



Hybrid entrepreneurship and public policy: The case of firm entry deregulation☆



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ABSTRACT

Hybrid entrepreneurs are entrepreneurs who are simultaneously working as paid employees. Although they constitute a systematic and large part of new firm creation, their possibly distinct responsiveness to public policy is not yet studied. Arguing for the need to consider hybrid entrepreneurs in public policy, we analyze the introduction of one-stop shops for faster and simplified firm registration in Mexico. We find that hybrid entrepreneurs are more responsive to changes in entry regulation than full-time entrepreneurs. While both the best and least educated people respond to the reform, the effect is most pronounced for highly educated hybrid entrepreneurs.

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1. Executive summary

Around the world, a significant share of individuals who are starting a venture simultaneously have a paid employment (Minniti, 2010). These entrepreneurs are referred to as hybrid entrepreneurs (Folta et al., 2010). Compared to entrepreneurs who leave their paid job upon entering entrepreneurship, hybrid entrepreneurs tend to be better educated (Folta et al., 2010) and their businesses survive longer on average (Raffee and Feng, 2014). Despite the potential relevance of these characteristics for public policy, hybrid entrepreneurship is rather hampered or at best neglected by current policy making (Folta et al., 2010). While hybrid entrepreneurs differ substantially from full-time entrepreneurs in their socio-demographic background, there is not yet any understanding of how these differences translate into differences in responsiveness to public policy. In order to design an efficient and well-targeted entrepreneurship policy, policymakers should consider relevant heterogeneity in responses to public policy measures (Parker, 2009; Welter and Smallbone, 2011).

In this study, we focus on the responsiveness of hybrid vis-à-vis full-time entrepreneurs to the introduction of ‘one-stop shops’. One-stop shops are a common type of firm entry deregulation, implemented in 96 countries as of 2013 (World Bank, 2013), and significantly reduce the time and cost of firm registration. We focus on the corresponding Mexican reform, SARE

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(Sistema de Apertura Rápida de Empresas, in English: System for Rapid Opening of Enterprises). Prior research indicates that SARE indeed triggered more entrepreneurship (e.g. Bruhn, 2011; Kaplan et al., 2011); however, there has been no analysis of potential differences between hybrid and full-time entrepreneurs. We theoretically argue that compared to full-time entrepreneurs, hybrid entrepreneurs reap comparably smaller individual benefits from entering entrepreneurship. Hybrid entrepreneurs' relatively smaller benefits translate into a higher responsiveness to the deregulation of firm entry as compared to full-time entrepreneurs (cf., Branstetter et al., 2014). Hybrid entrepreneurs' lower individual return, however, does not imply that these businesses are generally less wealth-generating. Instead, hybrid entrepreneurship might be especially attractive for businesses associated with externalities that are not individually appropriated (e.g., knowledge externalities or a positive social return to society through social entrepreneurship) or for people with very attractive employment alternatives to entrepreneurship. As some motives for entering as hybrid entrepreneur may also apply to part-time entrepreneurship, we further explore the reform's effect on part-time entrepreneurship. Using a large Mexican household panel for the years 2009–2013, we identify the impact of SARE on hybrid, full-time, and part-time entrepreneurship.

Our results indicate that hybrid entrepreneurs are more than four times as responsive to SARE as full-time entrepreneurs. Distinguishing between different levels of education reveals that SARE's impact is strongest for highly educated potential hybrid entrepreneurs who might be testing business opportunities through hybrid entrepreneurship. Our results also show a smaller but positive impact of SARE on part-time entrepreneurship. In contrast to hybrid entrepreneurs, part-time entrepreneurs appear to have lower levels of education.

Our theoretical and empirical analyses suggest that potential hybrid entrepreneurs differ from potential full-time entrepreneurs not only in their socio-demographic background, but also in their response to a public policy like firm entry deregulation. Reviewing existing policy instruments on their accessibility for hybrid entrepreneurs as well as designing instruments which specifically target these entrepreneurs' needs could enable the testing of business opportunities through hybrid entrepreneurship, which would not be explored through full-time entrepreneurship. Therefore, policy could better exploit a country's full potential of entrepreneurial activity by explicitly considering hybrid entrepreneurship. We further believe that differences in the responsiveness between hybrid and full-time entrepreneurs might also apply to other behaviors such as exit from entrepreneurship and the way these businesses are run. Our analyses suggest interesting further avenues to studying hybrid vis-à-vis full-time (or part-time) entrepreneurship.

