(When) Can Entrepreneurship Increase Community Integration?

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Abstract

Previous research has focused on the antecedents of entrepreneurship within communities, but little is known about the consequences of entrepreneurship for the community. Focusing on crime incidence as a key dimension of community disintegration, we propose that regional boosts of entrepreneurial activity benefit communities. Using employer-employee matched data from Portugal between 2002 and 2010 and an exogenous increase in entrepreneurship following a deregulation reform, we find that promoting entrepreneurship reduces crime incidence within the focal communities. We further find that higher participation in the labor market and access to better working conditions within established firms is the key mechanism responsible for this effect. This result is further amplified in communities with higher unemployment rates and greater income inequality, confirming our prediction that entrepreneurship serves as a vehicle to improve the standing of disadvantaged groups.

Keywords: communities, entrepreneurship, labor market integration, social integration

In considering the prosperity of local communities, is entrepreneurship an advantage or a hindrance? While one might hope for the former, research concerning local communities and entrepreneurship has not provided a definite answer. But shedding light on this question seems especially important because growing evidence suggests that entrepreneurship, or the act of founding new ventures (Aldrich and Ruef 2006; Audia and Rider, 2005), is one of the most important features of today's economy (e.g., Haltiwanger, Jarmin, and Miranda 2013; Saxenian 1994; Sørensen and Sharkey, 2014), and efforts to spur the creation of new ventures within communities and regions have become increasingly more prevalent (e.g., Audia, Freeman and Reynolds 2006; Kwon, Hefflin, and Ruef 2013; Samila and Sorenson 2017).

Although scholars of entrepreneurship have taken important steps to address this question, the extant research has paid disproportionate attention to economic gains – including the benefits of knowledge spillovers (Bresnahan, Gambardella, and Saxenian 2001; Saxenian 1994), employment (Decker et al. 2014; Haltiwanger et al. 2013; Steinmetz and Wright 1989), and innovation (Samila and Sorenson 2017; Schumpeter 1954; Wong, Ho, and Autio 2005) – all thought to accrue to entrepreneurial communities. Yet the viability and long-term survival of local communities critically depend on community social structure (e.g., Audia, Freeman and Reynolds 2006; Berrone et al. 2016; Rao and Greve 2018; Samila and Sorenson 2017; Tilcsik and Marquis, 2013). Studies show, in particular, that social integration, whereby marginalized groups become incorporated into the community's social structure, is the key attribute of robust communities (e.g., Durkheim [1897] 1951; Berrone et al. 2016; Samila and Sorenson 2017). For example, local communities prove to be more stable when traditionally excluded groups are more highly integrated with dominant community members, by either participating in common activities or having greater access to mainstream opportunities (e.g., Alba and Nee, 1997; Junger-Tas, 2001). However, despite its critical importance, community integration has not been examined by entrepreneurship scholars and thus needs to be considered more fully.

In this study, we therefore assess the influence of entrepreneurship on community social integration. Community breakdown and disintegration have been most commonly associated with deviance from norms and values widely upheld within communities (e.g., Coleman 1988; Durkheim

[1897] 1951; Katz and Kahn 1978; Pescosolido and Georgianna 1989; Sharkey, Torrats-Espinosa, and Takyar 2017). Hence, following this line of work, we focus on crime incidence within communities, and ask: How does entrepreneurial activity impact community social integration, as expressed by within-community crime incidence?

Drawing on theories of strategic human capital (Coff 1997; Flammer and Kacperczyk 2019; Ganco, Ziedonis, and Agarwal 2015; Marx 2011; Starr, Balasubramanian, and Sakakibara 2018) and research on statistical discrimination (Berger, Rosenholtz and Zelditch 1980; Ridgeway and Correll 2006), we develop a conceptual framework to link entrepreneurial activity to social integration within local communities. We propose that initiatives to promote entrepreneurship will, on average, facilitate the integration of marginalized, socio-economically excluded groups into the labor market, reducing crime incidence, for two interrelated reasons. First, as entrepreneurship becomes a more feasible option for members within the community, we expect that incumbent firms will face greater threat of losing their workers to entrepreneurship, based on the premise that employees can leave to become founders or startup joiners more easily. Because in those cases incumbents will extend their search to groups excluded from regular opportunities, these individuals will gain access to better employment options. Second, we further expect this effect to be compounded by the fact that labor-market competition may reduce employer negative bias against excluded groups (Becker [1957] 1971), increasing the overall employment chances of disadvantaged community groups. Hence, the prevalence of deviant behavior will subside following boosts in entrepreneurship because traditionally marginalized individuals will gain access to labor-market opportunities. Finally, as a test of our mechanism, we expect this effect to be dampened when integration in the labor market is weak or absent because in those cases social fractures, distrust, and community divides will intensify.

The impact of entrepreneurship on community social integration is difficult to assess empirically because such relationship is subject to classical endogeneity concerns. We exploit a quasi-natural experiment provided by the staggered enactment of an important institutional change in the form of an entry deregulation reform (the "On the Spot Firm" program) implemented in Portugal from 2005 to 2009.

3

This reform increased the rate of entrepreneurship at the community-level (i.e., municipality), by decreasing bureaucratic and financial burdens on those starting new ventures. There is consensus that the reform's enactment was exogenous with respect to the socio-economic characteristics of the municipalities (e.g., Branstetter et al. 2014). Given these features, it is possible to estimate the effects of this reform using a difference-in-differences methodology – with the "treatment" group composed of municipalities that are subject to the reform, and the "control" group composed of municipalities that are not. To estimate these effects, we leverage a large scale, longitudinal, employee-employer matched dataset containing the annual accounts of all limited liability firms in Portugal. The data document complete career histories of the entire population of employees, allowing us to track the evolution of specific groups of individuals – and thereby the extent of their integration – in the labor market.

This study contributes to multiple debates and streams of research. First, we contribute to the sociological theories of entrepreneurship by documenting the impact of entrepreneurship on critical social outcomes, thus extending past research, which has mainly focused on economic impacts of new venture creation. Along similar lines, we identify novel pathways through which firm founding enhances community integration, by increasing the social standing of disadvantaged, low-status workers (Gould, Weinberg, and Mustard 2002; Raphael and Winter-Ebmer 2001; Sharkey et al. 2017; Keister 2005). Second, and more broadly, we contribute to organizational theory and the recent discussions around the community grand challenges, by documenting a new antecedent of community vitality: entrepreneurship (e.g., Allard and Small 2013; Audia, Freeman and Reynolds 2006; Berrone et al. 2016). Our findings also provide insights into the contingencies for communities to benefit from entrepreneurial activity, and in so doing, shed light on possible labor market interventions, which can have important policy implications. Finally, by emphasizing the role of (certain) firms in facilitating the integration of disadvantaged groups into the workforce, this study relates to recent debates and calls for research on how organizations shape income inequality and how their practices aggregate to community- and societal-level outcomes (e.g., Amis, Mair, and Munir 2020; Bapuji, Ertug, and Shaw 2020; Cobb 2016).

THEORY AND HYPOTHESES

Past Research

The relationship between community-level characteristics and entrepreneurship has been subject to some prior inquiry. Research in this area has been scant to date, but a number of studies have nevertheless highlighted the key role of socio-structural context in general, and the impact of community-level attributes on entrepreneurial activity in particular.

Several forces are thought to facilitate entrepreneurial activities within communities. First, scholars have associated new venture creation with greater community resilience, defined as the ability of a community to bounce back from disasters. For example, in a study of Norwegian retail cooperatives in the wake of the Spanish Flu, communities that are more resilient in face of disasters exhibit stronger civic capacity to form non-profits (Rao and Greve, 2018). Specifically, when disasters are attributed to chance rather than to other community members, cooperation increases, leading to higher rates of new cooperatives' formation. Scholars have further highlighted the critical role of community social capital and social networks in fostering entrepreneurship. For instance, founding rates tend to increase within communities embedded in market relations because community residents are more likely to start new firms when similar organizations are already present within the local community, making the knowledge about entrepreneurial opportunities more easily accessible (Audia, Freeman and Reynolds, 2006). Similarly, community social trust increases entrepreneurial foundings by facilitating the flow of information across socially-disparate groups and helping overcome the legitimacy problem of small businesses (Kwon et al. 2013). However, these benefits might not accrue to all community members equally; rather, white and native-born residents tend to benefit more from social capital than do minorities and immigrants. Building on these findings, subsequent research has emphasized the key role of social integration in general, and of racial integration in particular, in fostering entrepreneurship within communities. Samila and Sorenson (2017), for example, document that racially integrated communities exhibit higher levels of entrepreneurial activity, manifested in the prevalence of venture capital firms

within a region. Ethnically diverse entrepreneurial groups are further found to promote the discovery of novel and more valuable inventions, leading to higher founding rates.

