Chinese microentrepreneurs in industrial cluster in Italy: analysis of the ethnic microenterprises' performance

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Abstract

Purpose – This paper aims to investigate the distinctive economic and social dynamics of ethnic quasi-enclave industrial sub-clusters and to econometrically analyse the main factors affecting the economic performance of Chinese-migrant microentrepreneurs with a specific focus on social capital.

Design/methodology/approach – An interpretative framework that encompasses sustainable local human development and mixed embeddedness is applied to a case study of Wenzhounese migrant socioeconomic quasi-enclave leather industrial sub-clusters located adjacent to the industrial district area of Florence, Italy. Given the complexity of the phenomenon, the research study adopted a mixed-method approach encompassing both qualitative and quantitative methods. The econometric analysis was based on data collected via a survey administered to a random sample of enterprises.

Findings – Ethnic social capital plays a central role in ethnic entrepreneurship. The results confirm the relevance of social networks in the context analysed and reveal the importance of ethnic and non-ethnic business social capital as one of the main factors affecting enterprise's economic performance.

Practical implications – The findings propose potential policies to upgrade the ethnic enterprises especially in terms of increasing their formality and inclusion in the Italian social and economic systems of production.

Originality/value – This analysis contributes to existing literature on migrant entrepreneurship and communities, adding new evidence related to ethnic enterprises and the importance of social capital in terms of performance and working conditions of the community of entrepreneurs.

Keywords Social capital, Social networks, Industrial clusters, Ethnic enterprises, Local development

Paper type Research paper

1. Introduction

As stated by the literature on ethnic entrepreneurship (Kloosterman, 2010; OECD, 2011; Wang and Altinay, 2012; Arrighetti *et al.*, 2014; Jones *et al.*, 2014; Storti, 2014; Ram *et al.*, 2017; Rahman *et al.*, 2018) migrant entrepreneurs and enterprises have recently emerged in local systems in the form of ethnic enclaves [1]. In countries characterized by a local system of production organized in industrial districts (IDs) [2] and clusters [3] such as Italy and Spain, ethnic entrepreneurship has contributed to reshaping the internal structure of their economic environments especially in manufacturing sectors (Canello, 2016; Lombardi and Sforzi, 2016; Dei Ottati, 2018). Nevertheless, more attention should be paid to these phenomena in terms of sustainability of the regional and local system and the impacts of these development processes on ethnic entrepreneurs and workers (see UN 2030 Agenda and ILO Decent Work Campaign).

The phenomenon of ethnic entrepreneurship is particularly interesting when addressing Italy as country-case study, especially as it intertwines with the presence of IDs and clusters in traditional labour-intensive industrial sectors, such as garment textiles and leather manufacturing of the "Made in Italy" (Barberis and Aureli, 2010; Santini *et al.*, 2011; Guercini *et al.*, 2017a; Lazzeretti and Capone, 2017a, 2017b; Dei Ottati, 2009, 2014, 2018). In Italy, many Chinese migrant communities have established their micro- and small-sized manufacturing enterprises (MSEs) within or near pre-existing IDs (Barberis and Aureli, 2010). This phenomenon has emerged also thanks to the similarity of the Italian and Chinese industrial communities in terms of modes of organization of the economic environment (i.e. model based on the role of micro- and small enterprises and the importance of tied and cohesive social capital). The relationship between ethnic entrepreneurship and IDs and cluster has been studied, especially the case of Chinese entrepreneurs in textile and clothing IDs in Prato (Becattini, 2001; Dei Ottati, 2009, 2018; Santini *et al.*, 2011; Biggeri *et al.*, 2015; Lazzeretti and Capone, 2017a, 2017b), and in more wide-spectrum regional and national studies (Canello, 2016; Lombardi and Sforzi, 2016).

Nevertheless, a clear analysis of the rise of ethnic industrial clusters acting as enclave or quasi-enclave economies [4] in specific local systems of production has not been deeply explored by the literature. This is partly due to the evident difficulties met in gathering suitable microdata (Canello, 2016). The case study chosen to analyse this phenomenon is the Wenzhounese migrant socioeconomic quasi-enclave industrial sub-cluster [5] located adjacent to a well-known leather ID in Florence.

This paper has two aims. The first is to investigate the phenomenon in IDs of ethnic quasi-enclave industrial sub-cluster by examining the distinctive economic and social dynamics. The second is to analyse the factors affecting Chinese entrepreneurs' economic performance. In particular, as the literature on ethnic entrepreneurship suggests, the study focuses on ethnic and non-ethnic social capital. Co-ethnic factors facilitate different market and non-market-related advantages. However, non-ethnic business networks are fundamental to allow "breaking out" (Arrighetti, 2014) and upgrading strategies. Moreover, due to the characteristics of the Chinese migrant community, the importance of their community in the daily life as in what concerns economic activities is not negligible. Thus, our research focuses on assessing the magnitude and direction of the influence of ethnic relational and ethnic and non-ethnic business social capital on the performance of enterprises.

