table 10. Estimated effects of linguistic competences on logged wages, by major occupational groups (those ten with higher employment in 2018)

	Model 4.1	Model 4.2	Model 4.3
	Verbal-reasoning skills	Communicative abilities	Foreign language knowledge
Management	-0.037	-0.013	-0.019
	(0.025)	(0.032)	(0.025)
Office & Administration	-0.021	-0.008	0.008
	(0.022)	(0.019)	(0.019)
Sales	0.035	-0.048**	0.029
	(0.023)	(0.019)	(0.046)
Transportation	-0.049*	-0.037	-0.002
	(0.029)	(0.025)	(0.029)
Healthcare Practitioners	0.007	0.055	0.002
	(0.031)	(0.059)	(0.036)
Education & Library	-0.083**	-0.163**	-0.030
	(0.042)	(0.071)	(0.021)
Production	-0.022	-0.053	-0.002
	(0.026)	(0.032)	(0.032)
Construction & Extraction	0.057	-0.032	-0.015
	(0.039)	(0.034)	(0.02)
Serving & Food preparation	0.010	-0.078***	-0.064***
	(0.032)	(0.026)	(0.031)
Business & Finance	-0.034	-0.046	0.028
	(0.029)	(0.03)	(0.027)

Notes: CPS and O*NET data. N=40,392 observations corresponding to 20,196 workers. The regression model includes: years of schooling, experience, experience^2, marital status, region, urbanicity, industry, sector, type of contract, membership of trade unions and year fixed-effects. * p<0.1; ** p<0.05; *** p<0.01

Finally, Table 10 answers the question of whether the payoff for linguistic competencies varies across the ten major occupational groups with highest employment by adding interactions to model 4. This analysis tests for the existence of other specific occupational features that can produce the payoff for linguistic skills rather than the cultural views of undervaluation. The analysis of rewards for linguistic skills by major occupations can also reveal if the results observed are caused for any group with particularly different effects (e.g. serving occupations). Results show that there is consistency across occupational groups, with reduced, generally non-significant coefficients for interactions. However, there are some exceptions. The penalty for communicative abilities is increased in sales, serving, and, specially, education and

library occupations. Foreign language knowledge is penalized in the case of serving occupations.

4.5 Concluding remarks

Labour research has made a great effort to measure skills. However, the measurements made are usually of broad constructs or categorisations of skills such as cognitive, social or soft skills and of tasks as proxies for clusters of skills. A closer examination to essential skills' payoff is necessary to better understand inter-occupation wage inequality. This paper has focused on linguistic skills, which are basic to a wide range of tasks. They are of particular relevance in the context of the new economy, because informationalism and globalization give language a major role in labour processes. However, labour research has paid little attention to exploring the demand and, especially, the payoff for language-related skills in the new economy.

By selecting purely linguistic items from the O*NET data base, three kinds of linguistic skills were obtained through a multivariate analysis with other kinds of cognitive, non-manual competencies: 1) verbal-reasoning skills, 2) communicative abilities and 3) foreign-language knowledge. The measurement of these skills, although still very abstract, represents three kinds of linguistic need identified in business research relative to complexity, penetration and diversity. Hence, this measurement makes it possible to analyse linguistic demands and rewards in the labour market in more detail than in previous research. Descriptive results show that, on average, linguistic competencies represent one-third of the total cognitive load of occupations. Communicative abilities and foreign-language knowledge (both with an average load of 12.2% across occupations) are in particular demand by the labour market. Bivariate correlations barely showed any compositional pattern among linguistic skills. However, it should be mentioned that communicative abilities correlate with feminised, white occupations and foreign-language knowledge do it only modestly with feminised occupations. Verbal analytical skills strongly correlate with the proportion of qualified workers, but not with other compositional variables.

Advocates of skill-biased technological change argue that it is difficult to substitute cognitive and social skills with technology. It is only to be expected that skills that are difficult to automate should be highly demanded and, in line with human capital theory, highly paid because of the positive balance with skill supply. Because the difficulty to automate linguistic competencies, they should be in demand and highly rewarded. SBTC researchers have showed that cognitive and social skills – of which language is a part – are heavily rewarded. However, there is also evidence to suggest that communicative skills, as well as foreign-language knowledge, are unrewarded in the labour market. It has been argued that institutional and ideological factors undervalue such competencies because of their relation to women's work, their predominance in low-status service-sector jobs or their naturalization. Our language-enhanced cognitive skill model sheds light on this issue. The net rewards associated with skills are obtained by removing individual traits and occupational control variables from regression estimates. The results show that almost all cognitive skills have a positive impact on wages, except for those of caring and linguistic competencies. As far as the latter are concerned, a distinction should be made, however, between the effect of verbal-reasoning skills requirement and the effect of communicative abilities and second-language knowledge requirements. The first has a strong positive effect on wages, as predicted by neoclassical theory. The other two have a negative and null effect, respectively, which supports the hypothesis of undervaluation. Thus, in contrast to the other competency-based demands that have been analysed, they are unrewarded and even penalized. In line with previous literature, only nurturing skills have also shown a null reward (although not a penalty). It should be pointed out that the argument here refers only to the undervaluation of skills. The effect of this process is independent from that of individual or occupational characteristics. The model described in this paper has controlled for individual characteristics such as race and sex as well as for occupational variables, such as feminization or work autonomy. Hence, undervaluation of competencies is independent of other inequality-producing processes like discrimination or workplace deskilling. What is more, we have seen that the coefficients obtained barely change across occupational groups. Non-significant interactive effects suggest that the valuation of skills depends on institutional or cultural processes rather than occupational factors.

Linguistic undervaluation similarly affects all occupations. This is of course a problem for those occupations in which communicative or foreign-language knowledge predominate. To illustrate this with an example from our data, 76% of the cognitive skill load of telemarketers is communicative abilities, and the wage in this occupation is less than half of the occupational mean. The opposite is true for verbal-reasoning skills, which appear in the results as the best-paid kind of skill.

This result gives rise to several considerations. Firstly, considerations linked to the study of the labour market and the wage setting. The optimistic view of SBTC supporters should be nuanced. Although skills that are difficult to automate skills are expected to be in higher demand, as is the case of interactive skills, cultural and social institutions influence their remuneration above and beyond the supply-demand dynamic. The results of this paper indicate that linguistic competencies with signs of devaluation in the literature are, in effect, unrewarded even though they are in high demand. In this respect, the cognitive and social skills which are believed to be in higher demand should be examined more closely. Moreover, to reach an understanding of wage settings and of payment for competencies it is necessary to take into account the principles of rational choice (debated in this paper from the perspective of the neoclassical theory of human capital) and cultural or social institutions.

A considerable number of the studies which analyse payment for linguistic skills focus on the knowledge of foreign languages. It is a sensitive topic given that economic/instrumental motives are the most important for learning and maintaining language. As with other types of human capital, the wage benefits associated with language should exceed the training costs of its acquisition. Moreover, rewarding knowledge of different languages can be a key element in the selective acculturation of immigrants in host societies. This argument is especially relevant in the US context given the high percentages of bilingualism and immigrant population. The academic literature is contradictory on this question: some studies report considerable returns, while others report a null effect or penalty. The analytical perspective adopted in this study shows that, at an occupational level, there is no reward for foreign-language knowledge.

The valuation of linguistic skills

The results of this research give rise to another issue related to public policy and fairness in the labour market. Skills are social constructions and representations or ideologies can be modified so that such competencies are fairly paid. Free market mechanisms cannot change cultural structures so political intervention is required to prevent competencies from devaluing. Political and trade-union actions should focus on measures of comparable worth and on promoting a wider and democratic conceptualization and valuation of competences. Employment in occupations that require interactive and, specifically, linguistic skills is on the increase. In fact, in the service sector, linguistic skills are the most important for many jobs (and increasingly the only ones demanded because of the robotization of labour processes). If such important skills for the labour market and the new economy are devalued, much of the workforce will not be receiving payment for their skills and work.