Overall, prior studies provide consistent evidence that key community attributes, such as resilience, social capital, and racial integration are critical predictors of whether community residents will collectively engage in entrepreneurial activities. But despite its merits, past research offers little evidence pertaining to how regional outbursts of entrepreneurship affect the underlying social fabric of the community itself. A number of studies have documented that entrepreneurship functions as a social mobility vehicle, whereby successful founders can gain status, accumulate wealth, and climb career ladders faster (Birch 1987; Chinoy 1955; Keister 2005; Kim, Longest and Aldrich 2013; Ruef, Aldrich, and Carter 2003). For example, Keister (2005) finds that entrepreneurship serves as an important avenue to gain social standing, especially among those without social status. In those cases, entrepreneurship can increase advancement options among those generally excluded from the labor market, offering alternative career paths when regular options are lacking (Burton et al. 2018; Sørensen and Sharkey 2014; Yang and Kacperczyk 2020). However, these studies have not yet examined whether entrepreneurship enhances or weakens community social integration, by affecting community incidence of crime.

Given the relevance of social integration for community survival and its vitality, we thus examine how institutional changes promoting entrepreneurship affect community social integration, as evidenced by the levels of delinquency and crime (Liska and Warner 1991; Sampson, Raudenbush, and Earls 1997).

The Impact of Entrepreneurship on Community Integration: Delinquent Behavior

The pursuit of deviant, delinquent behavior is a frequent response to exclusion from socio-economic opportunities and marginalization within a community, and thus a manifestation of social disintegration.[1]

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[1] Measures of social integration have included the involvement in neighborhood activities, the likelihood of neighbors sharing information, perceptions of similarities among neighbors, and the number of friends and relatives living in the neighborhood (see Bursik and Grasmick, 1993). Such measures, however, are also indicative of community social capital (e.g., Kwon et al. 2013). By contrast, delinquent behaviors allow to measure social integration more directly by assessing the degree to which community members are likely excluded from the mainstream socio-economic activities and thus more prone to engage in criminal activities (e.g., Junger-Tas, 2001).

Going back to Durkheim (1897/1951), scholars have argued that the social integration of community members inhibits deviance because social cohesion is based on a collective consciousness and shared moral sentiments. Building on the view of community attachment, social integration creates a system of social control that holds behavior in check, reducing crime. By contrast, delinquent behaviors increase dramatically after societies undergo changes that disrupt community social bonds. Along these insights, social disorganization theory further posits that delinquency and crime tend to be muted or absent in highly-integrated communities (Shaw and McKay 1942). In contrast, the loss of community belonging, the fraying of social solidarity, and the corrosion of community ties lead to systematic increases in delinquent behaviors (McEvily, Perrone, and Zaheer 2003).

Merton's (1968) theory of deviance depending on the opportunity structure in a society, together with Cohen's (1955) and Blau and Blau's (1982) work on the relationship between inequality and crime, further establish that, when certain groups have limited access to mainstream labor market opportunities or attractive advancement options within established firms, delinquent behavior will increase dramatically. Systematic exclusion of particular groups from the regular opportunity structure will place these individuals at a higher risk of deviating from community norms. Indeed, prior research has found a robust link between economic conditions, poverty, deprivation, and crime (Gould, Weinberg, and Mustard 2002; Raphael and Winter-Ebmer 2001; Sharkey et al. 2017). A related stream of work has highlighted a strong connection between racial discrimination and delinquency, suggesting that groups exposed to racial discrimination are particularly likely to sort into criminal activities as a response to exclusion from regular career progression routes (Blau and Blau 1982; Burt, Simons, and Gibbons 2012; Sampson 1987). Disproportionate concentration of low-status individuals in unattractive jobs or unemployment further undermines community bonds, encouraging delinquent behavior (Bapuji et al. 2020). As a result, organizational scholars have recently recognized that addressing the grand challenge of fragmentation and inequality within local communities critically hinges on increasing the vocational rehabilitation of disadvantaged groups (Allard and Small 2013; Berrone et al. 2016).

Significant for the question at hand, these theories imply that communities can reinforce social integration and mitigate the prevalence of delinquent behavior by introducing initiatives that change the opportunity structure within the community. In what follows, we therefore posit that initiatives to promote entrepreneurial activity within communities will reduce community-level crime – and thereby foster social integration – by facilitating the inclusion of disadvantaged groups into the formal labor market.

The Integration-Enhancing Effect of Entrepreneurship

Initiatives promoting entrepreneurship within local communities will likely dampen the engagement of disadvantaged community members in delinquent behavior, by mitigating their exclusion from the regular labor market opportunities in at least two ways: by (a) increasing competition for labor between incumbents and start-ups and (b) by mitigating employer discrimination.

First, as founding rates increase, we expect that the overall rates of delinquent behavior will subside because boosts in entrepreneurial activity will pose a significant threat to incumbent firms, as the risk of losing employees to become founders or joiners intensifies (Agarwal et al. 2016; Campbell, Ganco, Franco, and Agarwal 2012). Indeed, strategic human capital research has long emphasized that, while the know-how of employees is a particularly valuable source of competitive advantage (Carnahan and Somaya 2013; Coff 1997; Somaya et al. 2008), workers can easily "walk out the door" when more attractive advancement opportunities arrive in the labor market. Indeed, scholars have recognized that alternative opportunities expand when founding a business or joining a startup firm becomes easier and more appealing (e.g., Kacperczyk 2012, 2013; Kacperczyk and Younkin 2017; Coff 1997; Ganco et al. 2015; Marx 2011; Saxenian 1994; Starr, Ganco and Campbell 2018). In those instances, incumbents will witness dramatic losses in their bargaining power vis-à-vis workers because attracting and retaining employees becomes more challenging when the threat of losing human capital intensifies.

Relatedly, greater labor market competition might reduce employer bias against disadvantaged groups, leading to significant changes in the opportunity structure available to them, and to improvements in work conditions via regular career ladders. Whereas opportunities tend to be unequally distributed

8

across individuals, even when workers' skills and competences are comparable or equivalent (e.g., Heckman 1998, Kang et al. 2016, Lundberg and Startz 2007, Moss and Tilly 2001, Pager and Quillian 2005, Pager, Bonikowski, and Western 2009, Pager and Pedulla 2015), employer bias tends to diminish when competitive pressures increase. Therefore, discriminatory behavior is often conceptualized as a costly consumption good of a firm's management, and discriminating employers tend to forego profits and pay more than the prevailing market wage in order to indulge their "taste for discrimination" and exclude disfavored groups (e.g., women or racial minorities) from the labor pool (Becker [1957] 1971; Borjas and Ramey 1995). Given that a firm's ability to discriminate is partly a function of the market structure, any decreases in the market power due to increased competition will undermine employer's ability to sustain discrimination in the long run, so that even resource-rich firms are unlikely to continue discriminating when faced with more intense competitive pressures that lead to structural changes in the labor market (Becker ([1957] 1971). Indeed, prior evidence demonstrates that greater rivalry pressures are associated with higher wages among minority workers because employers are less likely to discriminate in face of competition (Black and Strahan 2001; Black and Brainerd 2004).

Consequently, following increases in entrepreneurial activity, competition will naturally intensify (Fackler et al. 2019; Patel et al. 2018), reducing the bargaining power of incumbent firms and making discrimination more costly for them. This will broaden the opportunity structure available to disadvantaged groups within incumbent firms because established organizations will search for new hires more extensively and offer more attractive jobs, as the threat of losing workers to new firms increases. As individuals from these groups witness significant improvements in their (a) labor force participation and (b) access to more attractive work conditions, their integration in the community will increase, resulting in lower engagement in delinquent, criminal activities. This leads to our main hypothesis:

H1: As entrepreneurship becomes more prevalent within the local community, engagement in delinquent behavior will decline.

Cross-Heterogeneous Effects: Mechanisms

We posit that entrepreneurship enhances community social integration by mitigating delinquent behavior among community members. Specifically, our theory implies that the negative impact of entrepreneurship on community-level crime will be contingent on the (re)integration of disadvantaged groups in the labor market, through their higher participation in the labor force and better work conditions.