This paper's interpretative framework adapts the conceptual framework presented by Mehrotra and Biggeri (2007b) to local systems of production characterized by the availability of informal and formal ethnic resources and different levels of embeddedness (Kloosterman, 2010). In particular, following Mehrotra and Biggeri (2007b), and considering the different internal and external social and economic dynamics characterizing ethnic enterprises, the interpretative framework focuses on two factors that define the level of development of the case study cluster: the production collective efficiency and the social and environmental collective outcomes.

The methodology adopted by this research is a mixed-method approach, which allowed to overcome difficulties related to collecting microdata via a survey in such a confined and sealed community and to the lack of extensive previous research. The econometric analysis is based on information gathered through the administration to a random sample of enterprises [6] of a survey on economic and social issues. The qualitative methods included a one-year observational analysis, in-depth interviews conducted with key-stakeholders and life-course interviews conducted with migrant Chinese entrepreneurs.

The results present the main characteristics of the ethnic enclave industrial sub-cluster. The econometric analysis reveals the relevance of business social capital as one of the main factors affecting the entrepreneurs' economic performance. This analysis contributes to existing literature on migrant enterprises and communities within and outside industrial clusters in Italy, by responding to a need for new evidence on ethnic entrepreneurship in terms of performance and working conditions within local socio-economic systems.

The structure of the research paper is as follows. In Section 2, a brief overview of the literature on ethnic quasi-enclave industrial clusters and the applied interpretative framework is provided. Section 3 presents the research methodology and the models used. Section 4 provides the empirical findings, while Section 5 encompasses a discussion on the results and then suggests policy implications. Finally, Section 6 offers some concluding remarks.

2. Ethnic enclave industrial clusters: an interpretative framework

2.1 Ethnic enclave industrial clusters and social capital

Migrants often organize themselves into ethnic communities and in some local systems of production the phenomenon of ethnic enclave economies intertwines with the presence of IDs and clusters (Kloosterman, 2010).

As stated by the classical theory of ethnic enclaves (Light, 1972; Portes, 1981; Zhou, 2004), the environment in which ethnic MSEs operate is characterized by the presence of strong co-ethnic social networks (Deakins *et al.*, 2007; Zolin *et al.*, 2016). Social capital comprises those characteristics of social structures (e.g. high levels of interpersonal trust and norms of mutual aid and reciprocity), which serves as resources for individuals and enable collective action (Coleman, 1988; Putnam, 1993).

Indeed, ethnic entrepreneurship emerges in self-sufficient and sustaining enclave economies and is tied by shared co-ethnic social structures, ethnicity and geographical location. Local factor conditions as access to skilled work, local demand conditions, access to suppliers and related businesses, local competition and industrial structure is shared by businesses located within an ethnic enclave and can differ considerably with respect to the economic environment outside the boundaries of the enclave (Zolin *et al.*, 2016).

Often ethnic enterprises locate themselves in "vacancy chain opening markets" (Kloosterman, 2010, p. 31) occupying economic spaces left by native entrepreneurs. They exploit "localized market opportunity" (Storti, 2014) of sectors characterized by small-scale, low-skilled, labour-intensive production). Often, these sectors provide scarce economic returns but demand long and unsocial working schedules (Jones *et al.*, 2006, 2014).

Drawing from Barberis and Aureli (2010), ethnic entrepreneurs in quasi-enclave clusters, although heavily characterized by the overreliance on ethnic financial and social resources and a co-ethnic labour force, have access to mainstream non-ethnic markets and national or even international mainstream network. Indeed, recent literature on migrant entrepreneurship (Arrighetti, 2014) has pointed out increased trade with non-ethnic markets and "breaking out" strategies overcoming the definition of ethnic enclave economy. However, for ethnic entrepreneurs the capacity to attract assets and resources (e.g. management skills, market information and technological knowledge) is still tightly connected to the availability of co-ethnic social capital (Arrighetti, 2014).

"Ethnic enclave economies" have emerged within or nearby industrial clusters, especially those characterized by work-intensive production processes and high levels of informality. In flexible work-intensive systems, MSEs can benefit from their ethnic networks since they allow for the accumulation of capital and the employment of cheap and hardworking co-ethnic workers, as a means to be more competitive (Smallbone *et al.*, 2003; Jones *et al.*, 2014; Zolin *et al.*, 2016). In our analysis, social capital takes two forms, namely, business and relational social capital, which can be both formal and informal, ethnic and non-ethnic, in the host country and transnational (Guercini *et al.*, 2017b). Especially in our case study on Chinese migrant communities, the analysis of social capital is very important. Chinese social capital includes implicit norms of reciprocity and trust based on ethnic origin and kinship (Ngoma, 2016). Social norms as *guanxi* – i.e. a system of personal ties that poses long-term social obligations (Bian and Ang, 1997) – are used both in private and commercial settings and reproduced over time by Chinese migrant communities. *Guanxi* and reciprocity shape economic agents' behaviours contributing to a sense of attachment and belonging to the community of reference (Guercini *et al.*, 2017b). These norms are reproduced over time by Chinese migrant communities, manifesting as in-group lock-in behaviours.