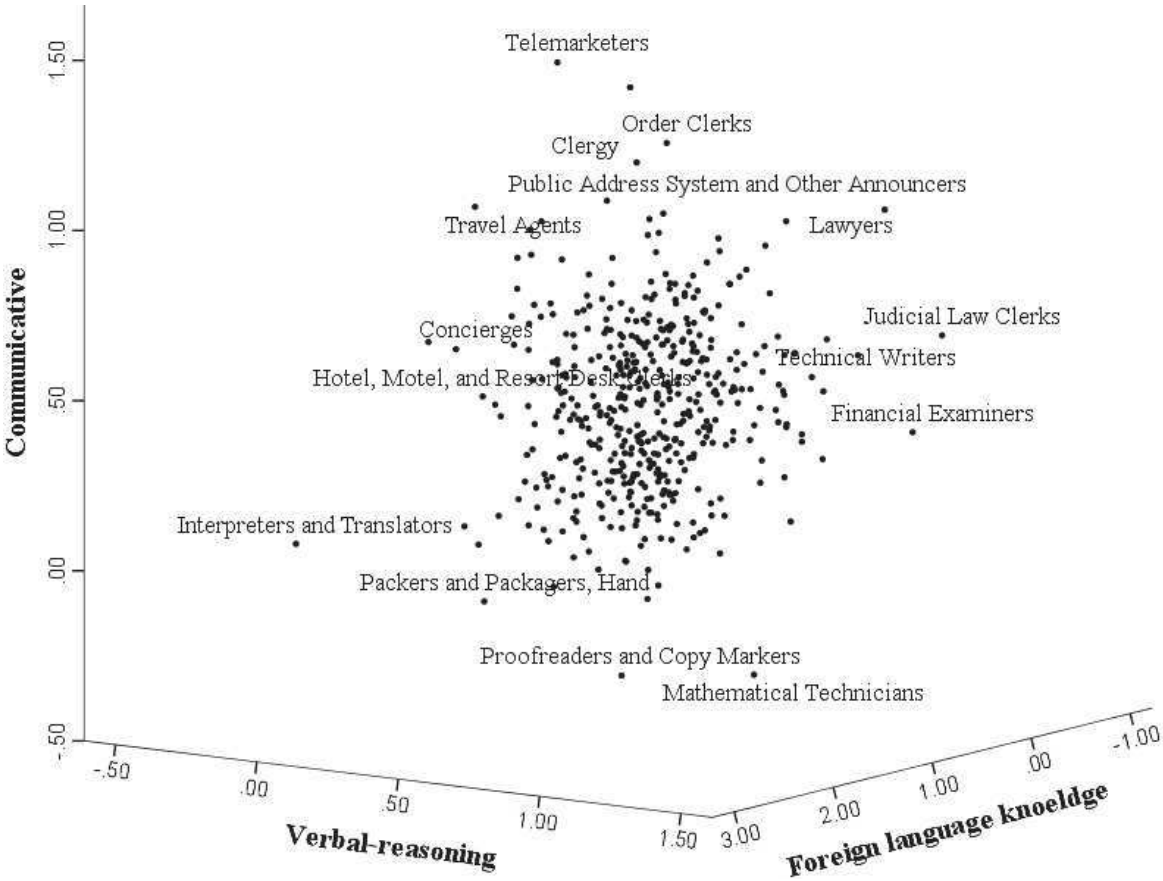
4.6 Appendix

Table 11. Mean and standard deviation of individual-level variables

Variable	Mean	Standard deviation
Adjusted hourly wage	21.34	17.31
Log hourly wage	2.71	1.08
Female (omitted=male)	0.47	0.50
Non-white (omitted=white)	0.20	0.40
Years of schooling	13.95	2.61
Potential experience	22.71	13.03
Experience^2/100	5.99	5.77
Married	0.54	0.50
Region (omitted= Northeast)		
Midwest region	0.22	0.41
South region	0.36	0.48
West region	0.23	0.42
Urbanicity (omitted=non)	2.57	0.91
Industry (omitted=other)		
Natural resources and mining	0.02	0.15
Construction	0.07	0.25
Manufacturing	0.10	0.30
Trade. Transportation and utilities	0.17	0.37
Media	0.02	0.14
Financial activities	0.07	0.25
Professional and business services	0.12	0.32
Education and health services	0.22	0.41
Leisure and hospitality	0.10	0.30
Public administration	0.05	0.21
Private sector	0.85	0.36
Union member	0.13	0.33
Full time worker	0.82	0.39

Notes: Civilian labour force aged between 16 and 65 years with valid missing data. March Earner Study of the CPS. 2013–16.

Figure 6. Occupational dispersion regarding linguistic skills requirements



Notes: Data are from O*NET (N=470 SOC occupations). The five occupations with greater and lesser loads in each score have been labelled. The scales are z-standardized (mean=0 and standard deviation=1).

Table 12. Estimated individual and occupational level effects on logged wages (full results from Table 9)

Variables	Model 1	Model 2	Model 3	Model 4
Year2013	-0.049	-0.047	-0.048	-0.048
	(0.024)	(0.024)	(0.024)	(0.024)
Year2014	-0.053	-0.051	-0.052	-0.052
	(0.021)	(0.021)	(0.021)	(0.021)
Year2015	-0.022	-0.021	-0.023	-0.023
	(0.018)	(0.018)	(0.018)	(0.018)
Year2016	0.013	0.014	0.012	0.012
	(0.015)	(0.015)	(0.015)	(0.015)
Year2017	-0.014	-0.014	-0.015	-0.014
	(0.01)	(0.01)	(0.01)	(0.01)
Union member	0.044	0.044	0.045	0.043
	(0.014)	(0.014)	(0.014)	(0.014)

Married	0.005	0.005	0.003	0.004
	(0.026)	(0.026)	(0.026)	(0.026)
Years of school	0.041	0.037	0.037	0.037
	(0.005)	(0.005)	(0.005)	(0.005)
Experience	0.019	0.018	0.017	0.018
	(0.004)	(0.004)	(0.004)	(0.004)
Experience^2	-0.035	-0.034	-0.033	-0.033
	(0.01)	(0.01)	(0.01)	(0.01)
Full time worker	0.072	0.064	0.062	0.061
	(0.015)	(0.015)	(0.015)	(0.015)
Private sector	0.023	0.026	0.026	0.028
	(0.02)	(0.02)	(0.02)	(0.02)
NAICS 21	0.115	0.102	0.098	0.1
	(0.085)	(0.085)	(0.084)	(0.085)
NAICS 22	0.145	0.129	0.119	0.12
	(0.079)	(0.079)	(0.079)	(0.079)
NAICS 23	0.078	0.059	0.041	0.035
	(0.065)	(0.066)	(0.066)	(0.066)
NAICS 31	0.019	0.008	-0.002	0.002
	(0.069)	(0.069)	(0.069)	(0.069)
NAICS 32	0.058	0.039	0.03	0.032
	(0.067)	(0.067)	(0.067)	(0.067)
NAICS 33	0.05	0.026	0.015	0.018
	(0.064)	(0.064)	(0.064)	(0.064)
NAICS 42	0.017	-0.011	-0.002	-0.002
	(0.063)	(0.063)	(0.063)	(0.063)
NAICS 44	0.002	0.004	0.01	0.014
	(0.062)	(0.062)	(0.063)	(0.063)
NAICS 45	-0.028	-0.026	-0.021	-0.016
	(0.067)	(0.067)	(0.067)	(0.067)
NAICS 48	0.113	0.093	0.106	0.106
	(0.071)	(0.071)	(0.071)	(0.071)
NAICS 49	0.017	0.003	0.01	0.006
	(0.082)	(0.082)	(0.082)	(0.082)
NAICS 51	0.137	0.099	0.099	0.095
	(0.07)	(0.071)	(0.07)	(0.071)
NAICS 52	0.073	0.043	0.047	0.048
	(0.068)	(0.068)	(0.068)	(0.068)
NAICS 53	0.139	0.118	0.118	0.121
	(0.075)	(0.075)	(0.075)	(0.075)
NAICS 54	0.111	0.076	0.064	0.064
	(0.064)	(0.064)	(0.064)	(0.064)
NAICS 55	0.082	0.054	0.044	0.048
	(0.107)	(0.107)	(0.107)	(0.107)

NAICS 56	0.062	0.044	0.041	0.041
	(0.065)	(0.065)	(0.065)	(0.065)
NAICS 61	0.028	-0.026	-0.002	-0.019
	(0.065)	(0.066)	(0.065)	(0.066)
NAICS 62	0.071	0.05	0.041	0.039
	(0.063)	(0.064)	(0.064)	(0.064)
NAICS 71	-0.009	-0.02	-0.013	-0.013
	(0.072)	(0.072)	(0.072)	(0.073)
NAICS 72	-0.129	-0.117	-0.115	-0.11
	(0.065)	(0.065)	(0.065)	(0.065)
NAICS 81	0.013	-0.002	-0.003	-0.003
	(0.066)	(0.066)	(0.066)	(0.066)
NAICS 92	0.098	0.069	0.065	0.064
	(0.065)	(0.066)	(0.066)	(0.066)
Free decisions		0.004		0.001
		(0.013)		(0.014)
English level		0.174		0.186
		(0.067)		(0.083)
Prop. Female		-0.065		0.007
		(0.026)		(0.033)
Prop. Non-white		-0.051		-0.054
		(0.084)		(0.091)
Prop. Qualified		0.163		0.067
		(0.032)		(0.042)
Unionization		0.002		0.073
		(0.054)		(0.059)
Unemployment		-0.003		0.002
		(0.002)		(0.002)
Science & engineering			0.010	0.014
			(0.006)	(0.008)
Numerical			0.02	0.016
			(0.006)	(0.007)
Verbal-reasoning			0.038	0.025
			(0.006)	(0.008)
Communicative			-0.003	-0.017
			(0.006)	(0.008)
Creative			0.032	0.023
			(0.006)	(0.008)
Informatic			0.028	0.015
			(0.006)	(0.008)
Managerial			0.024	0.017
			(0.005)	(0.006)
Foreign lang.			0.022	0.003
			(0.006)	(0.009)

Nurturing	0.001	-0.001
	(0.006)	(0.007)

Notes: CPS, 2013–18 and O*NET v.20.1. N=40,392 observations corresponding to 20,196 workers. Dependent variable: Log adjusted hourly wages.