Hiring is a gatekeeping mechanism that facilitates career opportunities for some while blocking entry for others (Amis et al. 2020; Pager and Quillian 2005, Pager, Bonikowski, and Western 2009, Pager and Pedulla 2015). Hence, we expect that an increase in founding rates will suppress delinquent behaviors even more when accompanied by the labor market integration of disadvantaged groups. In this case, crime-reducing efforts will emerge from communities' ability to activate organizational mechanisms that help integrate those excluded from regular labor market opportunities (Skogan 1988). By contrast, when increases in entrepreneurship are not accompanied by such integration mechanisms, we expect the predicted effects of entrepreneurship on social integration to be dampened, triggering greater deviance and resulting in higher crime levels.

When labor market integration is weak or absent, new venture foundings will result in greater disparities, increasing social fractures, fostering greater distrust, and deepening the divides among those engaged in the entrepreneurial economy and those deprived of such opportunities. Indeed, past studies have associated entrepreneurship with a wider distribution of earnings and greater income inequality between those who do and do not participate in entrepreneurial activities (Åstebro et al. 2011; Blau and Schoenherr 1971; Gambardella and Giarratana 2010; Halvarsson et al. 2017). In such cases, entrepreneurship may further destabilize the focal community, because the widening distribution of opportunities and income will amplify the propensity of the disadvantaged groups to breech community norms via delinquent behaviors.

In sum, we predict that promoting entrepreneurial activity at the community-level will facilitate social integration, by reducing the engagement in deviant behavior, but this effect will be contingent on integrating disadvantaged groups in the labor market. This leads to the following prediction:

10

H2: The negative impact of entrepreneurship on community-level engagement in delinquent behavior will be amplified (dampened) when the integration of disadvantaged groups in the labor market increases (decreases).

Given the mechanism we propose, we further expect more pronounced benefits from entrepreneurship activities in communities with higher susceptibility to social disintegration. If, as we hypothesize, a community-level boost in entrepreneurial activity leads to greater labor market integration of disadvantaged groups, we should then expect the negative relationship between community-level entrepreneurial activity and the engagement in delinquent acts to be amplified in communities that are more socially fragmented. Past studies suggest that social fragmentation tends to increase when inequality in pay rises because a small share of winners tends to be in control of the vast majority of available resources (e.g., Card et al. 2018; Tomaskovic-Devey, Hällsten and Avent-Holt 2015; Wilkinson and Pickett 2010). Unemployment is further thought to have a scarring effect on individuals and the community surrounding them, having a persistent impact on human capital depreciation, reemployment, wages, and later labor market attachment (Arulampalam 2001; Gangl 2006). Unemployment is therefore one of the common causes of deviant behavior and criminal activities (Raphael and Winter-Ebmer 2001). Prior research also found a link between unemployment and suicide (e.g., Blakely, Collings, and Atkinson 2003), which in turn, according to Durkheim's [1897] 1951 seminal theory, is associated to low levels of social integration. Accordingly, we hypothesize magnified effects in communities with greater income inequality and higher unemployment *ex-ante*, prior to the increase in entrepreneurial activities.

H3: The negative impact of entrepreneurship on community-level engagement in delinquent behavior will increase in communities with a) higher unemployment rates and b) higher income inequality ex-ante.

Finally, our theory implies that initiatives promoting entrepreneurship within a community will lead to significant enhancements in the opportunity structure available to disadvantaged groups who would otherwise face systematic barriers to their advancement. If startups boost competition and pose a threat of human capital loss to incumbents, we would expect established firms to witness significant reductions in their bargaining power vis-à-vis workers in general, including those in disadvantaged groups, and in their propensity to discriminate against these groups. Hence, we predict that an increase in

entrepreneurship will enhance the opportunities available to groups excluded from regular labor market

opportunities, and thus more prone to engage in delinquent acts, by leading to better-quality jobs in terms

of earnings and type of contracts.

H4: As entrepreneurship becomes more prevalent within the local community, disadvantaged workers will experience disproportionate increases in wages and better work conditions, overall.

DATA AND METHODS

Data and Empirical Setting

We use Quadros de Pessoal (QP), a rich linked employer-employee dataset maintained by the Portuguese

Ministry of Employment since the late 1980s. QP files are based on a mandatory yearly survey covering

all firms in the Portuguese private sector and employing at least one wage earner in the reference month

(October, since 1994). All firms, as well as each of their establishments and workers, are identified by a

unique identification number, so they can be linked and tracked over time. Available information at the

firm-level include their year of foundation, location, industry classification, number of employees,

number of establishments, sales volume, and ownership structure. At the individual-level, QP files report

details about age, schooling, gender, qualifications, wages, occupation, hiring date, number of hours

worked, and type of contract. We supplement these data with municipality-level information on crime,

population density, and unemployment from the National Statistics Office (INE).

Portugal provides a suitable setting to test our theory for several reasons. First, income inequality

and social exclusion figures in Portugal were among the highest in European Union for decades (Santana

2002). Second, its legacy of a low skilled labor force has been remarkable, given the high share of school

dropouts and the persistently low education attainment of the adult population (OECD 2017). Third,

despite exhibiting lower crime rates and higher levels of social integration than several other countries,

crime is prevalent and shows a positive trend over the years under different forms (e.g., from non-violent

street crime to homicides, gang activities, drug-related crimes, and crimes against the government).

Furthermore, income inequality and social exclusion of underprivileged groups, such as low-educated

young men, are often associated with crime incidence in Portugal (Gomes 2013; Seabra and Santos 2005).

12

Portugal also offers an ideal empirical context to test our theory owing to the so-called "On the Spot Firm" (*Empresa na Hora*) program introduced in 2005, which drastically reduced the time and costs of establishing a firm. Before 2005, starting a business in Portugal took 54 to 78 days, with an estimated cost of about 2000 euros (more than 13% of the Portuguese annual GDP per capita). As a result, Portugal used to rank relatively low (133 out of 155 countries) in the Doing Business Ranking of the World Bank (World Bank, 2006). Following the reform, all the agencies supervising the creation of new firms were aggregated into a single office, so that entrepreneurs would no longer need to visit several spots to obtain all the documents required. Portugal became one of the easiest countries in which to start a new business, with an estimated time cost of less than one hour – well below the OECD average of 14 days – and of only 300 euros, which significantly increased the number of new businesses created (Branstetter et al., 2014; Fernandes et al., 2014, 2017). Besides effectively decreasing entry barriers, this reform was enacted in different moments in time (between 2005 and 2009) across different municipalities. We exploit the timing and geographical variation in the reform's enactment as exogenous variation in entrepreneurship.

We focus on the period 2002-2010 to test our hypotheses. Starting our analysis in 2002 avoids gaps in the data at the individual-level (which are not available for 2001), while still allowing us to observe the outcomes of interest before the introduction of the reform. We stop in 2010 due to the introduction of a concurrent procedure to register a firm online in 2009 (*Empresa Online*). Even though this procedure was only accessible to some individuals initially (lawyers, solicitors, and individuals with the – non-yet mandatory – citizen card with electronic certification), we do not analyze any outcomes beyond 2010 due to the lack of exogenous variation in entry deregulation between municipalities. Finally, we excluded from our analyses a number of industries which were not eligible for the "On the Spot Firm" reform (see Branstetter et al. 2014 for details on those industries).

Variables

Dependent Variables

Community Crime. We measure community social integration with crime incidence at the community-level. We collect external yearly data on the total number of crime incidents per municipality

13

through the National Statistics Office and match them with QP files. Following prior research (e.g., Burt et al. 2012; Sharkey et al. 2017), our measure accounts for different kinds of delinquent acts committed within a community in the reference year and registered by police authorities, including property, personal and violent crime incidents (e.g., homicide, forcible rape, robbery, and aggravated assault).

Labor Market Integration. Extant research systematically shows that young and less educated men are among the most likely to exhibit delinquent behavior (Freeman 1996; Gould et al. 2002). We thus focus on young men (up to 25 years old) with weak educational credentials (i.e. who failed to complete high school). To proxy the labor market integration of this particular risk group, we consider (a) their participation in the labor force and (b) the wage gap between them and other, non-disadvantaged, employed men. We focus on (a) because greater group participation in the labor market indicates that opportunities for a traditionally disadvantaged group have become wider or more accessible (De Jong and Madamba 2001). We further focus on (b) because a reduction in wage gaps may indicate that traditional barriers to advancement amongst certain groups are alleviated (Reimers 1983). Wage gaps may reflect employer discrimination and induce feelings of unfairness, decrease cooperation and job satisfaction, and increase labor turnover (e.g., Card et al. 2012). For young men with low educational credentials and already employed before the reform, we examine the trajectories of their wages and job contracts.