2.2 Mixed-embeddedness, production and social and environmental collective outcomes

Further and recent developments of the definition of Porter (2000) define industrial clustering as a dynamic process characterized by the combination of various internal and external factors on both the production side and the social and environmental side (Mehrotra and Biggeri, 2007a; Gereffi and Lee, 2016). Indeed, as highlighted by recent literature on sustainable human development (SHD) at the local level and by the UN 2030 Agenda (Biggeri and Ferrannini, 2014; Bianchi *et al.*, 2021), outcomes for industrial clusters and local development are not just influenced by production organization and production results but are also deeply connected to social and environmental sustainability.

According to the mixed embeddedness approach itself (Kloosterman, 2010; Ram *et al.*, 2017; Arrighetti *et al.*, 2014; Jones *et al.*, 2014), ethnic MSEs within ethnic enclave industrial clusters, are embedded in a multilevel opportunity structure that affects the opportunities and threats faced by both individual firms and the cluster.

Considering these new elements, to capture the evolution of ethnic enclave clusters, our interpretative framework adopts the conceptual framework presented by Mehrotra and Biggeri (2007b) [7] and the mixed-embeddedness framework (Kloosterman, 2010).

Mehrotra and Biggeri conceptual framework is based on two main dimensions allowing for the evaluation of industrial clusters: the collective efficiency of production and the social and environmental outcomes. In brief, when the determinants of the production collective efficiency and social and environmental collective outcomes create positive synergies, the cluster is positioned in a high road of development, whereas a low intensity of social and environmental collective outcomes and/or of production collective efficiency depict "low" or "dirt roads" development patterns. This study started from this analytical position, which considers

differences in the combination and intensity of the production collective efficiency and social and environmental collective outcomes, to investigate which factors need to be taken into consideration in the particular case of ethnic enclave economies and ethnic industrial clusters.

Production collective efficiency depends on the interaction of cooperation and competition (Schmitz, 1995). Local systems of production experience both internal and external competition and cooperation (i.e. trade and business networks). For instance, "dirt road" cluster are characterized by high internal competition, low internal cooperation and low external competitiveness (Mehrotra and Biggeri, 2007b).

Moreover, ethnic entrepreneurship is characterized by the role of formal and informal ethnic social capital networks. These provide access to social and business-related resources as practical information, such as help in finding accommodation, employment or financial aid. On the one hand co-ethnic social relations compensate whenever different economic and non-economic resources are not accessible via standard non-ethnic networks, on the other hand excessive reliance on ethnic enclave resources may create "lock-in effects' that limit ethnic enterprises' upgrading, for instance by limiting access to and spill over of knowledge and technology (Rahman *et al.*, 2018).

Working conditions are another internal factor that influences the social and environmental outcomes of the cluster. Favourable working conditions can contribute to individual well-being. Satisfactory standards of living and working, as well as access to basic social services, facilitate the promotion of cooperative labour and supplier relations in the productive, social and environmental dimensions (Mehrotra and Biggeri, 2007b). Additionally, from an external point of view, the social development of ethnic enclave industrial clusters depends on access to basic social services (e.g. health, education, social insurance and environmental protection) and the level of integration within the host context (Kloosterman, 2010; Portes and Martinez, 2020).

The combination of all these internal and external factors determines both the position of the ethnic enclave industrial cluster within local systems of production, as well as potential routes towards upgrading, from human, economic and local perspectives.

The Kloosterman's (2010) mixed-embeddedness framework can be applied to the individual entrepreneur who is embedded in multiple spheres of influence and whose business-related decisions depends on his/her opportunity. Ethnic enclave industrial clusters are not only a mode of organization of production: some social and economic dynamics developed within the cluster have repercussions for the general well-being of their members. Indeed, the relationship between ethnic enclave industrial clusters and the individual ethnic microentrepreneur is two-way, and analyses should focus not only on the contribution of entrepreneurs to their local system of production and business networks but also on the effects that the ethnic enclave economy and cluster produces on the single microentrepreneur in terms enterprise's performance.

3. Methodology

3.1 Research design

This study is based on primary data collected during the field research in the ethnic quasi-enclave industrial sub-cluster of Osmannoro, Florence. A long-term observational analysis was implemented by a Wenzhounese member of the research team, who lived for one year (2012) embedded within the Wenzhounese community in Florence to become familiar with the members of the community and their dynamics. Given the exploratory nature of the research, an integrated mixed-method approach that combines quantitative and qualitative methods was adopted. In-depth life-course interviews with key stakeholders (e.g. local Wenzhounese entrepreneurs) allow the assessment of the sub-cluster and the selection of a sample of enterprises.

Considering that, at that time, there was no list detailing the ethnic enterprises that existed within the small industrialized peripheral area of Osmannoro, we decided to select a sample randomly, starting with warehouses (Italian ex-factories) rented to Chinese entrepreneurs. Based on the information gathered through several key informant interviews, more than 20 plants were identified in the cluster area. Moreover, the descriptive statistics of the main variables considered confirmed the high homogeneity of the units in the sample (Table 1, next section). It can be observed that the firms do not differ statistically in size, they all produce leather bags only with consistent design and material (they all buy the main inputs from the same pool of input providers), the majority of the entrepreneurs are middle age and comes from the same place of origin and thus are characterized by a similar background in terms of education, skills development and approach to business development.