Chapter 5 Recognition of linguistic work. The case of call centres in Spain

This chapter shows how linguistic work recognition in the call-centre sector obeys to two broad social processes: informationalism and globalisation. These two broad processes have consequences on the standardization of the use of language that have been covered by previous research. However, the effect of standardization on the recognition of linguistic work is a phenomenon that has been subject to little study. Using documentary and interview analysis, the chapter focuses on the call-centre sector in Spain and discuss the effects of standardization on collective bargaining and the creation of wage bonuses and professional categories. The results show that employment conditions of linguistic workers, institutionalized through collective bargaining, depend more on the language autonomy workers have in the execution of their tasks than on criteria based on their multilingual skills.

5.1 How is linguistic work recognised in call centres?

During the period of industrial capitalism based on Taylorism and Fordism, language was not very relevant to execution (Boutet, 2001, Coulmas, 2013). Illustratively, according to Cohen (2009:26), in the Fordist factories of the first third of the 20th century, “Workers should not be expected to know how to read, or write, or to speak English, only to refrain from drinking on the job. Assembly-line work was conceived for an illiterate population, many members of which were recent immigrants to the United States who didn’t speak English.” But, conditions of production have evolved from industrial capitalism to informational capitalism (Castells, 2000). Informationalism implies that symbols and information become central elements of economic activity

across local and global linguistic landscapes, with important effects regarding the role of language in the production processes of the new economy (Heller, 2010).

This paper states that language is becoming more important *not only* in today's production processes and access to labour market, *but also* in the struggles for the employment conditions of the so-called "wordforce" (Heller, 2011: 50). It shows how employers and workers are struggling to define the new role of language within employment relations in terms of the economic bonuses and occupational classifications institutionalized[17] by collective bargaining. More specifically, the paper analyses the employment conditions of language workers in the exemplary case of third-party call centres in Spain, where: 1) language has become the raw material, scripts the working tools, and conversation the product; 2) it is a rising industry generating hundreds of thousands of new jobs in spite of computerization, and 3) there is a wide range of post-fordist practices applied to service work, including externalization and delocalization. We restrict our research to a coordinated job market such as the Spanish one, with trade unions and employers' organisations heavily involved in collective bargaining (Gallie, 2011). As in other coordinated economies[18], these agents have produced new occupational classifications and wages for call centre workers according to the linguistic performance in the workplace.

Observing the relationship between language work and employment conditions is by no means straightforward because the complexity of the concept of language work. It has been argued that language, as a defining human characteristic, could be inextricable from any work practice at any time, and that the commodification of language could be understood as a part of a larger historical process of commodification and objectivization

[17] By institutionalized, a common term in industrial relations, we mean compulsory in companies and accepted by social agents

[18] In the Dutch call centres agreement [Collectieve Arbeidsovereenkomst Facilitaire Callcenters in Nederland 2010-2012], the criteria for defining occupational categories are closely linked to the employees' autonomy from the script and protocols. It stipulates five occupational categories with different wage levels, where each occupational category entails a salary increase of approximately 3%. In the French case, according to the 7th article of the "Avenant du 20 juin 2002 relatif aux salariés des centers d'appels non integres," the criteria for defining professional categories includes the management of dialogue times, the linguistic complexity (speaking or writing) of the transactions and the pauses between calls.

of the capabilities and knowledge of workers which serve capital accumulation (Block, 2017; Holborow, 2015). So, a main challenge in this paper is to identify how language becomes an object of collective bargaining and, therefore, an element of new employment conditions. The question is which linguistic dimensions are required in the production process and negotiated in collective bargaining. As Heller points out (2005: 3): "Service providers are meant to reach clients "in their own language" (*whatever type of linguistic variability that might refer to*)" (our italics)[19]. So which types of language *variability* are observable and arguable as a key part of work in the employment conditions of call centres?

In this work, main dimensions of language work are identified through a grounded approach, analysing agreements and arguments produced by social agents, workers and employers in its own world: the bargaining arena of employment conditions at companies and sectors. As we observed, language is involved in call centre work with respect two aspects: a) the management of linguistic diversity, and, b) the linguistic autonomy to produce unscripted arguments. Language autonomy is of a key importance, since in spite of the debatable image of high direct control over speech in call centers (Cameron, 2000; Taylor and Bain, 1999), language work by teleoperators has proven to be highly complex, a complexity which is essential for service provision (Huws, 2009; Woydack and Rampton, 2016). Since in service work routinization can run against productivity when dealing with complex human interactions (see Leidner, 1993), management fosters workers' control of conversations. This implies that workers' skills or seniority not always are recognized institutionally in form of better wages nor employment conditions (Sallaz, 2010)[20].

The first section of the paper explains that globalisation and informationalism reflect new working conditions that give language a central role. The paper then goes on to

[19] Criticisms have been raised about whether entrepreneurs are really interested in reaching clients "in their own language" (Sabaté-Dalmau, 2012; Duchêne and Heller 2012; Tan and Rubdy, 2008; Grin et al., 2010), although this does not mean that information and language are not key elements in informational capitalism.

[20] Empirically, there is evidence to show that the level of standardization of conversations in call centres varies significantly between workstations, companies and sectors (James and Vira, 2012) and also across periods of time (Moss, Salzman, and Tilly, 2006).

describe the two main tensions in the management of language work: standardization versus diversity and standardization versus linguistic autonomy. It is argued that these tensions become increasingly important in collective bargaining. The main characteristics of the call centre sector and of the collective bargaining were described, and then the methodology explained. It is a qualitative study that is based on the analysis of interviews and documents (collective and company agreements and legal rulings). Subsequently, the paper present the results by describing the conditions laid down by the collective agreements of the call-centre sector in Spain, and the discourses and conflicts that revolve around these conditions. The focus is given to two "bonuses" – the "language-diversity bonus" and the "linguistic-autonomy bonus" – which reflect the process of negotiating the aforementioned tensions. The conclusion points out the particular importance of linguistic autonomy and communicative skills in the construction of job categories.

5.2 The centrality of linguistic work in a context of diversity and informationalism

5.2.1 Diversity and language work

When considering language diversity there are two key aspects: the current process of globalization and limitations on homogenization within the State (particularly observable when looking at co-official languages of a State, as in the case of this research, in Spain with regards to Catalan, Basque and Galician languages). Currently, diversity is related to the management of multilingualism (languages in the plural) in a context of the delocalization of production services and labour migrations (Marschan-Piekkari, Welch and Welch, 1999). Following on from that, the management of language diversity has become more important for many organisations which are considering whether to increase or decrease the number of languages used in communication for purposes of efficiency and the satisfaction of consumers and workers (European Commission, 2008; Spolsky, 2009). Companies such as call centres are still trying to use Taylorist logic of *one best way/one best language* in their management practices

(Mirchandani, 2004). In this regard we find practices of standardization as reduction of natural complexity, such as the formal establishment of bridge languages to be used with clients and the limitation on the number of working languages (Cowie, 2007; Sabaté-Dalmau, 2012).

From a business perspective, not only do the number of languages need to be rationalized (control, calculation, efficiency, predictability); but due to a variety of codes, accents and registers, the quality and proximity to the client are also important in highly competitive markets with the aim to reproduce "authentic" trustable community relations in opposition to anonymous and formal economic exchanges (see Heller 2010). As a result, the emphasis on standardization in the days of national markets for industrial products makes less sense in a context of flexible companies and delocalization. Noticeably, the management of customer satisfaction can be implemented in very contraposed ways: Poster (2007:293) made a detailed observation of intensive models for controlling national identity, often by imitating accents (*one best accent*), masking location and – in the case of call centres in India – adopting fictitious names. On the other hand, Duchêne (2009:48) identified models based on authenticity in the management of tourist information that targeted, for example, French and Germans using binationals in Switzerland.