Independent Variables

Community Entrepreneurship. Our key independent variable pertains to the entry deregulation reform. The "On the Spot Firm" program introduced exogenous variation in founding rates at the community-level, with 144 out of 308 municipalities being affected by the reform. Since this program was enacted in a staggered way between 2005 and 2009, our main independent variable is a dummy equal to 1 in the year (and all subsequent years) a given municipality has enacted the reform, and 0 otherwise.

Control Variables

Although the "On the Spot Firm" reform arises exogenously with respect to our outcomes of interest, we nevertheless control for a number of municipality characteristics. First, we include a control for

14

population density, measured as the number of inhabitants per squared kilometer, externally obtained from INE. Moreover, we account for the employment distribution across sectors (namely primary, manufacturing, energy and construction, and services). We also include a control for gender composition of the regional labor force, by computing the share of male employees in a given municipality and year. We further consider the employment distribution across firms of different sizes and ages: the share of the labor force in firms up to five years old and up to 49 employees. We consider regional human capital by computing the share of employees with university education and in medium-high or top qualifications (or ranks). Our models further control for the nature of the employment contracts, by including the share of employees with full-time jobs, as well as for the average wage level and wage inequality within the community (measured by the yearly standard deviation of wages in the municipality). Finally, we control for the total annual sales of firms located in the community. These variables capture the differences in economic development, industrial structure, and skill composition across communities and over time.

Methodology

Empirically, it is difficult to estimate how entrepreneurial activity affects social integration, and hence crime incidence, because such estimates are subject to classical endogeneity problems. In particular, finding a significant link between entrepreneurship and community integration may be spurious if the relationship is driven by unobserved regional or institutional characteristics that are permanent during the period we analyze. Similarly, the relationship between entrepreneurship and community integration can be subject to reverse causality: for example, a less segregated community can encourage more individuals to start their own business. To rule out these and other potential confounders, we exploit the exogenous variation in entrepreneurship introduced by the above-mentioned "On the Spot Firm" reform.

Methodologically, we use a difference-in-differences approach. As an example, suppose we want to measure the effect of Lisbon's 2005 enactment of the reform on community integration. We compute the difference in crime incidence post-2005 versus pre-2005 for Lisbon (a "treated" municipality). Yet, other events may have happened around 2005, potentially influencing changes in crime – for example, an

15

economy-wide boom that translates into lower crime. To account for such contemporaneous effects, we use as a control group any municipality that has not launched the program and compute the corresponding difference in the respective outcomes post-2005 versus pre-2005. Computing the difference between these two differences provides an estimate of the effect of Lisbon's 2005 enactment of the reform on crime, controlling for contemporaneous changes in such a gap that are due to changes in broad economic conditions. Our model further accounts for the staggered nature of the reform, meaning that the composition of the treatment and control groups changes over time, as more communities are progressively "treated." Following previous studies (e.g., Branstetter et al. 2014; Castellaneta, Conti, and Kacperczyk 2020; Cooke, Fernandes, and Ferreira 2019; Fernandes, Ferreira and Winters 2014, 2017), this reform might be seen as a quasi-natural experiment, since its enactment seems to be exogenous to municipalities' economic and social characteristics.[2]

We follow Bertrand and Mullainathan (2003) and their application of the difference-in-differences methodology in the presence of staggered treatments at the regional-level. Formally, the impact of the reform on the municipality-level outcome of interest can be broadly modeled as follows:

$$Y_{my} = f(\theta Z_{my} + \sum_{m=1}^{308} \alpha_c + \sum_{y=2002}^{2010} \partial_y + X_{my} \boldsymbol{\beta}) \qquad (1)$$

where Y_{my} refers to municipality-level (i.e. community) crime; Z_{my} is an indicator variable taking the value 1 at the opening year of the one-stop shop and all subsequent years, 0 otherwise; α_m and ∂_y are municipality and year fixed effects, respectively; and X_{my} is the vector of control variables described earlier. Errors are clustered at the community-level. Descriptive statistics for control variables are provided in Appendix A and a correlation matrix is available in Appendix B.[3]

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[2] Even though the registration of a new firm can be performed in any of the one-stop shops located across Portugal, the fraction of firms registered outside their municipality is trivially small (see Branstetter et al., 2014).
[3] The analysis of individual outcomes (wages and type of contract) will follow the same differences-in-differences approach, and include relevant time-varying individual and firm controls, and person fixed effects.

RESULTS

Main Results

We start by testing whether within-community boosts in entrepreneurship, following institutional changes designed to promote entrepreneurship (captured by the staggered enactment of the reform across municipalities) has affected crime incidence within communities, as predicted in our first hypothesis. Table 1 reports the results from the estimation of a count model with municipality fixed effects for the total number of crimes registered in the municipality per year. The statistically significant coefficient ($P <$ 0.05) of the "On the Spot Firm Reform" treatment dummy suggests that within-community crime decreased by 4.2% in the aftermath of the reform. This finding lends strong support to Hypothesis 1. Regarding the control variables, we find that communities with greater concentration of employment in manufacturing industries, young firms, and skilled occupations tend to exhibit lower crime levels.

*** *Table 1 about here* ***

To further examine the mechanisms underlying this relationship, we assess whether the labor market integration of disadvantaged groups systematically moderates the entrepreneurship effect on community-level crime. We first assess changes in the number of young men with low educational credentials (i.e., who failed to complete high school) entering the labor market in the respective community. These "disadvantaged individuals" exhibit lower community integration and are thus particularly likely to engage in criminal acts (Freeman 1996; Gould et al. 2002; Gomes 2013; Santana 2002; Seabra and Santos 2005).

Table 2 extends our baseline model by including an interaction term between the deregulation reform and the (log) number of these disadvantaged individuals entering the labor market in the reference year (model 2). As expected, we find that communities in which disadvantaged groups tend to enter the labor market at higher rates witness a more pronounced reduction in community crime and, thus, greater extent of social integration. By contrast, our results suggest that failure to integrate these groups into the labor market result in greater crime incidence: the coefficient of our treatment dummy becomes positive and statistically significant, indicating that entrepreneurship reduces community social integration, when

not accompanied by access to job opportunities within incumbent firms. This supports Hypothesis 2, which predicts that community initiatives promoting entrepreneurship enhance social integration by reducing delinquent behavior, and (but) this effect is amplified (dampened) when the integration of disadvantaged groups into the labor market increases (decreases). In models 3 and 4, we further examine the moderating role of pay disparities between male employees with low educational credentials and other male employees in the labor market. Accounting for pay disparities (model 3) continues to yield a negative coefficient on the treatment dummy. However, model 4 reveals that initiatives designed to boost entrepreneurship can fracture communities and increase delinquent behavior, when accompanied by higher wage differentials between disadvantaged and non-disadvantaged groups. These findings provide further support for our Hypothesis 2.

*** *Table 2 about here* ***

As a final test for Hypothesis 2 (reported in Appendix C), we consider the representation of young men with low educational credentials among all male entrants in the labor market. We compare the trends in this variable in the periods before and after the reform. As can be seen, crime levels declined (increased) by 4.5% (7.9%) in communities that experienced a boost in entrepreneurship and in which the integration of disadvantaged groups was stronger (weaker).

We next test Hypothesis 3. Table 3 reports the estimated effect of the reform in communities that exhibited relatively high and low levels of unemployment at the beginning of our period.[4] We find that the entry deregulation reform reduced crime incidents only in communities with above-median unemployment rates *ex-ante*. We observe an amplified effect of entrepreneurship initiatives in these regions, which amounts to a reduction of about 8% in the community-level crime. In Table 4, we repeat this analysis for communities with higher and lower income dispersion at the beginning of our period (2002), prior to any significant changes in founding rates. We find a 6% reduction in crime incidence in

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[4] Unemployment rates at the municipality-level are only disclosed by INE every ten years, when detailed Census data of the entire population are collected. We use the 2001 Census data, which include unemployment rates per municipality, to split our sample into municipalities with high and low unemployment in the beginning of the period.

communities with historically high levels of wage inequality, but no significant effect in communities with historically low levels of wage inequality. Together, these results corroborate our Hypotheses 3a and 3b. Overall, we confirm that regional outbursts in startup activities, driven by lowered barriers to entry, reduce crime levels, thus increasing social integration, particularly in socially fragmented communities.