At the time, owing to limited information, we expected that there would be 20–25 enterprises, on average, in each plant/warehouse. We randomly selected five plants, so as to reach at least 70 enterprises, hypothesizing a maximum of 30% of non-respondents [8].

After the selection, we found 212 enterprises operating within the five plants (around 100 more than expected, one warehouse was particularly large including almost 100 enterprises). It follows that the cluster could have contained between 800 and 1,000 ethnic-Chinese enterprises; this number was later confirmed by two key informants and the informal association of producers. The Chinese researcher of the research team contacted all 212 enterprises directly to deliver the surveys which was designed *ad hoc*. Of these, only 71 enterprises and relative households replied to the questionnaire delivered in the survey. The response rate was lower than expected [9] (33.5%) but in line with similar surveys addressing migrant enterprises (Tubadji *et al.*, 2020) [10].

The questionnaire was divided in multiple sections. First, the interviewee was asked to indicate basic information on the members composing their households in particular:

- their relationship to the respondent;
- their personal details;
- their job;
- hours and days of work;
- their education attainments;
- their arrival in Italy; and
- whether their place of origin corresponds to the one of the respondent.

Taking into consideration both the entrepreneurs and his/her wife/husband points of view, on the one hand the questionnaires pays attention to the reasons behind migration, the knowledge of the Italian language, if the migrants are used to live in Italy and the related reasons and the level of life satisfaction. On the other hand, it asks about their evaluation of the working conditions and safety-related questions and their involvement in the community. Regarding the enterprises, the questions focus on the networks surrounding the firms both upstream and downstream the chain of production, the main factors influencing their economic activity and basic enterprise's detail such as size, capital, sales volume, technology and features of the sector.

3.2 Models and expected results
The empirical analyses include descriptive statistics about the main characteristics of the cluster as well as the main model investigating the economic performance of the enterprises.

To examine the key factors contributing to the economic performance of the Chinese microenterprises during the period 2009–2012, an extended production function model is considered:

$$Y_i = A \; f(K_i, \; L_i, \; H_i, \; I_i, \; S_i) \qquad with \; i = (1, \ldots \; , N) \tag{1}$$

Y represents the output of the single enterprise (business performance), and A represents the technology-absorbing capacity. Production is a function of the capital used to set up the business (K), the labour force (L), the human capital of the owner (H), the infrastructure (I) [11] and includes social capital (S). Our main hypothesis is that social capital, in its different forms, can be an essential driver of both migrant entrepreneurship and local systems of production, especially those related to business as reported in the literature [12]. While relational capital has not a clear expected result on economic performance since the ethnic community may be also confining (Jones *et al.*, 2014) [13]. Moreover, following the literature, we expect the labour force to increase production outcomes (manufacturing being a labour-intensive industry) and that human capital will have a positive effect, as we are referring to entrepreneurs, although manufacturing jobs are mainly unskilled.

From an operational point of view, the study analysed the influence of social capital distinguished into different categories: total, ethnic business, non-ethnic business and ethnic relational. The variables measuring social capital are chosen following the ego-centric network analysis of Biggeri *et al.* (2021) and the analysis of Guercini *et al.* (2017b) run on Chinese-owned enterprises.

Total social capital is defined as the aggregation of relational and business social capital. Business social capital is defined as the network of ethnic and non-ethnic business relations forged/developed by the entrepreneurs, meaning relations upward and downward the product's value chain. Business capital is then considered both in terms of number of business/trade relations in Italy and in China.

Through the data collection, the existence of relational ethnic social capital intended as high levels of interpersonal trust and norms of mutual aid and reciprocity outside business relationships, i.e. in daily community life. In other words, in this study, relational social capital is identified as the positive connotation that each entrepreneur gives his/her kinship and in-group ties in daily community life. For more information on the construction of variables see Table A1 in Appendix.

4. Empirical findings

4.1 Ethnic quasi-enclave industrial cluster characteristics

The data collected via qualitative methods and the survey allow us to describe the main characteristics of the ethnic sub-cluster (e.g. the size of the sub-cluster, production processes and financial resources) and the ethnic community, from a standard as well as SHD perspective (see Tables 1). Thus, we explore the organization of production, the formal and informal activities, and the business social networks (local, national and international) as well as different phenomena linked to SHD, such as exploitative and self-exploitative labour relations (see also the Agenda 2030 and the Sustainable Development Goals SDGs #8 on Decent Job) or the quality of relationships in the community.