These management approaches are by no means free of conflict because decisions must be taken about the languages that can be used legitimately within organizations between management and workers. Firms can micromanage (this often means that they conceal) such language variables as the accents of their workers or the number of languages accepted in communication, while the workers can respond in a variety of ways (including acceptance and resistance) (Mirchandani, 2004; Cowie, 2007; Taylor and Bain, 2005; Rahman, 2009; Sonntag, 2009; Roberts, 2010; Roy, 2003).

5.2.2 Informationalism and linguistic work

Informational capitalism turns language – as a medium for processing and creating information, independently of the number of languages involved – into a key component

in production processes. The importance of information often involves standardizing language in firms rather than allowing workers to make autonomous linguistic productions (Urciuoli and LaDousa, 2013). Managing language in business, then, involves the discipline of the text –maximum number of options or words on the screen – and the use of scripts. So standardized processes are set up that are just like those that were implemented with the manual/industrial work of Taylorism and Fordism (Leidner, 1993; Ritzer, 1996; Cameron, 2000; Boutet, 2012).

From the critical perspective of labour relations, companies are a stage on which the struggle for power and control unfolds (Hyman, 1973). In this struggle, the division of work that accompany Taylorism is not regarded as being conducive to efficient work; rather it represent a management strategy that break down specialized knowledge into simple, routine tasks; into unqualified work that allows for a greater rotation of workers, lower wages and greater control of the production process by company managers (Braverman, 1974). The fact is that previous research has shown highly variable results in terms of the extent to which it is possible to standardise the work of telephone operators. Contrary to a complete dichotomy between workers totally subject to scripts and workers who are totally autonomous (Holman, Batt and Holtgrewe, 2007), empirical research has shown a considerable complexity that cannot be objectivised between these two extremes (Huws, 2009; Woydack and Rampton, 2016).

5.2.3 Tensions and recognition of language work

Two key tensions arise from the above processes. The first tension is because competition complicate the standardization of diversity. This is related to growing internationalization, mainly related to delocalization and migrant flows, but also renewed local-nationalistic claims. The second tension pits Taylorist routinization against the autonomy of the workers in producing effective communications. This is connected to the centrality of information and the importance of workers who make intensive use of language. The tensions caused by rationalization run parallel to the objectification, in Marxist terms, of work: that is to say that the abilities of the workers, from multilingual to communicative ones, that become part of the machinery or fixed

assets of companies, generally through standardization, are inspired by Taylorist principles (Timmermans and Epstein, 2010; Brophy, 2011).

Our research hypothesizes that these tensions must be the object of negotiation between trade unions and employers when laying down the collective regulations governing the linguistic part of work. Both wages and job categories depend on the negotiating power of the actors involved in it. For example, it has been documented that in language-intensive sectors such as call centres where skills in two languages are crucial, managers are employing a bilingual workforce with no differential remuneration (Duchêne, 2009, Alarcón and Heyman, 2013). Similarly, Boutet (2012: 216) argues that oral and written activities are rarely formally recognised or validated in terms of employment conditions.

5.3 Spanish third-party call centres: Creating employment conditions for language workers

Third-party call centres began their activity in Spain in the early 80s. In this country, there are around 183 companies providing call centre services to third parties with a total of 72,000 employees, double the number of just ten years ago. These call centres are highly polarized: 163 small-and medium-sized enterprises account for approximately 10,000 employees, while the 20 largest companies (the only ones belonging to the Employers' Association) have 62,000 workers (double the 1999 figure) (Martí-Audí, Valverde and Heraty, 2013; ACE, 2012) and 72,525 in 2016 (ACE, 2017), being one of the more dynamic sectors of the economy. These 20 companies regulate their working conditions with the 5th Collective Agreement for Contact Centres (the first was signed in 1999). It is a highly feminized sector (74.8% women in 2010) with relatively young workers (73.7% aged between 26 and 45 years old). Only 30% of the workforce has a permanent employment contract and the majority are part-time workers. 87.7% of the workforce in the call centres is defined by the employers' organization under the occupational category of operational agents, while other employees are supervisors and

structural staff (ACE, 2012). They mostly provide inbound[21] services (67.3% of turnover) and work stations[22] are on third-party platforms (94.4%) rather than on-site locations[23] (ACE, 2013). The work centres are large: in nearly all cases they have more than the 50 workers required to create a workers' committee and they often have more than 500, which encourages unionism and the effectiveness of union organization in these centres (Shire et al. 2009).

The first "Contact Centre Agreement" which regulates employment relations was signed in 1999 by major trade unions and the 20 largest companies of the sector. Four more agreements with minor changes have since been signed, the last in 2017. These agreements have regulated the employment conditions in third-party centres using the telephone and other telematic means. The story of the origin and evolution of the Collective Agreement is told differently by social partners. According to the employers' organization, it was an attempt to bring order to a fast-growing new industry in the 1990s, limiting unfair competition between the bigger companies. The companies operated under very different collective agreements and the unions belonged to different sectors, e.g. the Transport and Communications Federations. In this case, according to one employer interviewed, "when there was a strike [at call centres] you could see truck drivers, with their trucks, blocking the entrance to the call centre. Imagine, trucks!" This unfair competition and lax enforcement of the collective agreement, with frequent irregularities and the use of other less favourable agreements, is still common practice in SMEs in the sector today due to their low levels of union membership.

According to the unions, the agreement originated from the need for a collective response to ensure minimum working conditions. The growing competition between companies was directly passed on to the precarious position of the workers: taking the form of project-based contracts and low wages[24]. Unlike the employers, however, the unions believed that this competitiveness led directly to unstable conditions with the vast

[21] In sector jargon *inbound* refers to workstations and services where agents are totally or mostly receiving calls, while *outbound* refers to agents issuing calls.
[22] Each work station defines workers with the same tools during diferent turns in the same days.
[23] On-site refers to contractors installations. Therefore part of contractors strategies
[24] *El País*, 18 December 1998

majority of contracts being of the work and service type[25]. The introduction of trade unions in call centres in Spain was made possible by the characteristics of the sector, which are similar to those of Fordist industrial production: they are large workplaces with more than 50 employees - and often more than 500 - and as such they are obliged under Spanish labour law to hold trade union elections and to have works councils. This has enabled the major trade unions to undertake intense trade union activity.

The organizational model is based on a segmentation of the workforce into "structural staff" and "operations staff". The business approach based on time-limited "campaigns"[26] meant that in practice there were virtually no permanent workers among the teleoperators. At the initiative of the employers and on the condition of gradual stabilization of the employees' status, in Article 11 of the First Telemarketing Agreement the social partners agreed that part of the company's staff would have to rotate to adapt to the markets. By institutionalizing –becoming a legal rule of compulsory acknowledgement by social agents- this dualization, the operations staff were also rationalized and provided with some degree of stability, including salaries and greater protection against layoffs than in other service sector agreements (Shire et al., 2009).

The main focus of the negotiation was on salary (a teleoperator's base salary increased from 7,885.28 to 13,164.58 euros between 1999 and 2012, which is an average annual increase of 4%). Stability was the main bone of contention. The first agreement failed to establish set quotas for permanent workers in the sector. The signing of the second agreement (2002) was preceded by major strikes on 15 and 21 June 2001, which according to the main trade union confederations were supported by 90-95% of the 40,000 workers working in the sector at the time (see *El País*, 21 June 2001). The size of the centres, with labour representation and union sections, facilitated this climate of unrest. The success of these mobilizations led to the signing of a second agreement with

[25] CGT (2003: 2007), highly critical of this agreement, points out that "Internal power struggles in CCOO and UGT between their Transport and Communication Federations, and their Service Federations led to the latter hurriedly signing the 1st Telemarketing Agreement." http://www.informacioncgt.info/ateneo/materiales-reflexion/MR04.pdf

[26] Temporary service contracts between call centres and their contractors

at least 30% of the operations staff included as permanent staff.

The collective agreement reflects the two aspects of language work in two different bonuses, as we will see in detail: the language-diversity bonus and linguistic-autonomy bonus. Although both diversity and autonomy are valued in terms of standardization, they have different representations and consequences, as we will see in detail in next sections.

5.4 Methodology

We focus on the processes of creating and implementing a series of extra payments (bonuses or compensations) related to language use in jobs in third-party call centres in Spain. These are the "Language-diversity" bonus and the Phone Manager bonus[27], which appeal to "language-autonomous communicative productions" (made operative through arguments production and deviations from the scripts). We investigate the dialogic nature of how these employment conditions are created and agreed to by the agents involved (workers, directors, unions and employers). Since the extent to which this agreement covers small and medium-sized enterprises in the sector is highly variable (Shire et al, 2009), we will focus on the major call centres, while the small and medium centres require a separate and specific study.