*** *Tables 3 and 4 about here* ***

Although the models above appear consistent with our theorized mechanism, our analyses are so far estimated at the macro (community) level. Therefore, we next estimate the reform effects on individual work conditions. We restrict the analysis to male individuals who, in the period prior to the reform, belonged to disadvantaged groups, according to our definition. Table 5 reports the estimated effects on these individuals' a) monthly wages, and b) probability of securing a permanent employment contract (versus a temporary, fixed-term, contract). Both models include individual fixed effects to account for any permanent, unobserved heterogeneity at the individual-level. Consistent with our Hypothesis 4, individuals belonging to these disadvantaged groups witnessed significant improvements in their employment conditions, following the enactment of deregulation reform. For additional robustness, we have examined whether the entry deregulation reform resulted in similar improvements for other individuals in the labor market. In Appendix D, we demonstrate that this was not the case: our results suggest that the entry deregulation reform has enhanced work conditions in paid employment only among individuals who are typically marginalized in the labor market and at higher risk of criminal activity.

*** *Table 5 about here* ***

Validity of the Identification Strategy

To be valid, our identification strategy needs to satisfy two requirements – the inclusion and exclusion restrictions. First, the treatment (i.e., the enactment of the deregulation reform) needs to trigger relevant changes in founding rates. Second, the treatment needs to be exogenous with respect to crime rates and labor market inclusion. We next discuss both requirements in detail.

Inclusion Restriction

We confirm that, as intended, the entry deregulation reform led to a substantial increase in new venture foundings. Before the enactment of the reform, "treated" and "control" municipalities displayed similar entry patterns, while afterwards, treated municipalities experienced an increase in the number of new firms compared with municipalities in the control group, both in absolute and relative terms. Furthermore, this boost in entrepreneurship increased over time (see Appendix E), confirming that our treatment is relevant. In short, the reform led to a substantial reduction of entry barriers usually faced by potential founders, resulting in a significant and remarkable boost in entrepreneurship within focal communities.

Exclusion Restriction

Our identification strategy further relies on the assumption that the rise in entrepreneurship driven by the reform is exogenous with respect to social integration outcomes. In other words, the reform was not rolled out in a way that correlates with pre-existing trends in the dependent variables of interest. If the treatment was purposely introduced, for example, in communities that initially experienced lower crime or a better integration of disadvantaged groups (not accounted by municipality and year fixed effects), our inferences could be biased. We conduct several tests to assess the credibility of our identification strategy.

First, we examine whether the administrative decisions to target particular communities and time periods are not correlated with existing trends in crime. We extend our baseline specification (Table 1) and introduce a set of indicator variables for the years prior and after the reform. The coefficients for the lagged periods (illustrated in Appendix F) are not statistically significant (neither individually nor jointly), which suggests that, on average, crime trends were not significantly different across treated and control communities prior to the reform. Yet, afterwards, we obtain negative and significant coefficients, which imply a reduction in community crime, as previously theorized and empirically confirmed.

Second, to further confirm that the introduction of the reform was not dependent on crime trends nor the integration of disadvantaged groups in the labor force, we estimate a linear probability model in which the dependent variable is equal to 1 in the year the reform was introduced (0 otherwise), predicted

by the lagged values of both variables. Appendix G confirms that neither crime levels nor the share of young low-educated men in the local labor market predicted the enactment of the reform.

Finally, we assess whether the order in which communities adopted the deregulation reform is correlated with prior trends in crime or labor market exclusion of disadvantaged groups. To do so, we test whether growth trends in these variables prior to the reform differ between "early" and "late" adopters (i.e., communities that were "treated" in 2005-2007 or later). Appendix H reports pre-reform average annual growth rates (over 2002-2004) in the abovementioned outcomes for "early" and "late" adopters, as well as the differences between the two and the *p*-value for the null hypothesis that the means are equal for both groups of communities. We do not find any statistically significant differences for any of the covariates, confirming that the timing of the reform was not correlated with pre-existing trends in those covariates. Overall, these tests provide robust evidence that the "On the Spot Firm" program can be considered exogenous with respect to both community-level crime and labor market representation of young low-educated men, alleviating endogeneity concerns.

Supplementary Analyses

We perform a few supplementary analyses to further validate the mechanisms we hypothesized.

Firm-level Analyses

In Table 6 we assess whether, consistent with our predictions, incumbents were more likely to integrate disadvantaged groups of workers in the workforce. We estimate firm fixed models to estimate the impact of the reform on a) the share of disadvantaged individuals in the firm, and b) the within-firm wage inequality between these and other male employees. Consistent with our theory, we find that the representation of disadvantaged men increases in incumbent firms located in communities affected by the reform. The first model reveals that, on average, the representation of disadvantaged groups in a firm's labor force increased by 0.4 percentage points following the reform, which represents an improvement of about 8% in the average representation of these individuals within these firms. Furthermore, we find that wage differentials between these disadvantaged individuals and other male employees in the firm

21

declined by almost 1 percentage point after the reform, which corresponds to a reduction of 3.6% in the average wage differential.[5] Overall, these results reinforce our confidence that our findings are not an artefact of the level of analysis.

*** *Table 6 about here* ***

Mobility to Other Firms

We investigate whether increases in pecuniary (i.e., wages) and non-pecuniary benefits (i.e., permanent contracts) primarily reflect inter-firm mobility. We re-estimate our baseline specifications for wages and permanent contracts (as in Table 5) but now including firm-worker match fixed effects. Table 7 summarizes the key results of interest and shows that the previous effect found on the wages of disadvantaged groups who were already employed before the reform is still significant, though smaller in magnitude. Therefore, the increase in wages is not necessarily driven by their mobility, since individuals staying in incumbent firms are still better paid after the reform. However, the positive effect on their permanent contracts vanishes when we introduce worker-firm-match fixed effects, which indicates that these individuals obtained better contracts by moving to other employers.

*** *Table 7 about here* ***

Given these results, we examine whether movers were more likely to join incumbents or startups (i.e., firms created before the reform or new firms, up to 5 years old, founded after the reform). Appendix I provides descriptive statistics regarding the destination firms of disadvantaged individuals. Panel A shows that young and low-educated men employed in the beginning of our period and moving to new jobs after the reform, moved more often to incumbents than to startup firms. Panel B shows a similar pattern for disadvantaged groups entering the labor market for the first time after the entry deregulation reform: these individuals also joined incumbents more often than startups. Together, these results offer further evidence that the reform led to significant improvements in working conditions across disadvantaged groups and that incumbents rather than startup firms were responsible for such changes.

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[5] In our data, 5.1% of the workers in incumbent firms were men, not older than 25 years old, who did not complete high school. Furthermore, firms pay about 20% lower wages to these employees compared to other male employees.

Labor Market Competition

Our theory suggests that disadvantaged workers become integrated in the labor market following increases in entrepreneurship, in part because of greater competition for labor. To further validate this explanation, we assess the cross-sectional heterogeneity in competition within the local labor market. If competition is partly a driver of our results, we should find stronger effects in firms facing stronger competition. We measure local competition for labor with the proportion of new firms in the same 2-digit industry entering the same municipality as the focal firm. Entry rates are common measures of competition, as they affect firm behavior and performance (e.g., Mata and Portugal 1994). In a robustness check (Appendix J), we use the Herfindahl index to measure industry competition and find similar results.

Model 1 in Table 8 estimates the heterogeneous effects of the reform on the share of disadvantaged individuals in incumbent firms, depending on competition. Consistent with our theorized mechanism, firms facing greater competition tend to be more responsive to boosts in firm entry and employ more disadvantaged individuals. The second model considers wage disparity across groups of employees. The interaction between *Competition* and the reform dummy is not significant at conventional levels, suggesting that wage gaps are equally likely to decline in firms exposed to different levels of competition. The last model evaluates the representation of disadvantaged individuals among new hires to rule out the possibility that the results of model 1 are driven by firms' ability to better retain these workers. This is not the case, since the moderating influence of competition still holds.

*** *Table 8 about here* ***

Substitution Effects

Another alternative explanation might be that greater labor market integration reflects the replacement of skilled incumbent workers with more disadvantaged individuals, if the former become scarcer or too costly to retain. In Table 9, we assess whether the effects of entry deregulation on labor market integration are amplified in firms with higher employee turnover, measured by the percentage of employees leaving the firm in the reference year. However, our results show that incumbent firms have

23

increased the representation of young low-educated men in their workforce (model 1), and reduced wage differentials between them and other male employees (model 4), independent of losing incumbent workers. As a robustness check, we consider the percentage of skilled employees (who completed university education) leaving the firm (models 2, 4, and 6, which we can only estimate for the subsample of firms with at least one skilled employee). Also in this case, our results continue to hold and confirm that the labor market integration of disadvantaged groups is not driven by workforce substitution effects.