The ethnic quasi-enclave sub-cluster analysed is constituted by autonomous family-owned micro-firms that produce lather bags aside a well-known leather ID in the Florence area (Bacci *et al.*, 2010). The ethnic quasi-enclave sub-cluster works separately (i.e. interacting seldomly, for instance, when Chinese entrepreneurs decide to "upgrade" by leaving the ethnic-Chinese cluster to become subcontractors for Italian companies) from the

Variables	N	Mean	SD	Min	Max
Individual level factors					
Years spent in Italy	70	13.629	4.45	3	26
Education level (Primary = 0=, junior high and above = 1=)	70	0.771	0.423	0	1
Firm-level factors					
Enterprise's output (Negative = 0, Stable/Positive = 1)	68	0.838	0.371	0	1
Number of employees (size)	71	3.085	1.547	1	7
Hours worked per day	70	13.144	1.863	5.6	15.8
Days worked per week	70	6.379	0.363	5	7
Sex of the entrepreneur (Male = 0, Female = 1)	71	0.141	0.35	0	1
Social capital					
Total social capital (categorical)	71	0.887	0.708	0	2
Relational social capital (dummy)	71	0.338	0.476	0	1
Business social capital (dummy)	71	0.549	0.501	0	1
Business social capital (Italy)	71	0.437	0.499	0	1
Business social capital (China)	71	0.197	0.401	0	1

Notes: For the variables representing social capital, when they are dummy 0 equal "no relations", while 1 "presence of relations". The categorical variables representing social capital instead runs "No relations" = 0, "One relation" = 1 and "More than one relation" = 2
Source: Author's elaboration

Table 1.
Descriptive statistics

Variables	(1) Model 1	(2) Model 2	(3) Model 3
Education level (secondary)	−0.600 (−0.558)	−0.865 (−0.770)	−1.010 (−0.869)
Years spent in Italy	−0.0599 (−0.508)	−0.0910 (−0.771)	−0.107 (−0.916)
Sex of the owner (female)	−1.527* (−1.540)	−1.690* (−1.633)	−1.478 (−1.410)
Number of employees	0.763*** (2.467)	0.835*** (2.537)	0.847*** (2.551)
Hours worked per day	0.683** (1.907)	0.576** (1.912)	0.790*** (2.106)
Days worked per week	−1.414 (−1.338)	−1.552* (−1.472)	−1.851* (−1.645)
Total social capital (categorical)			
At least 1 (business or relational)	1.662** (1.725)		
At least 2 (business and relational)	4.285** (1.821)		
Business social capital		2.496*** (2.143)	
Relational social capital		1.149 (1.095)	1.003 (0.949)
Business social capital (Italy)			2.238** (1.936)
Business social capital (China)			3.586** (1.684)
Constant	0.00486 (0.000766)	2.635 (0.393)	1.950 (0.293)
Observations	68	68	68
Pesudo *R*-squared	0.277	0.290	0.324
Log Lik	−21.75	−21.38	−20.34
Prob > chi2	0.0335	0.0258	0.0212

Notes: Table 2 presents the estimated coefficients of the logit regression and the corresponding z-statistics in parentheses. The dependent variable is "Enterprise's output", assuming values equal to one when the enterprises registered a stable/positive outcome and zero if a negative one. Significance of coefficients is noted with star (*), namely, ***$p < 0.05$, **$p < 0.1$, *$p < 0.15$
Source: Authors' elaboration

Table 2.
Production function:
Output

ID and is situated in one industrial suburb of Florence. It is composed of MSEs run by Chinese migrants from the prefecture-level city of Wenzhou. The Wenzhounese ethnic sub-cluster population counts between 800 and 1000 Chinese MSEs. These firms occupy 20–24 plants, with each firm operating in a working space between 30 and 100 square meters of these large warehouses.

Most workers are relatives or members of the extended family (around 70%). A relevant share of the enterprises (almost 20%) are one-man enterprises; however, these one-man enterprises often receive occasional help in the form of unpaid work on the part of family members, illegal migrant workers and trainees.

Almost 82% of the interviewed enterprises explicitly declared themselves to be legally registered. However, according to key informant interviews, Chinese entrepreneurs often legally register their enterprises only to close them after a couple of years (before the fifth year after the founding year) and then they reregister them under a new name. This is a common practice to avoid or reduce the compliance of tax regulation. Moreover, the fact that 18% of the enterprises surveyed are not registered at all, it means that almost one-fifth of the enterprises operate informally. Furthermore, being registered does not imply that the enterprise complies with the law in terms of security, job, fiscal duties and workplace's environmental and hygienic measures (this is confirmed by the data from the nearby ethnic textile/fast fashion cluster in Prato, Biggeri *et al.*, 2015).

The majority of the enterprises have a stable sales volume. This result is in line with the 2012–2013 trend of the textile and leather industry in Tuscany. Indeed, the regional leather industrial sector experienced a +11.9% exports increase and a +10.9% increase considering only the Province of Florence (IRPET, 2014) The stability of sales flow is an indicator of the soundness of the industrial sector, which did experience restructuring but is still a leading industry in Italy. This stability, however, can be otherwise read as a symptom of immobility or a lack of upgrading and of innovation. Indeed, technology and technological advancement are not considered an important asset by the Wenzhounese entrepreneurs of this cluster.

Around 60% of the entrepreneurs indicated that the desire to achieve better income was the main reason behind their migration, which confirms them as economic migrants. The education level of the majority of the microentrepreneurs is quite low (60% attended only junior middle school). Only 3%, approximately, attest to being fluent in Italian.