We analysed in-depth interviews in three major platforms (of between 300 and 800 employees) located in Galicia, which were carried out by the fieldwork team of the "Language Rationalization" project.[28] Galicia is the region with the highest number of platforms (13 out of 20) and work stations (4,493) of the leading call centres in Spain. In fact, due to relative high taxes of unemployment in Galicia, this region has been a

[27] After the next collective agreement in 2002, the bonus was turned into the professional category of "Telephone Manager".

[28] Amado Alarcón was the main researcher of the project. The project was funded by the Ministerio de Economía y Competitividad (FFI2012-33316). The fieldwork was carried out during the years 2012 and 2013. The interviews were conducted in the Spanish language (only two interviews were carried out in Galician, but transcribed into Spanish) and quotations appearing in this paper have been translated into English.

pole of attraction for call centres. For most workers in our sample call centre job represents their only or primary employment opportunity.

These platforms in Galicia provide services that can be classified largely as outbound mass-market services designed for the domestic market, very similar in this respect to the domestic markets located on the peripheries of the United States (Alarcón and Heyman, 2013). However, since their work for third parties is organised in several campaigns simultaneously –contracts for one specific service during an established amount of time that may last from one week to several months- the duration of the calls and the detail of the scripts for the conversations was much more heterogeneous than the literature tends to suggest. The language diversity that the employees have to deal with is due to the diversity of the clients from Spain –although affected by levels of wealthy among foreign populations that become effective buyers of call centre services- , where there are four main official languages (Spanish, Catalan, Galician and Basque), the effects of internationalization on the increase in foreign clients (12,1%-11,7% of the total population of Spain during our fieldwork according to Instituto Nacional de Estadística) and the incorporation of immigrants as work colleagues.

In total, 31 interviews were analysed, including worker operators (20), managers (7) and coordinators/supervisors (4). All interviewees were employed by three major platforms of the Spanish Association of Contact Centres. The 20 operators in the sample had recently taken part in at least one specific sales campaign for various companies in the telecommunications or banking sectors, and their teams had contained people from abroad, particularly from Latin America. This profile theoretically matches Boutet's definition (2012) of outgoing calls[29], which are often the ones that can be measured by effective sales. Interviews were limited to autochthonous workers so as to limit the range

[29] "Outgoing calls are totally standardized, leaving no room at all for the employee to be autonomous; incoming calls give them a certain amount of leeway" (…) The consultant's language activity is generally organized on a taylorized model, their professional dialogues strictly channeled by way of scripts, time control (…) and a rigorous supervision of their communications. Consultants's verbal activity and language practices are restricted threefold: by time, by the obligation to follow the script point by point, and by software scripts to assist in decision making" (Boutet, 2012: 219).

of representations about language. Despite the sector's high rotation rate, an effort was made to include a majority of workers with more than five years' experience in the sample so that the workers' accounts would not focus on one particular workstation/campaign but would enable us to analyse employment trajectories in the sector. Thus, the sample reflected the main representations in the negotiation frameworks and make it possible to reproduce the research in other geographical areas (call centres located in advanced capitalist countries with services designed for the domestic market). Finally, we also analysed seven interviews to social agents in Galicia and Madrid: five trade union representatives and two members of the employers' association (of whom five have taken part in various stages of the collective negotiation between 1997 and 2012).

Different interview scripts were produced based on the job of those interviewed. The main dimensions of the questionnaire were: a) career and training b) level of standardization of conversations - time control, standardization of greetings, farewells, and content, sequence trees and protocols; b) level of linguistic and professional autonomy - decisional autonomy, autonomy to argue and negotiate; c) language and salaries; d) language and professional categories. Social partners were asked about such matters in addition to questions concerning: the development of the sector, the heterogeneity of the companies/workers, the positioning of the agents, the origin of the negotiation and the main items in the negotiation, including the main points of agreement and disagreement.

The information collected was systematically organised and structured with particular attention paid to the agreements and disagreements between employers (11 families – listed above- and 65 main codes) and workers. The information was codified and organized with qualitative data analysis software (Weft QDA), which allowed us to carry out content analysis with a greater focus on items (families and codes) of a relatively large amount of data, rather than on specific biographies of workers within the sector[30].

[30] Tree codes and data available from the authors.

At the same time, we conducted documentary analysis of: the five collective agreements for the sector signed in from 1999 to 2012), b) two company agreements for the application of the category of manager, c) five judicial rulings on individual and collective disputes concerning the relationship between linguistic standardization and occupational categories, and d) conversation scripts, protocols and training documents relating to 10 different campaigns compiled during the fieldwork. In addition, the research used secondary sources such as trade union journals and reports by employers' organizations, as well as legal repositories to locate rulings in Spain (Wolters Kluwer and General Council of the Judiciary).

5.5 The “language-diversity” bonus

5.5.1 Recognising bi/multilinual skills

Throughout the history of Spanish collective bargaining it is very difficult to find a bonus for a command of foreign languages and in no case has a bonus been paid for co-official languages. According to the Wolster Kluwer Collective Agreements Database, of the total sectorial and state agreements, besides the Telemarketing Agreement, foreign languages have been awarded a bonus in only two state agreements with an extra payment of 20 euros for foreign languages knowledge. A very different case is depicted in the new sector of call centres, where from the very beginning of its collective agreement language diversity was present as a remunerable attribute of workers. The so-called “language bonus” was first reflected in the 1999 first Telemarketing Agreement, although there were considerable changes in the second version of 2002, which by mutual agreement between the unions and the employers included not only foreign languages but also the official languages of the regions other than the one in which the call centre is located (i.e. Galician, Catalan and Basque languages).

According to interviews with employers, the decision to include language diversity in management depends on each campaign and the client’s express wishes. Campaigns can last for as little as a few days or as long as several months, and among the clients there

are large companies and public authorities. The employers say that there are no IT problems to prevent language diversity from being part of a campaign and neither are there any problems in recruiting staff. According to the employers, there is an abundance of workers skilled in the co-official and foreign languages. For these reasons, it is only to be expected that paying a bonus for languages makes no sense, especially in the case of local languages. But this has not been the case. In the quotation below a worker shows awareness of the relevance of language diversity for customer satisfaction and for its own company: Languages must be paid for.

> Some clients demand that the call be attended where the language they want is spoken, in the province or in the autonomous community (…) in Catalonia or Galicia or the Basque Country (…) I have it on good authority that in Valladolid they attend calls in Galician. Even though they may not be from Galicia or the Basque Country or Catalonia they have learned a lot. If you [in reference to the employer] are outside the community, you have to pay for language.
>
> [Woman, 46 years, Unionist taking part in the collective bargaining, and worker in the sector for 15 years]

The previous quote evidences, in accordance with other interviews, that workers have interiorized the relevance of multilingualism for companies and the difficulties that companies have to satisfy linguistic tastes of customers, including their preferences towards local official languages. Specifically, Galician workers consider that current management of language diversity frequently cause conflicts, particularly with clients located in bilingual regions (Catalonia and the Basque Country). In different interviews was mentioned that call centres prioritize time over language quality, which means that when there are queues for work stations that deal with calls in non-dominant languages (for example, Catalan or Greek in opposition to Spanish or English), the calls are routed to monolingual Spanish workers (more abundant among the personnel). This language practice contrasts with the multilingual discourse of the companies in the sector of telecommunications, who allegedly see diversity as a market opportunity (Sabaté-Dalmau, 2012). The quoted worker fully interiorized the collective agreements between

employers and unions that have made it possible to apply a bonus for language skills when dealing with diversity.

This bonus was 63.08 euros in 1999 and by 2012 had increased to 104.98 euros. The bonus is paid at exactly the same rate independently of the number of additional languages used in the workplace, and outside the community in which they are official, facts that are the source of complaints from workers and unions. The recognition of co-official languages has never been reflected, as far as we know, in any other sectorial agreement, to define the salary bonus for a command of languages. Other agreements, for example in the railway sector, even make reference to these languages but only to specifically exclude them from any sort of remuneration.

Diversity needs to be managed in a context of competition and there has been massive recruitment of a linguistically diverse labour force with a specific remuneration, unlike in other sectors. Language work means that language as an ethnic, non-remunerable competence is becoming increasingly unacceptable for workers in this sector. According to the unions, the elevated quantities of these bonuses is symptomatic of its importance and its relative scarcity. The period between the end of the 1990s and 2008 were years of considerable economic growth in Spain, and employers accept that the bonus has helped to guarantee a workforce that is well equipped with multilingual skills. As such, the bonus is designed to guarantee a continuous supply of multilingual labour.