*** *Table 9 about here* ***

Overall, these post-hoc analyses collectively support the key mechanism underlying the positive effect of regional boosts in entrepreneurship, following the deregulation reform, on community social integration: the labor market integration of disadvantaged groups, particularly young and low-educated men. We find evidence consistent with the notion that, in the aftermath of the entry deregulation, incumbent firms have faced increased pressures to compete with new entrants, which enabled them to tap into unexplored pools of labor. The disadvantaged groups we have studied represent general human capital (i.e., low in specificity and high in transferability), which is commonly underestimated and even stigmatized by the market, but possibly valuable for certain firms if they leverage the low external demand for these employees and create conditions (e.g., pecuniary and non-pecuniary benefits) that increase their retention (e.g., Campbell, Coff, and Kryscynski 2012). More generally, these findings suggest that (incumbent) firms, under certain circumstances, may play an important role in shaping – and particularly alleviating – inequality, which relate to recent debates (e.g., Amis et al. 2020; Bapuji et al. 2020; Cobb 2016).

DISCUSSION

Entrepreneurship, or the act of launching and operating an entrepreneurial venture, has become an increasingly prevalent feature of the modern economy (Baumol 1968; 1990) and an important vehicle of wealth creation and social mobility for individuals (Haltiwanger et al. 2013; Schumpeter 1934; Steinmetz and Wright 1989; Sørensen and Sharkey, 2014). Whereas much literature examined antecedents of entrepreneurial activity within communities (e.g., Kwon et al. 2013; Rao and Greve 2018), its

24

consequences have been much less explored, raising critical questions about the effects of founding rates on community social structure. The objective of this study is therefore to examine how key community attributes, such as the level of social integration between its members – in the sense of deviating from community norms through criminal activities – can be altered by entrepreneurial activity within communities.

Methodologically, we exploit a quasi-natural experiment provided by the staggered enactment of an important institutional change in the form of an entry deregulation reform (the "On the Spot Firm" program) implemented in Portugal from 2005 to 2009. This reform exogenously increased founding rates in some communities (i.e., municipalities), by significantly decreasing bureaucratic and financial burdens on individuals willing and motivated to start new ventures. Our findings indicate that regional increases in entrepreneurship foster community integration. Specifically, focusing on crime incidence as a manifestation of community disintegration, we find that the entry deregulation reform was followed by sharp declines in delinquent behavior at the community-level. Moreover, we find evidence consistent with the notion that labor market integration was the key mechanism behind this effect. Specifically, regional increases in entrepreneurial activity enhance the integration of disadvantaged groups into mainstream opportunities available within established firms. In a similar vein, we find that, following an increase in founding rates in the community, wage differentials between disadvantaged groups and other workers in paid employment decrease, and that undeserved community members tend to witness notorious improvements in work conditions in the form of permanent contracts and higher wages. These effects are mostly driven by incumbent firms tapping into labor pools that are typically marginalized and undervalued by the market, partly as a response to the increased competition by new entrants. Our findings are thus consistent with theories of discrimination, which suggest that greater market competition will likely mitigate firms' discriminatory power, and thereby improve the opportunities available to disadvantaged groups (Black and Strahan 2001; Cooke et al. 2019, Nickerson and Zenger 2008; Petersen and Saporta 2004).

Our research offers a number of contributions to the extant work in the field of organizational theory and entrepreneurship. First, our study extends the long line of inquiry on entrepreneurship. Whereas rich scholarship has examined the influence of the social structure on entry into entrepreneurship (e.g., Kwon et al. 2013; Samila and Sorenson 2017), much less attention has been devoted to how entrepreneurial activity impacts, in turn, the social structure of the focal communities. We contribute to this literature by specifying one beneficial consequence of entrepreneurial activity at the community-level – greater social integration as indicated by crime decline.

Second, our study contributes to ample research on discrimination and labor market outcomes, more broadly. Scholars have long documented that unequal access to opportunities and resources is a persistent feature of labor markets (e.g., Moss and Tilly 2001; Neckerman and Kirschenman 1991a, 1991b). A critical line of inquiry in this literature is to understand organizational mechanisms that might alleviate workforce disparities (Castilla 2011; Petersen and Saporta 2004). We contribute to this debate, by highlighting how initiatives promoting entrepreneurship can serve as a vehicle to reduce the disadvantage of underprivileged workers, by increasing the competition for labor and reducing firms' ability to conduct exploitative and discriminatory practices. In so doing, this work also contributes to recent debates on how organizations reproduce – or rather mitigate – inequality (Amis et al. 2020; Cobb 2016), also beyond economic dimensions of inequality (Bapuji et al. 2020).

Third, the present study extends recent research on community integration (e.g., Samila and Sorenson 2017; Sharkey et al. 2017), by documenting an overlooked mechanism responsible for greater cohesion and adherence to shared community norms – entrepreneurship. In this respect, our study is the first to theorize and document empirically that communities might benefit from entrepreneurship because higher founding rates reduce the aggregate levels of crime via better, more appealing work conditions within incumbent firms. Our findings also have important implications for policymakers and shed new light on the necessary actions that communities may want to undertake as they address some of their grand challenges (Berrone et al. 2016). While policy interventions aimed at enhancing community social integration might focus on promoting entrepreneurship, those measures should also ensure that

26

disadvantaged groups are integrated into the labor force. Otherwise, our findings suggest that policies encouraging entrepreneurship might paradoxically undermine community vitality in the absence of mechanisms to integrate groups that are systematically disadvantaged in the labor market.

Several issues remain to be addressed in future research. First, our study strongly suggests that entrepreneurship may enhance community social integration by offering wider and more attractive opportunities to marginalized groups within incumbent firms, but future work might explore in greater depth whether and how such initiatives may benefit other community members. For example, scholars might want to investigate the potential effects of entrepreneurship on the impact of racial minorities or immigrant workers. In addition, in analyzing a longitudinal dataset from Portugal, we have taken the first step to investigate the causal impact on community social integration. Future studies, however, could build on our insights to focus instead on other key community dimensions. For example, researchers may want to investigate whether increases in entrepreneurial activities improve community resilience, especially among communities that may be more fragile and easier to break down otherwise.

In summary, our study makes important contributions to theories and empirical work on communities and entrepreneurship. We advance current theories by developing a framework to understand the impact of entrepreneurship on community social integration. This complements prior research which disproportionately highlights the impact of community social structure on founding rates as well as the subsequent growth of new ventures. Our study shifts away from this traditional approach, by documenting instead the profound effects of entrepreneurship on local geographic units, such as communities. Together, these findings suggest that the key importance of entrepreneurship for the society must begin with greater attention to its effects on the social structure of those units. Moving the debate beyond its current focus on economic outcomes and recasting the core arguments in terms of societal outcomes is the first step toward a clearer understanding of the impact of entrepreneurship on the society.

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TABLES

Table 1. Impact of the reform on within-community crime

"On the Spot Firm" reform	-0.0424 *
	(0.0176)
Population density	-0.0001
	(0.0001)
Employment in manufacturing industries (%)	-0.6700 *
	(0.2886)
Employment in energy & construction (%)	-0.1855
	(0.1346)
Employment in services (%)	-0.3987
	(0.2988)
Male employees (%)	0.3334
	(0.4118)
Employees in top & high qualifications (%)	-1.1453 **
	(0.4472)
Employees with university education (%)	0.0739
	(0.2259)
Employment in young firms (%)	-0.3844 **
	(0.1363)
Employment in micro and small firms (%)	-0.0366
	(0.1559)
Full-time employees (%)	-0.2232
	(0.1931)
Average hourly wage (log)	0.1156
	(0.2910)
Hourly wage dispersion (log)	0.0195
	(0.2453)
Total sales in the municipality (million Euros, log)	0.0066
	(0.0132)
Year Fixed Effects	YES
Municipality Fixed Effects	YES
Observations	2,745

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests). Fixed effects negative binomial regression.
Values in parentheses are standard errors clustered at the municipality-level.