Although hard work and long working hours are typical of Chinese MSEs, these ethnic MSEs are characterized by an extraordinary number of working hours. The average ethnic cluster's employee works almost 84 working hours per week (on average 13 h per day for 6.5 days a week). Italian standards and legislative regulations stipulate a working week characterized by 40 working hours, equivalent to eight hours per day (five days per week only). In the ethnic quasi-enclave industrial clusters, the average number of hours worked per week is more than double the national standard, leaving employees open to self- and co-ethnic exploitation. Although, workers themselves considered their workplace conditions to be on average sufficient, to an outsider this would not be so. This may be explained by the fact that workers do not have an alternative frame of reference, and for those who do have one, the benchmark is often the dirt-road clusters in China.

In almost 99% of cases, the financial capital used to set up an enterprise is provided through informal networks, predominantly in the form of family savings and loans from Chinese friends in both Italy and China. Almost all the Chinese entrepreneurs included in this case study (around 95%) come from only two towns in Wenzhou, and more than half of employees who are not blood relative come from the same place of origin as the enterprise's owner. Over 94% sells their products also abroad (Europe, in particular Germany and

France) and 91% have recurrent orders from customers in Italy, 68% from Tuscany and 30% from Florence Province.

Regarding relational social capital available to entrepreneurs, the ethnic migrant network significantly impacts the daily lives of individual entrepreneurs. Indeed, the presence of Chinese family and friends plays a major role in helping migrants to feel integrated within the host country. Foremost, 90% of respondents indicated that "being happy" in the local ethnic community is an important factor that contributes to their life satisfaction but not necessarily to the enterprises' business performance.

4.2 Empirical analysis: enterprise performances
As shown in Table 1, the enterprises that comprise the cluster are quite homogeneous in terms of size, geographical location, products produced, origin of the entrepreneurs and their workers, and the fact that they are all first-generation owners.

In our data set, the variables that mark each enterprise's business performance is an indicator that compares sales volume across three reference years: 2009, 2010 and 2011. Due to the type of data available, the econometric model chosen in this study to estimate the production function is a regression model for dichotomous data, specifically, a logistic regression model. The response variable assumes value equal to one when the enterprise recorded stable/increased sales volume, whereas value is equal to zero when the enterprise recorded decreased sales volume. Here, social capital represents both ethnic and non-ethnic formal and informal business networks and ethnic resources/relationships available through the ethnic community. Thus, we measure the impact of total social capital, relational and business capital, and business networks in Italy and back in China, using the following as proxies: the level of quality of relations in the community of reference, access to informal financial capital in China and Italy, and retailer networks.

Table 2 reports the results of three specification for the production function model, investigating the role of the different types of social capital. Model 1 comprises the influence of total social capital available to the enterprises, Model 2 differentiates between relational and business social capital, whereas in Model 3, the business social capital is further differentiated between ethnic and non-ethnic capital. The coefficients of almost all covariates are significant, and the sign is that expected. An increase in the number of employees generates a positive impact on the production volume of the enterprises, as can be expected. Likewise, an increase in workings hours per day increases the probability of experiencing an increase in production, whereas the negative sign of the working days per week confirms a decrease in sales volume.

The behaviour of key variables in the models is quite interesting. As expected, total social capital is significant, confirming the importance of social networks for the success of microenterprises, in addition to business social capital. Furthermore, the results of Model A.3 show the importance of informal/formal and local/transnational networks and are in line with the literature on ethnic enterprises. Maintaining strong connections with the motherland, especially in terms of informal financial support, and developing local and regional networks contributes greatly to economic success. However, the same pattern is not identifiable in terms of relational social capital. Having a high quality of relations in the community does not significantly increase the probability of a positive output.

5. Discussion
Our findings indicate the relevance of ethnic resources for businesses, specifically of the tightness, cohesion and transnationality of the Wenzhounese ethnic networks, and this

confirms the importance, for ethnic enterprises, of having informal means of accessing financial resources.

Drawing on the interpretative framework, for what concerns production collective efficiency, the ethnic quasi-enclave industrial sub-cluster under analysis is characterized by high "unhealthy" (i.e. fierce and disruptive) internal competition and low internal cooperation in terms of production (Mehrotra and Biggeri, 2007b). The leather goods production ethnic quasi-enclave industrial sub-cluster in Florence is thus considered to be on the low road of development, in terms of SHD of local systems of production. Although it is quasi-enclave, meaning it engages with local, national and international business networks, its competitive advantage is based on low labour costs and low-quality products. Simultaneously, even though ethnic social capital enables the survival of the enterprises, it also hinders their long-term upgrading (Arrighetti *et al.*, 2014; Zolin *et al.*, 2016), reinforcing a system of "enclave economy" and exploitative work relations. The extension of business networks beyond the ethnic enclave economy, in addition to the local, national and international business relations of the enterprises, allows the survival of the cluster in the short-medium run. Production collective efficiency is stymied by the low value added of production, absence of investment in technology and innovation, "unhealthy" internal competition and a lack of cooperation in terms of collaboration, which in turn fosters cluster upgrading.