The bonus can also be explained by institutional requirements. One of the main clients of the companies that have signed the agreement are the public authorities (about 20% of the sector's turnover). These authorities insist on their official languages being used as a condition for entering into the contract, so the employers are quite used to using co-official languages and establishing economic mechanisms to guarantee a sufficient workforce. Nevertheless, the employers point out that the regional authorities normally require a considerable proportion of the workload to be carried out in the autonomous community itself, which makes it easier to employ staff with the appropriate language skills. This is not the case for the State's Central Administration. According to our informants, although it favours setting up work centres in Madrid, it is obliged to provide

services in the various co-official languages of Spain. This does not seem to be a major problem, because in the capital (Madrid) there are a considerable number of workers from the rest of Spain, although companies need to pay an extra bonus for its recruitment. The fact that public authorities are clients may have played an important role in their official languages being factors in the salaries paid, but private companies have also insisted that particular languages be used in their campaigns. For example, companies in Catalonia have to provide services in Catalan on telephone lines specifically for Catalan clients in compliance with Law 1/1999 of Language Policy[31]. Galician workers point out that this legal framework makes Catalan clients the most demanding in terms of language.

5.5.2 Empowered language workers

The interviewed workers point out that clients do not like being attended by operators with strong accents or varieties used in other countries and that in some cases communication is hindered. And, they argue, this affects both customer satisfaction and productivity (call length). In a global environment of delocalization of production, the autochthonous workers argue that their jobs cannot be exported to South America or other countries because of the language prejudices of Spanish clients. Union representatives and the longest-serving workers in the companies have experienced several waves of offshoring and mechanisation of calls and they realise that nowadays companies are aware of the limits that this places on the quality of the service. This vision is shared by employers and managers, who explain that in recent years key services have been repatriated due to professionalization of services and that the mechanisation of customer service has focused more on digital platforms than on telephone lines. In fact, ACE (2013) shows that the number of work stations in foreign countries has had a reduction of about 10% in last years, while workers located in Spain are yet growing.

[31] Although according to (Sabaté-Dalmau, 2012) the 1/1999 Law is systematically violated by telephony-related call centres.

Therefore, workers and representatives find that they have greater bargaining power because they are not easily replaceable by machines and they believe they are in possession of legitimate competences. However, the employers do not seem to be concerned (nor have they set up any training programmes) about how to manage language features such as accents or dialects at their places of work. It is assumed that workers from other countries naturalise their accents and adapt to the standard, which is also a way of putting pressure on the autochthonous workers by making it clear to them that the importance of accent is relative. In no case do accents emerge as an issue to be dealt with in the processes of collective negotiation. Below we discuss these limitations and their implications.

5.5.3 Consented language indiscipline to deal with diversity

It may seem to be contradictory with satisfaction of customers, but the number of languages is formally limited in all campaigns, including local official languages. In call centres in Galicia the workers who are bilingual in Spanish and Galician are not allowed by their work protocols to use Galician or any other official or foreign language if it is not explicitly sanctioned for the campaign. When specific campaigns target foreign clients (campaigns conceived for labour migrants and their families), communication is nearly always in Spanish. There were three cases of campaigns in which interviewed workers took part that included English and only one that included German. When there is no specific design to attend to clients in Catalan (or in any other language), the protocol established a “language barrier”, which means that the operator cannot continue with the call. This creates difficulties for operators to do their job. According to the workers, in many instances they act with a certain amount of language flexibility and use their common sense: this essentially means using Galician if it happens to be their native language and the native language of the client, and trying to communicate in English with foreign clients, even though the conversation may not be absolutely fluent, and involves improvising. The companies tend to be very permissive of these practices because, as mostly third-party companies, they are results-oriented (often sales).

Permissiveness aside the following quotes show a situation in which companies are taking profit from language flexibility of workers, but without compensating them, and thus generating new types of recognition demands for language work:

> If you take calls in languages other than the language of the region you are working in, you do get paid. I have to speak Galician and Spanish and I don't get paid any extra. And it's quite difficult for me because I was a Galician speaker and now I've started mixing them up … so I don't know whether the company should pay extra or separate the service into different languages. Because you go from speaking to a client in Galician, which is your native language, very quickly into Spanish, which is not easy.
>
> [Woman, 36 years old, specialist telephone operator for 6 years]
>
> We are fighting a language battle… Here in Galicia, because it's supposedly your language and you volunteer to come to the department, you're not paid the language bonus. But in Valladolid if you take calls in Galician, you are paid.
>
> [Unionist-Negotiator of the Collective Agreement, 48 years old, previously working in the sector for 17 years]

As we observe, during the interviews the workers claim that code switching is part of their job and should, therefore, be the object of remuneration even if they are using languages that are co-official in the region where the company is located. This acquires greater importance when it is taken into account that bilingualism in Galicia is asymmetric and, therefore, Galician is not highly prized as a job asset (57% of the population know how to speak Galician "a lot", *IGE. Enquisa estrutural a fogares* 2013). The interviews make it clear that the Galician workers get greater job satisfaction when they use their own language at work. However, Galician workers' demands to be remunerated for speaking in Galician in their own region are not envisaged in the regulations. Neither have they been key points in the negotiations about employment conditions since the year 2002. When a language competence is prevalent in a particular

region, the employers regard it as a "natural" trait and, therefore, it is not remunerable. Nevertheless, this has not prevented individual work centres from questioning the legality of this situation, indicating that diversity plays a role in the recognition of employment conditions. Nevertheless, none of these conflicts has ended in a legal ruling in favour of the workers.

5.6 The "manager bonus": job categories and linguistic autonomy

5.6.1 The Telephone Operators

> Interviewer: So how do the people who design the script time…
>
> Interviewee: That's a question I would like to know the answer to. The objectives are set and many people achieve them because they jump some stages of the process…
>
> Interviewer: But you can be fined for not following the process, can't you?
>
> Interviewee: Of course, that's precisely the contradiction. If you reach your target, it's because you're doing something that is not part of the process…. Because for the first few minutes the client doesn't listen. And he begins, "I have been a client for so many years and in 2004 such and such happened to me…"
>
> Interviewer: The client's conversation hasn't been operationalised (laughter)
>
> Interviewee: That's right… But you tell him "Do this, do that." And he says, "My cousin told me that the cable was all wrong…". And, of course, that's impossible… You've got to be nice to the client and not interrupt him and that involves doing something that's not in the protocol. But you can't interrupt and be nice at the same time, and you can't hit your target when

> they start speaking about their cousin who told him there was something wrong with the cable...
>
> [Fragment of an interview with a woman, 28 years, telephone operator for 10 years]

The previous fragment exemplify how difficult is to standardize the work of telephone operators. The workers in the call centres are timed and have to use scripts and decision trees. According to interviews and documents analysed from workers and companies, we observed that the telephone operators have very reduced scripts, engage in long conversations with the client to generate confidence and use a considerable amount of discretion. In an attempt to comply with the objectives of time and daily sales established by the company, they often depart from the protocol. The workers interviewed suggested that the coordinators or supervisors would not rebuke them if by "flexibilising" the protocols and scripts they managed to improve their daily or weekly performance. Winiecki (2004) has documented these telephone operator "tricks" and how the system of work organisation permits them and even encourages them because, after all, what is important is not how the job is done but how each worker is positioned on the final results panel. Although those subcontracted companies formally offered a highly structured service, in the studied call centres this is far from the case. In fact, the relational unit is the conversation, which is conducted in as natural a way as possible, and often adapted to the characteristics of the interlocutor rather than the script.

The work, then, is subject to considerable formal rationalization, but the workers use their discretion within this system, and their supervisors are fully aware of this. On the strength of the analysed data, the key feature is that these workers need to be trained in knowledge bases and diagnostic procedures, which is what enables them to work efficiently. While standardization involves identical communication formulas for all conversations, language autonomy relies on the workers' ability to articulate their own discourses, choosing content and adapting it to the interlocutor, and to increase interactivity in the framework of specific professional knowledge. Practically, the dichotomy in this respect is between the standardization of conversations with clients by

means of an operative guide (and decision trees) with restricted information and a time limit, and the autonomy to transmit information as well as conversational decisions without so many time restrictions.

The linguistic autonomy described to us by our telephone operators coincides with what Boutet observed in France in call centres for staff who were highly qualified in inbound calls. "I was able to observe that the consultants brought into play a large diversity of language skills and acts: they informed, solved problems, reassured, convinced, argued. Their technical skills were visible in the dialogues, for example, giving expert advice on technical systems, solving technical problems, understanding how an installation functions, producing technical diagnoses (...) In such work, where the industrial model leaves them a certain degree of initiative and autonomy, telecounselors use their language resources and their skills to deal with the professional interaction as best as possible; guiding the client, giving appropriate answers, analysing the requests, coordinating the dialogue, adapting to the client's language and technical level, and informing him/her correctly and precisely" (2012:220-1).

In short, the language work that is conducted by operators is on a continuum between standardization (represented by the tools of their trade: computerised scripts and decision trees) and autonomous conversation.