Table 2. Cross-heterogeneous effects of the reform on within-community crime

	(1)	(2)	(3)	(4)
"On the Spot Firm" Reform	-0.0416 *	0.1106 **	-0.0318 *	-0.0288
	(0.0175)	(0.0380)	(0.0163)	(0.0161)
Disadvantaged groups entering the labor market (log nr)	0.0393 *	0.0448 *		
	(0.0188)	(0.0190)		
"On the Spot Firm" Reform * Disadvantaged groups entering the labor market (log nr)		-0.0288 ***		
		(0.0067)		
Growth in wage disparity (non-disadv/disadv)			0.0792	-0.0031
			(0.0666)	(0.0650)
"On the Spot Firm" Reform * Growth in wage disparity (non-disadv/disadv)				0.4174 *
				(0.1845)
Year & Municipality Fixed Effects	YES	YES	YES	YES
Controls (as in Table 1)	YES	YES	YES	YES
Observations	2,745	2,745	2,438	2,438

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. Wage disparity is the ratio between the average monthly wage of men considered to be non-disadvantaged (based on our definition) in the municipality and the average monthly wage of disadvantaged individuals in the same municipality – i.e., men up to 25 years old with less than secondary education. "Growth in wage disparity" refers to the relative change in wage ratios, within the community, between *t-1* and *t*. Monthly wages include both regular and extraordinary payments, besides the employee's base salary.

Table 3. Effect of the reform in municipalities with high and low unemployment rates before the reform (2001)

	Municipalities with unemployment rates below the median	Municipalities with unemployment rates above the median
"On the Spot Firm" reform	0.024	-0.082 ***
	(0.0234)	(0.0182)
Observations	1,413	1,332

*** $p < 0.001$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. All controls as in Table 1.

Table 4. Effect of the reform in municipalities with high and low wage inequality before the reform (2002)

	Municipalities with 90th/10th percentile wage ratio below the median	Municipalities with 90th/10th percentile wage ratio above the median
"On the Spot Firm" reform	-0.003	-0.058 **
	(0.0289)	(0.0165)
Observations	1,377	1,368

** $p < 0.01$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. All controls as in Table 1. Results are consistent when using the standard deviation of wages as an alternative measure of wage inequality.

Table 5. Impact of the reform on individual-level outcomes: estimations restricted to disadvantaged groups employed before the reform

	Wages	Permanent Contracts
"On the Spot Firm" reform	0.0064 ***	0.0119 ***
	(0.0016)	(0.0034)
Controls	YES	YES
Individual Fixed Effects (FE)	YES	YES
Municipality, Year & 2d-Industry FE	YES	YES
Observations	1,690,837	1,921,311

*** $p < 0.001$ (two-tailed tests). Linear regression models with fixed effects as indicated. Values in parentheses are standard errors clustered at the municipality-level. Controls include individual's age, schooling, firm age, firm size, and firm productivity. Models for monthly wages also control for the number of hours worked in the reference firm and year. Monthly wages include both regular and extraordinary payments, besides the employee's base salary.

Table 6. Integration of disadvantaged groups in the labor market (firm-level)

	Share of young and low-educated male employees	Wage gap (Ratio: wages of young and low-educated men/wages of other men in the firm)
"On the Spot Firm" reform	0.0042 ***	-0.0070 **
	(0.0012)	(0.0022)
Firm-level controls	YES	YES
Year, 2d-Industry, Firm & Municipality FE	YES	YES
Observations	1,957,469	253,920

** $p < 0.01$; *** $p < 0.001$ (two-tailed tests). Linear regression models with fixed effects as indicated. Values in parentheses are standard errors clustered at the municipality-level. Firm-level controls include firm age, size, and productivity (logged ratio between firm sales and employment).

Table 7. Impact of the reform on individual-level outcomes: estimations restricted to disadvantaged groups employed before the reform, including person-firm match fixed effects

	Wages	Permanent Contracts
"On the Spot Firm" reform	0.0040 *	0.0110
	(0.0020)	(0.0067)
Controls	YES	YES
Municipality, Year & 2d-Industry FE	YES	YES
Person-by-firm FE	YES	YES
Observations	1,690,837	1,921,311

* $p < 0.05$ (two-tailed tests). Linear Fixed Effects models. Values in parentheses are standard errors clustered at the municipality-level. Controls as in Table 5.

Table 8. Firm-level integration of disadvantaged groups and moderating effect of competition for labor

	Share of young low-educated male employees in the firm	Wage gap (Ratio: wages of young low-educated men/wages of other men in the firm)	Share of young low-educated men among new hires joining the firm
"On the Spot Firm" reform	0.0021	-0.0059 *	0.0012
	(0.0011)	(0.0025)	(0.0020)
Competition	-0.0725 ***	0.0046	-0.0920 ***
	(0.0181)	(0.0275)	(0.0192)
"On the Spot Firm" reform*Competition	0.0917 ***	-0.0327	0.1119 ***
	(0.0195)	(0.0395)	(0.0188)
Firm-level controls	YES	YES	YES
Year, 2d-Industry, Firm, and Municipality FE	YES	YES	YES
Observations	1,841,130	247,290	607,665

$*$ $p < 0.05$; $***$ $p < 0.001$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. Firm-level controls as in Table 8. Competition is measured by the share of new entrants in the 2-digit industry that are located in the same municipality as the focal firm (Ratio: Total Number of Entrants in Industry j and Municipality m/Total Number of Entrants in Industry j). Models for wage gap are restricted to firms employing both "disadvantaged" and "non-disadvantaged" male employees in the reference year. The last model is restricted to firm-year observations with at least one new hire.

Table 9. Firm-level integration of disadvantaged groups and the moderating effect of labor turnover

	Share of young low-educated male employees in the firm		Wage gap (Ratio: wages of young low-educated men/wages of other men in the firm)		Share of young low-educated men among new hires joining the firm	
	(1)	(2)	(3)	(4)	(5)	(6)
"On the Spot Firm" reform	0.0042 ***	0.0010	-0.0085 **	-0.0072	0.0031	0.0002
	(0.0012)	(0.0006)	(0.0026)	(0.0039)	(0.0020)	(0.0018)
Employees leaving the firm (%)	0.0053 ***		-0.0005		0.0101 **	
	(0.0009)		(0.0071)		(0.0030)	
"On the Spot Firm" reform * Employees leaving the firm (%)	-0.0000		0.0102		0.0026	
	(0.0014)		(0.0098)		(0.0049)	
Skilled employees leaving (%)		-0.0035 ***		0.0192		-0.0144 ***
		(0.0008)		(0.0247)		(0.0036)
"On the Spot Firm" reform * Skilled employees leaving (%)		-0.0020		-0.0039		0.0059
		(0.0015)		(0.0244)		(0.0054)
Firm-level controls	YES	YES	YES	YES	YES	YES
Year, 2d-Industry, Firm, and Municipality FE	YES	YES	YES	YES	YES	YES
Observations	1,658,372	516,356	236,004	110,519	560,399	251,310

$**$ $p < 0.01$; $***$ $p < 0.001$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. Firm-level controls as in Table 8. All models exclude the year of firm exit from estimation, so employee attrition is not driven by firm closure. Skilled employees are defined as employees with university education (bachelor degree or higher). Therefore, models 2, 4 and 6 are estimated for the sub-sample of firms with at least one skilled employee in the workforce. Models 3 and 4 are restricted to firms employing both "disadvantaged" and "non-disadvantaged" male employees in the reference year. Models 5 and 6 are restricted to firm-year observations with at least one new hire.

Appendix A. Descriptive statistics of municipality-level control variables, Portugal, 2002-2010

	Mean	Std. Dev	Min	Max
Population density (inhabitants/km^2)	305.3	837.0	5.100	7586.7
Employment in manufacturing industries (%)	0.271	0.167	0.000	0.824
Employment in energy & construction (%)	0.235	0.122	0.017	1.000
Employment in services (%)	0.442	0.140	0.000	0.884
Male employees (%)	0.589	0.054	0.417	0.922
Top & high qualifications (%)	0.204	0.047	0.072	0.458
University education (%)	0.120	0.069	0.011	0.502
Employment in young firms (%)	0.275	0.100	0.000	0.719
Employment in micro and small firms (%)	0.768	0.151	0.172	1.000
Full-time employees (%)	0.713	0.067	0.430	0.939
Average hourly wage (log)	1.293	0.204	0.744	2.453
Hourly wage dispersion (std dev. of logged wages)	0.429	0.061	0.262	0.709
Total sales in the municipality (million Euros, log)	5.085	1.671	-1.390	10.554
Observations (municipality-year)		2,762		

Appendix B. Correlation matrix (control variables at the municipality-level, 2002-2010)