Ethnic social cohesion is juxtaposed with a lack of proper integration into the local system, which hinders the development of higher synergies typical of an ID industrial atmosphere (Becattini, 2001). The relative low level of integration does not contribute to social and environmental collective outcomes, which is also confirmed by the econometric analysis of business performances. However, though this result may not raise problems in the short run, a lack of proper economic integration within the local system of production may not be beneficial for the ethnic quasi-enclave sub-cluster in the long term. The lack of Italian language proficiency constitutes an important barrier that contributes to isolation and overreliance on ethnic social capital, both in regard to economic, social and cultural aspects of an individual's life. These findings align with most of the literature on Chinese migrant communities and ethnic enclaves, which identify language as one of the relevant barriers to the development of ethnic entrepreneurship (Aldrich and Waldinger, 1990; Wang and Altinay, 2012).

Nonetheless, in the long run, lack of social integration may increase the likelihood of social conflict within the local society, thus causing negative repercussions on the quality of life of citizens (both Italian-born and migrant), but mainly for the Chinese migrants.

As expected, social capital is a key determinant. However, it is relevant to distinguish and to verify how different typologies of social capital impact differently enterprises' economic performance. The empirical results confirm the major role of ethnic and non-ethnic business social capital on the business performance. The density of an enterprises' business relationships and the importance of informal and formal, local and transnational networks are in line with the literature on ethnic enterprises (You and Zhou, 2019; Portes and Martinez, 2020). Especially in the case of Chinese communities, social relations, such as *guanxi* networks, significantly influence people's lives.

It is important to note that being a female entrepreneur determines a negative impact on the probability of achieving a positive output, and this finding reflects the empirical literature. Gender discrimination and asymmetric access to human and financial capital cannot be overlooked, since these biases are often amplified in contexts characterized by poor income and overreliance on an unpaid family workforce. Constraints related to gender are often underestimated when assessing migrant entrepreneurship (Ram *et al.*, 2017).

Nonetheless, these results are not completely reliable as we cannot assess the "real" engagement of female entrepreneurs within the enterprises. Female family members are often appointed as legal owners of enterprises although *de facto* they do not act as entrepreneurs. This is a matter that requires further investigation.

Though this is not the case here, higher education attainment is not a determinant of business performance. This result is not too surprising since the enterprises of the cluster under analysis are low-value-added and characterized by no investment in technological innovation and unskilled labour force.

Number of working hours is, in part, a proxy of work environment and conditions. Exploitative employment is often not "visible" due to the closed nature of the community and the presence of informal modes of operation and illegal migrant workers. In contexts where the community of reference constitutes the most important network available to the migrant, co-ethnic exploitation may be concealed behind family and ethnic ties (Jones *et al.*, 2006; Ojo *et al.*, 2013).

6. Final remarks

This study delves into the literature on ethnic entrepreneurship, industrial clusters and migrants and provides new empirical evidence on migrant entrepreneurship in traditional manufacturing clusters in the Italian context and on the phenomenon of Chinese quasi-enclave industrial sub-clusters.

The interpretative framework proposed, conceptualizing the evolution of a cluster (or sub-cluster) according to its potentials or weaknesses, helps to clarify possible strategies of development that can be undertaken to upgrade local economic systems, especially where dirt- and low-road clusters co-exist with IDs and clusters. This study analyses the main characteristics of both the case study sub-cluster and the enterprises constituting it, revealing the extent and density of its business networks, as well as the high reliance on a co-ethnic workforce and questionable workplace and working conditions.

In line with these analyses, policy implications can be drawn to facilitate the social and environmental upgrading of the Chinese ethnic enterprises and the sub-cluster. For example, the development of synergies with the metropolitan area of Florence and the wider Tuscany region and the engagement of associations of producers and consumers could facilitate the provision of policies aimed at upgrading in terms of health, hygiene, environmental and social security and compliance with the law of production, security and sustainability of the ethnic sub-cluster.

Through the application of the interpretative framework and the mixed-embeddedness approach (Kloosterman, 2010), the paper focuses on the different ways that social capital may impact spheres of influence and opportunity structures available to entrepreneurs. Overall, the results of this empirical analysis reinforce the relevance of ethnic and non-ethnic business ties – formal and informal, within the host and home countries and transnationally for ethnic enterprises, as already stated within existing literature (Smallbone *et al.*, 2003; Deakins *et al.*, 2007; Wang and Altinay, 2012; Arrighetti *et al.*, 2014; Zolin *et al.*, 2016).

The pronounced difficulties encountered in gathering suitable microdata make this research highly valuable. Moreover, the results of this study are based on an *ad hoc* survey administered to a representative sample of enterprises (although small in size). Indeed, the results are solid and consistent thanks to the high level of homogeneity in the population (which allows for a smaller sample size, according to power analysis). Moreover, they are consistent with the results gathered through our long observational analysis, in-depth interviews with key stakeholders and life-course interviews with Chinese entrepreneurs.

Nevertheless, caution is needed in generalizing the results since the sample is taken from a specific geographical area, and we invite further analysis of other similar contexts.