5.6.2 Complex communication and dichotomisation of employment conditions

The 1st Collective Agreement set the so-called "manager bonus" at 74.15 euros for the year 2000, the first year it was applied. This bonus, which in the second agreement was to become a job category, was used to shape one of the leading job identities in the sector. All the workers know the collective agreement and can discuss the relationship between their current work and the category they have been assigned.

The Collective Agreement classifies the telephone workers into two main categories: telephone operators (65.5%) and telephone managers (20.8%). The rest are structural staff. The Collective Agreement defines the telephone operators very briefly. "They

attend or make calls following work methods based on protocols." Nevertheless, telephone managers must be able to work in the following conditions:

> Telephone managers: (...) 1) active outbound sales, with (...) use of complex arguments with no pre-established dialogue (...), 2) technological support (...) beyond systematised procedures (...); 3) professional support (...) professional advice on complex incidents that cannot be solved automatically by following a systematic script; 4) Debt management (...) when the worker manages and negotiates debt (...); 5) Management of invoicing incidents. The telephone operator "(...) identifies the client's incident without using systemized procedures, and then analyses and diagnoses it (...). (Agreements 2-5)

The category of telephone manager uses a broader definition of acts of communication with clients: they require complex arguments, with no established scripts or outside systematised procedures. Thus, the agreement refers to certain activities, the way in which they are carried out and, in particular, to the absence of protocols or established procedures.

Notably, one of the differences between the 1st Agreement (1999) and the 2nd Agreement (2002) is that the latter excluded from the definition of telephone sales operators all those who did not contact the client directly but received "internal" calls routed to the sales department. This is explained by the employers in terms of the difficulty of interpreting the work of the telephone operators and by trade unionists as errors in the negotiation process and the trade-offs that were accepted: in 2002 it was established that there should be a minimum of 30% of staff on permanent contracts, which could be increased to 40% in subsequent agreements. To guarantee this, the unions sacrificed increases in job categories, which are difficult to implement because negotiations were specific to particular companies and workstations. For one of the union negotiators, the dichotomy has always been clear: *"The difference between a telephone operator and a manager is simply that the latter deals with problems that are not automated. Somehow they have to solve them without automation."*

Under the new regulations, telephone managers have greater autonomy to take economic decisions (offer a client a discount, for example) and also greater language autonomy, in the sense that they can use communicative tools that have not been pre-established "in their own way" and using their professional knowledge. From the point of view of the reviewed works, such category is necessary in the frame of the new economy when workers carry out their tasks in a linguistically autonomous, unstandardized fashion.

As criteria for constructing job categories, unions and workers prefer to use those that are closest to *informational* production guidelines: language autonomy. Workers and unions believe that autonomy lies in deviating from the script, creativity and presenting arguments. Employers, however, believe that autonomy is related to taking economic decisions and assigned to specific functions (outbound sales, technical management, invoicing and debt collection). This different vision has led to various legal rulings and in almost all of the cases that we analysed the judges applied the criterion of language autonomy to solve the conflict:

According to the employers, skipping the script or protocols is not enough to be awarded the category of manager. Our review of scripts and protocols shows that they rarely tell telephone operators what to say word for word. They merely try to guide conversational situations by providing decision trees. Telephone operators even skip some steps in the tree by making deductions or using their intuition about the interlocutor on the basis of the preceding conversation. For practical purposes, these two ways of interpreting the category of manager mean that in each company and "campaign" workers and management have to enter into negotiations to determine whether they are working as telephone operators or managers. Likewise, in the same campaign, different companies use one type of protocol and script, as do different job categories, depending on the power of negotiation and staffing policies in each company and the recruitment facilities in the region where they are located. In this respect, we detected that the categories were often applied quite arbitrarily by employers.

Many of the telephone operators and telephone managers of our sample are subjectively aware of the conditions in which they carry out their work. Nevertheless, they believe

that these conditions should give them the category of manager. Aware of the contradiction in the discourse on Taylorism and worker autonomy, the employers argue that no workers merely read sentences: "Everybody has to interpret, converse and solve problems".

5.7 Discussion

This research contributes to the academic debate on language as part of production processes in informational capitalism and on the consideration of language as a professional competence that is remunerable and "commodified" in the market (Cameron, 2000; Heller, 2010; Duchêne and Heller, 2012). The importance of analysing the relationship between language and job conditions lies in understanding how the criteria that govern salaries or job categories in the new economy are (re)formulated and how they are negotiated and agreed to by the social agents (employers and unions). Thus, the research gives greater insight into the significance of language in labour relations.

Our results have shown how the main linguistic conflicts of call centre companies are subsumed in the frameworks of labour relations and the main lines of regulation: remuneration and job categories. Although there is an increasing volume of literature on sociolinguistic management and conflicts in companies, the novelty of this paper is that it has shown that new systems of labour relations are being generated on the basis of: First, remuneration for language skills (bi/multilingualism), which is in turn related to globalization and language diversity. And second, communicative skills and linguistic autonomy, which is linked to informationalism. Both dimensions and processes, in the labour relations arena, are confronted by the tensions between standardization and linguistic authenticity and standardization and communicative autonomy.

In more detail, our analysis derived from call centres in Galicia (Spain), shows that:

- As far as language diversity is concerned, it has been seen that it does not affect the workers' job categories. It can be regarded as a salary extra, which is only paid in some campaigns and by some companies. The "language bonus" can be

matched to other "bonuses" (for example, transport or night work) depending on the needs of production and it has no relevance to professional career development in the sector. Despite the importance of language for productivity of call centre workers and the considerable size of the "language bonus", the system of labour relations gives it little importance. According to employees, this contradiction leads to bad practices in the management of diversity which, in turn, give rise to tension with both call-centre workers and clients.

- Likewise, the analysis of the regulation of the sector shows that language autonomy plays a leading role in the construction of professional categories, which have different working conditions (rank, stability and remuneration). This is a key issue for companies because the standardization of language through protocols, scripts and decision trees is a way to increase the efficiency of production processes and, therefore, survival in a highly competitive environment. However, it is an issue that causes tension between the trade unions and the employers. Our interviews have shown how difficult it is to reach agreement on the extent to which workers can use their discretion. The workers point out the contradiction between reaching their targets; respecting the timings laid down and following the protocols and scripts.

The reason why the dimension of linguistic autonomy acquires more importance than language diversity in the institutionalisation of employment conditions can be found in two different historical processes: 1) the reluctance to regard natural languages as a feature of professional qualifications and the insistence that they are an innate quality connected to ethnicity; and 2) in the trade-off between the actors involved, the unions tend to prioritise some issues over others. In particular, in the Fordist tradition, priority is given to compensating the autonomy of the workers in their jobs over other possible tensions (such as authenticity).

One of the most important aspects of this research is that it shows that in one of the sectors most criticised for its working practices in the new economy, language, and especially linguistic autonomy, plays a key role in defining employment conditions.

Bearing this in mind and from an applied point of view, we emphasize the importance that language should be given in collective bargaining in informational societies. Adding language at the centre of collective agreements in language-intensive sectors could facilitate the fitting between employers' interests and working conditions. At the same time, this could facilitate the management of diversity and service quality and, therefore, enterprises could gain in competitiveness due to better adaptation to their clients' preferences.

Chapter 6 Conclusion

In the new economy, informationalism and globalisation are generating a great need of highly skilled workers to perform both cognitive and interactive tasks. This is especially relevant considering that new technologies are replacing routine labour while complementing (making more productive) skilled labour. In considering this, skill-biased technological change advocates suggest that supply-demand market dynamic is generating a dualized society with high wages and status for the more skilled workers, but low wages and status for the less skilled ones. For neoliberal economists, this reasoning has clear political implications, stating that the achievement of a meritocratic labour market requires free-market policies together with a promotion of a highly skilled workforce. Without denying the relevance of supply-demand value formation, sociological and heterodox views give rise to alternative hypothesis about how skills are valued. The structure of the labour market, the differential power of agents or groups and institutionalized ideologies are considered as other important aspects influencing skills valuation. Sociological and heterodox views result in very different policy implications from those of the mainstream economists and skill-biased technological change advocates. In contrast to the free market ideal, they argue that political intervention is necessary to overcome the devaluation of skills of minority and marginalized groups, to equalize the different skills in the labour market (i.e. caring, interactive skills versus technical skills) and to prevent deskilling of the workforce.

This thesis has delved into the social construction of skill, highlighting distinct ways in which labour market inequality is produced due to differentiations in the valuation of workers and occupations and even the kind of skill. It has focused on language skills because of their relevance in the new economy. It has been argued throughout this thesis

that language skills are highly demanded for their capacity to create value in the informational and globalized economy. However, linguistic skills and work have generated several debates concerning how institutionalized ideologies influence their valuation. The three papers that compose the thesis precisely explore these controversies combining quantitative and qualitative approaches.