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Population density (inhabitants/km^2)	1.00												
2	Employment in manufacturing industries (%)	0.05	1.00											
3	Employment in energy & construction (%)	-0.17	-0.51	1.00										
4	Employment in services (%)	0.16	-0.66	-0.13	1.00									
5	Male employees (%)	0.24	-0.11	-0.23	0.47	1.00								
6	Top & high qualifications (%)	-0.08	-0.08	0.43	-0.32	-0.10	1.00							
7	University education (%)	0.17	-0.02	-0.27	0.24	0.34	0.04	1.00						
8	Employment in young firms (%)	-0.09	-0.23	0.37	-0.10	-0.25	0.24	0.07	1.00					
9	Employment in micro and small firms (%)	-0.18	-0.57	0.36	0.27	-0.16	0.05	-0.16	0.42	1.00				
10	Full-time employees (%)	-0.01	0.02	-0.31	0.23	0.25	-0.14	0.16	-0.40	-0.15	1.00			
11	Average hourly wage (log)	0.15	-0.09	-0.08	0.29	0.51	-0.10	-0.14	-0.57	-0.34	0.24	1.00		
12	Hourly wage dispersion (std deviation of logged wages)	0.18	-0.08	-0.08	0.23	0.44	0.13	0.33	-0.14	-0.31	0.03	0.48	1.00	
13	Total sales in the municipality (million Euros, log)	0.34	0.34	-0.42	0.11	0.44	-0.08	0.27	-0.34	-0.59	0.09	0.45	0.40	1.00

Appendix C. Impact of entry deregulation on within-community crime

	Increased integration of disadvantaged groups	Decreased integration of disadvantaged groups
"On the Spot Firm" Reform	-0.045 *	0.079 *
	(0.018)	(0.037)
Year & Municipality Fixed Effects	YES	YES
Controls (as in Table 1)	YES	YES
Observations	2,390	355

* $p < 0.05$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. The first column restricts the estimation to municipalities that increased the representation of young low-educated men in all male labor market entrants by at least one percentage point. The second column refers to municipalities that witnessed a decrease or barely change in the representation of these individuals among labor market entrants. Alternative sample splits using 0 as a threshold produce qualitatively similar results.

Appendix D. Relative impact of the reform on individual-level outcomes: estimations restricted to men

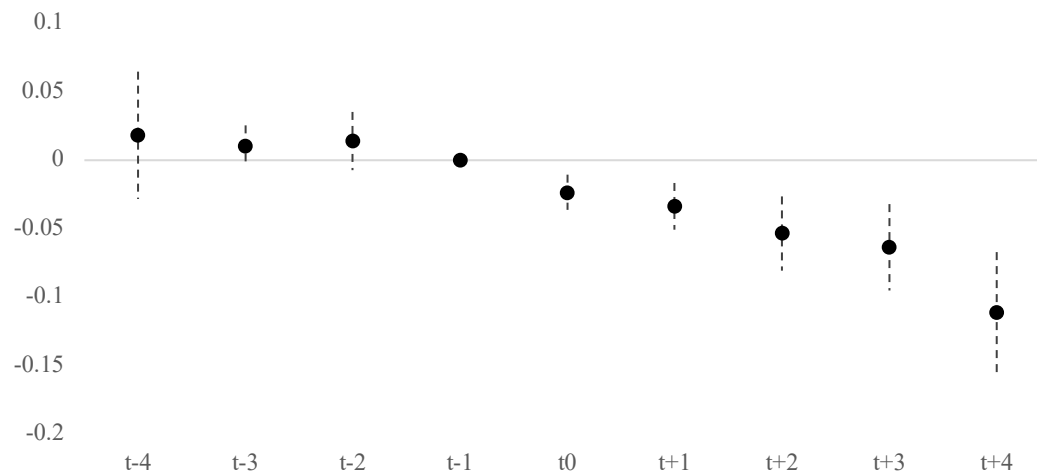|	Wages	Permanent Contracts
"On the Spot Firm" reform	-0.0115 ***	-0.0012
	(0.0014)	(0.0023)
"On the Spot Firm" reform*Young low-educated man	0.0453 ***	0.0195 ***
	(0.0015)	(0.0025)
Controls	YES	YES
Individual, Municipality, Year & 2d-Industry FEs	YES	YES
Observations	7,117,269	7,914,626

"Young low-educated man" is a dummy variable equal to 1 if the individual was up to 25 years old and did not complete high school education before the reform (2002-2004), 0 otherwise. *** $p < 0.001$ (two-tailed tests). Linear regressions with fixed effects as indicated. Values in parentheses are standard errors clustered at the municipality-level. Controls include individual's age, schooling, firm age, firm size, and firm productivity. Models for monthly wages also control for the number of hours worked per month in the reference firm and year.

Appendix E. Impact of the deregulation reform on new firm entry at the municipality-level

	Number of new firms		Share of firms that are newly founded	
Time to the "On the Spot Firm" reform:				
t-4	0.0265		0.0010	
	(0.0286)		(0.0035)	
t-3	0.0292		0.0021	
	(0.0393)		(0.0033)	
t-2	0.0434		0.0029	
	(0.0252)		(0.0031)	
t-1	(reference year)			
t0	-0.0014		0.0022	
	(0.0342)		(0.0031)	
t+1	0.0727	**	0.0081	**
	(0.0274)		(0.0026)	
t+2	0.1223	***	0.0119	***
	(0.0345)		(0.0030)	
t+3	0.1655	***	0.0173	***
	(0.0419)		(0.0034)	
t+4	0.1943	***	0.0183	***
	(0.0425)		(0.0036)	
Observations	2,753		2,753	
Municipality & Year FE	YES		YES	

** $p < 0.01$; *** $p < 0.001$ (two-tailed tests).

Appendix F. Coefficients of the reform year dummies on community-level crime incidence

Notes: Dashed lines represent 95% confidence intervals. The year prior to the enactment of the reform is used as the reference year.

Appendix G. Determinants of "On the Spot Firm" reform introduction

	Introduction of the reform
Number of crimes (log) (t-1)	0.0143
	(0.0126)
Share of disadvantaged individuals in the labor market (t-1)	-0.1667
	(0.2486)
Municipality FE	YES
Year FE	YES
Number of observations	3,016

Clustered standard errors at the municipality-level in parentheses. Two-tailed tests.

Appendix H. Pre-reform trends of social integration outcome variables: municipality-level

	Late adopters	Early adopters	Difference	P-value
Number of crimes	0.0412	0.0470	0.0058	0.5269
	(0.0337)	(0.0152)	(0.0576)	
Share of disadvantaged individuals in the labor market	-0.0672	-0.0719	-0.0047	0.7454
	(0.0081)	(0.0064)	(0.0142)	

The table reports average pre-reform growth trends (between 2002 and 2004) of number of crimes and share of low-educated young male employees in the labor force at the municipality-level. Early (late) adopters are municipalities that adopted the reform between 2005 and 2007 (2008 and 2009). Those that do not adopt the reform over our sample period are not considered in this table. The results are robust to changing the cut-off definition of early adopters to municipalities that adopted the reform between 2005 and 2006. Observations are by municipality-level. Standard errors are reported in parentheses. The p-value is for the test of the null hypothesis of equality between the means (proportions) for early and late adopters of the reform. P-values refer to two-tailed tests.

Appendix I. New jobs taken by disadvantaged individuals after the reform

    A. Share of disadvantaged individuals* already in the labor market prior to the reform and who initiated new jobs after the reform

(Total: 101,470 individuals)	
In incumbent firms	0.599
In new entrants	0.257

    B. Share of disadvantaged individuals* entering the labor market and initiating new jobs after the reform

(Total: 23,798 individuals)	
In incumbent firms	0.848
In new entrants	0.323

*young (up to 25 years old) and low-educated (i.e., who did not complete high school education) men

Appendix J. Firm-level integration of disadvantaged groups and moderating effect of industry concentration (measured by the Herfindahl Index)

	Share of young low-educated male employees in total firm workforce	Wage gap (Ratio: wages of young low-educated men/wages of other men in the firm)
"On the Spot Firm" reform	0.0039 **	-0.0073 **
	(0.0013)	(0.0023)
Competition	0.0265	0.1821
	(0.0251)	(0.1486)
"On the Spot Firm" reform * Competition	0.0897 ***	0.0552
	(0.0250)	(0.0634)
Firm-level controls	YES	YES
Year, 2d-Industry, Firm, and Municipality FE	YES	YES
Observations	1,841,130	247,290

** $p < 0.01$; *** $p < 0.001$ (two-tailed tests). Values in parentheses are standard errors clustered at the municipality-level. Firm-level controls include firm age, size, and productivity (logged ratio between firm sales and employment). Models for wage gaps are restricted to firms employing both disadvantaged groups (men up to 25 years old who did not complete high school) and other, "non-disadvantaged", men in the focal year.