This research contributes to the existing literature on migrant enterprises and communities by offering new empirical evidence on ethnic entrepreneurship and the importance of social capital in terms of the performance of enterprises. However, factors influencing business performance could be enriched by future research that considers institutional settings and the role of the regulatory framework and on contextual provision of public services – i.e. as the access to basic social services – which affect both the level of integration and cultural tolerance.

Notes

1. "Immigrant groups which concentrate in a distinct spatial location and organize a variety of enterprises serving their own ethnic market and/or the general population" (Portes, 1981, p. 291).

2. Marshall's IDs are economic productive systems distinguished by interrelated social, economic and cultural systems that share formal and informal institutions (Becattini, 2001).

3. "Geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities" (Porter, 2000, p. 16).

4. According to Zolin *et al.*, following Portes and Bach (1985), an ethnic enclave economy "is an interdependent network of social and business relationships that are geographically concentrated with its co-ethnic people" (Zolin *et al.*, 2016, p. 454).

5. In this case study, we define the agglomeration of ethnic enterprises as a sub-cluster and not as a proper cluster as it has developed spontaneously and is, to a certain extent, connected to the leather industrial district in the local system of production.

6. We collected the data between 2012 and 2013. Given the sensitive issues addressed by the research, the ethical committee established that, a part from the internal report, the data could not be used for publication for five years.

7. This framework draws from the ideas of Pyke *et al.* (1990) on low roads and high roads in the evolution of clusters as local systems of production.

8. The minimum sample size, based on a power analysis (considering a 2.5% error ex-ante), was set to 61 enterprises.

9. Of those contacted, 141 enterprises (60%) refused to reply: 126 did not want to waste time that would otherwise be used to produce for their business, while 15 did not want to respond because they feared possible future controls by police or local authorities. This demonstrates the difficulty involved in collecting data on these issues. The low response rate raised some doubts regarding possible biases in the interviewed sample, especially regarding the registration status of the enterprises (some were reluctant to be interviewed if not legally registered). However, the lack of statistical association between the economic performance and the registration status (i.e. Fisher exact test) indicates that the bias we anticipated due to difficulties encountered in the data collection process is limited.

10. Moreover, compared to Tubadji *et al.* (2020), our sample is composed of homogenous enterprises in the same sector.

11. As all of the enterprises are a part of the same sub-cluster (area), infrastructure is disregarded.

12. As already mentioned in the literature on industrial clusters (Schmitz, 1995; Porter, 2000; Bellandi, 2006; Boneu *et al.*, 2016) and on ethnic entrepreneurship (Aldrich and Waldinger, 1990; Deakins *et al.*, 2007; Zolin *et al.*, 2016).

13. We assume, according to the literature, that social capital is a determinant of the economic performance. However, given the data available, we cannot completely exclude the issue of endogeneity.

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Appendix

Variable	Description and construction of the variable
Years in Italy	The number of years spent by the individual in Italy. It is a proxy of the degree of integration in the host country in literature on migration (Amit, 2010)
Education level	A dummy equal to zero when the entrepreneur has only a primary education. The education level is an indicator of the human capital owned by the entrepreneur
Business performance (output)	A dummy variable equal to zero if the firm has experienced a negative change in the sales volume if the sales volume was stable across the period 2009–2012 and to one if it has experienced an increase. Given the difficulty of gathering information on ethnic enterprises especially with regard to profit and revenues, the questionnaire posed questions stressing comparison instead of quantities (see the work by Mehrotra and Biggeri, 2005, 2007b)
Size	Measured through the number of workers employed by the entrepreneur
Hours worked per day	Measured through the number of hours worked on average per day by the entrepreneurs
Days worked per week	Measured through the number of days worked on average per week by the entrepreneurs
Owner's sex	A dummy variable equal to zero when the entrepreneur is male and equal to one when the owner is female. The empirical literature has generally found that the gender may have an impact on economic performance of ethnic firms (Ram et al., 2017)
Relational social capital	Measure using as a proxy the level of quality of relational social capital. The variable is a dummy equal to one when the owner has high quality of relation in the community of reference
Business social capital	Measured using as a proxy the number of Steady business relationships of the enterprise aggregated with the variable below (business social capital in Italy and in China). This variable is a dummy equal to zero if the firm has no established steady business relations, to one if it has at least one or more stable relations
Business social capital (Italy)	Measured using as a proxy the presence of direct business relations to Italian retailers: a dummy equal to one when the enterprise sells/buys directly to/from Italian retailers or retailers located in Italy
Business social capital (China)	Measured using as a proxy the variable Set up capital from China: a dummy equal to 1 if the informal capital used to set up the enterprise comes from China and equal to zero instead if this capital comes from family and friends based in Italy
Total social capital (categorical)	A variable created by aggregating the variables above

Notes: In choosing the best proxy for social capital, we focus on measuring social capital at the individual level, i.e. ego-centered measures, namely, survey-based assessment of individual perceptions and presence and lack of presence of relations (Carrillo Álvarez and Riera Romaní, 2017)
Source: Authors' elaboration

Table A1.
Variables'
description

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