The first paper (Chapter 3) has shown that the worker skill valuation depends on who holds the skills. Some ideologies, such as sexism or racism, imply that there is a devaluation of the skills of workers belonging to discriminated or marginalised groups. This argument has been applied to help in understanding how the linguistic skills of immigrants are valued. According to the results obtained from a regression analysis across 25 European countries, the foreign language knowledge of immigrant workers leads to them acquiring lower status jobs than in the case of natives. This disadvantage is basically produced for non-European immigrants and sensitivity analysis shows it is robust to basic and extended sets of statistical controls. This suggests that the cause of the disadvantage is the discriminatory behaviours of employers. However, there is a considerable variability in European countries. Whereas in almost half of the countries language relative advantage is positive for immigrants, in the other half there is a negative differential which places immigrants in lower positions in the labour market. It has been shown that this variability is partly caused by the attitudes toward immigrants —or the degree of openness towards them— in these societies. The impact of attitudes is higher for non-European immigrants and especially so for females.

To the knowledge of the author, this is the first research providing evidence of the effect of attitudes towards immigrants on the valuation of their skills. The evidence obtained is in favour of the hypothesis regarding the effect of ideology (or social norm) on the valuation of skills of different status groups. We saw that, beyond any individual reasons of employers who discriminate, either because of racial animus, unconscious prejudices, or statistical discrimination, the attitudinal environment moderates these individual behaviours.

The valuation of skills at the occupational level is also influenced by ideological aspects. This is the conclusion of the second paper of the thesis (Chapter 4). It was hypothesised that there are some linguistic skills that have null rewards or even penalties in the labour market. Whereas the valuation of verbal-reasoning skills would be subject to the supply-demand dynamic, other linguistic skills such as communicative abilities and foreign language knowledge are unaffected by the market dynamic but are ideologically undervalued. The results show that both these linguistic skills are in higher demand in the labour market. However, as opposed to verbal-reasoning skills, payoff for them does not increase with demand when skill supply and occupational level variables are kept constant. In fact, the need for communicative abilities in an occupation is negatively related to wages. The lack of reward of such linguistic skills can be explained by the cultural association with women's work, with low status service sector jobs, and with ethnic attributes rather than technical skills. Both unions' and employers' criteria are biased by the ideologies and social norms predominant in society. This valuation of skills is institutionalized in several ways, such as job classifications and compensation schemas stipulated in collective agreements or in pay rates set up by individual employers.

Based on a wide literature review, it can be said that this paper provides one of the most complete measurements of the linguistic skills requirements in occupations. It extends previous measurements of intellective skills and incorporates into a single model those linguistic skills analysed separately in other works. It enhances our knowledge about the relevance of language in the new economy and provides the opportunity to test if the potential of language for value creation is related with salary conditions. The results obtained disagree with some of the existing work regarding the payoff attributed to linguistic skills. The lack of reward found for communicative and foreign language skills is especially worrying in those jobs where they are the most important part of the work load. Thus, for example, telemarketers would see their occupational payoff lowered due to the high requirement of communicative skills. In the case of verbal-reasoning skills, the reverse happens because, despite being in lower demand, these are the skills best rewarded in the US labour market. The lack of reward for communicative and

bi/multilingual skills is an important issue to consider in labour policies since that they are among the skills most demanded in the labour market and probably one of the most difficult to substitute in fourth industrial revolution.

The third and last paper of the thesis (Chapter 5) focuses on the recognition of language work in collective bargaining and on the views and interpretations that labour market agents (i.e. employers and trade unions) made of it. It has been argued throughout the thesis that informationalism and globalization make language more important in business. This is especially true in call centres, the object of study of this third paper. It is an industry with high and growing employment rates where language becomes the main input and output of labour. The process of commodification of language in call centres has generated a tension between the need of standardized work to increase efficiency and the need of linguistic skills and autonomy to provide services to diverse and demanding clients. The review of collective agreements in the case of Spain showed that linguistic skills are introduced in collective agreements, defining job categories and wages. However, interview analysis showed that what can be considered "skilled" labour is a matter of negotiation among the labour market actors. Multilingualism or foreign language knowledge in call centres is used by employers as a freely disposable human capital. They consider that language diversity has to be rewarded as a salary extra only when it is explicitly required in specific campaigns. This is also the case in collective bargaining, where it has no relevance to professional career development in the sector. Workers express they disconformity in the recognition of their language skills, as they are continually providing multilingual services. Language autonomy and the use of communicative skills play a leading role in collective agreements regarding the construction of professional categories with different working conditions (rank, stability and remuneration). Workers and unions contest the views of employers on who can be considered a communicative autonomous worker.

The paper gives greater insight into the significance of language in labour relations. The recognition of linguistic skills in call centres that affect workers conditions is mainly based on the tensions between standardization and authenticity as well as autonomy in language production. Given the relevance of language in work processes of the new

economy and the tendency to a so-called "callcenterisation" of labour relations, the debates based on linguistic standardization and skills and autonomy are becoming more important.

The evidence provided by these three papers make clear that the valuation of linguistic skills depends to a great extent on institutionalized ideologies and on political negotiation. This conclusion can be extended to all skills in the labour market and is consistent with theories of the social construction of skill. However, the thesis extends the theory's basic formulation by showing how the "social valuation of skill" implies a (re)production of inequalities in the labour market. Indeed, it has shown that, the worse are the attitudes towards immigrants across countries, the worse the valuation of their language skills in terms of occupational status. It has also shown that communicative abilities and foreign language knowledge are unrewarded and even penalized in the labour market, making occupations intensive in such skills less valued in comparison to equally skilled others. Finally, the qualitative part of the thesis illustrates how standardization of work in call centres produces a deskilling of communicative and foreign language skills. Standardization is especially relevant in determining job categories, which make employers stronger in lowering the payment of a large part of the workforce.

These conclusions go beyond the reasoning of orthodox economists regarding the valuation of skills. Supply-demand theory is fundamental in understanding skill valuation, but it is also crucial to recognise that markets are embedded in social and ideological structures. These structures affect the preferences and choices of individuals and regulate the scope of the market functioning. According to a "social valuation of skill" point of view, it can be said that the policy recipe suggested by neoliberal economists is not enough to achieve a fair labour market. The present work highlights three social problems that should be addressed by political action: the discrimination of minority or marginalized groups, the undervaluation of some "soft" skills and the deskilling of the workforce in the services sector. Regarding the first of these, the prohibition of discrimination in the labour market is essential to attain a truly meritocratic labour market. However, as discussed in the first paper of the thesis, there

are unconscious prejudices and information biases that influence employer decisions. We saw that the attitudinal environment is a moderator of discriminatory behaviour, and therefore there is a need to change attitudes towards marginalized groups or ethnic minorities at a deeper level. Education is a very important element for reducing discrimination and devaluation, but also the general promotion of a respect and tolerance for such social groups in all areas of social life. Also, regarding undervaluation of skills, there are some skills for which their rewards do not increase at all or even decreases with demand. This implies an undervaluation of them, which is arguably attributed to ideological views of occupational skills. This is the case, not only for caring skills (as is widely discussed in the literature), but also (as reported in this thesis) for communicative abilities and bi/multilingual skill. An important step in defining and conceptualising soft and relational skills is done in several job evaluation instruments. However, a change in existing pay schemas in order to give interactive work equal value to other comparable cognitive activities is still remaining. Finally, another implication derived from the thesis refers to the impotence of social agents in driving social change. There is a need for recognition of linguistic work in collective bargaining. In general, for all kinds of interactive work, clearer criteria about what should be considered skilled work and tasks is a necessary step for preventing undervaluation and worker deskilling.

The findings of this thesis regarding language work, skills valuation and labour market fairness can be extended in several ways. Despite, due to its relevance in the new economy, the thesis focuses on linguistic work, however other soft and interactive skills that are becoming increasingly relevant should be also considered. How are they rewarded and paid across social groups and occupations is an important topic that should help us to understand the patterns of inequality in the labour market. This analysis would require a finer grained measurement of skills and a better understanding of their interrelations. To study skills devaluation, the thesis focused on one specific group of workers, the immigrants. However, other minorities or marginalized groups for which there are high rates of inequality in the labour market should be considered. Such analysis should be made, not only for language skills, but also for other cognitive and especially soft or relational skills. The influence of institutionalized ideologies is a

special matter that requires more analysis regarding the valuation of occupations and workers. In the third chapter of the thesis, an analysis of the impact of openness towards immigrants across countries was provided. Similar research to test the influence of ideologies on occupational skills might be done to show, for example, the impact of sexism ideology on the devaluation skills. To finish, a closer examination to the processes of negotiation and collective bargaining regarding the recognition of soft skills would also form an interesting line of research. In our literature review, few studies were found that investigate how skills become part of the configuration of pay hierarchies across occupations. This would be an especially relevant line of research given the changes in the content of work in the new economy.

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