2. Introduction

Entrepreneurs starting a venture while still employed by others – hybrid entrepreneurship – is a wide spread phenomenon (Folta et al., 2010). In many countries and regardless a country's economic development, many people starting a venture simultaneously hold other jobs (Minniti, 2010). While hybrid entrepreneurs are either actively discouraged or, at best, neglected under current policy making (Folta et al., 2010), we see four reasons why these hybrid entrepreneurs should receive attention. First, among new entrants in high-tech industries, which receive particular attention by policymakers, the share of hybrid entrepreneurs is estimated to be 58% in Sweden (Folta et al., 2010). Even when focusing on the narrow group of R&D-pursuing high-tech start-ups, their share is found to be 42% in Germany (Bretz et al., 2015). Second, as hybrid entrepreneurs are often better educated than full-time entrepreneurs, their business ideas might be expected to result in more high-growth ventures (Folta et al., 2010). Third, businesses started through hybrid rather than full-time entrepreneurship survive longer on average (Raffee and Feng, 2014). Fourth, regardless of whether or not hybrid entrepreneurs generate greater economic impact than full-time entrepreneurs, their relevance also emerges from their potential to evolve into valuable full-time businesses that otherwise would not have existed (Folta et al., 2010; Raffee and Feng, 2014).

Despite the prevalence of hybrid entrepreneurship and their potential role in triggering valuable businesses, previous research on entrepreneurship policy either neglected entry by hybrid entrepreneurs or did not distinguish hybrid from full-time entrepreneurship (e.g., Bruhn, 2011; Kaplan et al., 2011; Branstetter et al., 2014). Neglecting those who do not invest all their time in entrepreneurship, however, leads to a severe underestimation of firm creation (Dennis, 1997), which can hamper the proper development and assessment of related entrepreneurship policies. Treating hybrid and full-time entrepreneurs alike might likewise misguide policy-making. As the determinants of hybrid entrepreneurship are shown to differ substantially from the determinants of full-time entrepreneurship (Folta et al., 2010; Raffee and Feng, 2014), policies designed for full-time entrepreneurs might not appropriately address the needs of hybrid entrepreneurs. To fully leverage a society's entrepreneurial potential, policymakers might need to develop specific instruments addressing hybrid entrepreneurship. However, before policymakers develop such instruments, policy evaluations should investigate whether and how hybrid entrepreneurs respond to current policy instruments relative to full-time entrepreneurs.

To demonstrate the differential effects of entrepreneurship policy on hybrid and full-time entrepreneurs, we focus on firm entry deregulation. Specifically, we analyze the impact of the introduction of *one-stop shops*, a reform strongly encouraged by the World Bank and OECD, that is adopted by a total of 96 countries as of 2013 (World Bank, 2013). The effects of such reforms on the emergence of new firms is the subject of substantial research (Amici et al., 2015; Branstetter et al., 2014; Bruhn, 2011; Bruhn and McKenzie, 2013; Kaplan et al., 2011); however, the possibly distinct response of hybrid entrepreneurs is not yet addressed. Using Mexican household panel data, we evaluate the impact of the Mexican “System for Rapid Opening of Enterprises” (SARE) policy reform. The program's staggered implementation across municipalities enables prior research to demonstrate its causal effect on firm creation (Bruhn, 2011; Kaplan et al., 2011). Following these studies, we explore the effect

of this reform with respect to the heterogeneous responses across hybrid and full-time entrepreneurs. Thus, we provide a more fine-grained analysis of entrepreneurial activity arising from firm entry deregulation.

This paper contributes, first, to the growing research on hybrid entrepreneurship (e.g. [Burmeister-Lamp et al., 2012](#); [Folta et al., 2010](#); [Raffiee and Feng, 2014](#)) by explicitly analyzing hybrid entrepreneurs' responses to firm entry deregulation. We argue that hybrid entrepreneurs benefit less from entering entrepreneurship, on average, than full-time entrepreneurs, which is a characteristic associated with a higher responsiveness to firm entry deregulation ([Branstetter et al., 2014](#)). Therefore, we hypothesize that hybrid entrepreneurs are more likely to be affected by entry deregulation than their full-time counterparts. Our empirical analysis supports our hypothesis: The share of hybrid entrepreneurs whose entry was triggered by the deregulation is about four times higher than the corresponding share of full-time entrepreneurs. Our findings indicate that differences in the determinants of hybrid and full-time entrepreneurship ([Folta et al., 2010](#); [Raffiee and Feng, 2014](#)) also translate into differences in responsiveness to public policy and, in particular, firm entry deregulation.

Second, we contribute to the literature on entrepreneurship policy and evaluations of firm entry deregulation (e.g. [Branstetter et al., 2014](#); [Bruhn, 2011](#); [Kaplan et al., 2011](#)). We argue that neglecting hybrid entrepreneurship may hide substantial parts of the effect of firm entry deregulation on entrepreneurial entry, which leads to underestimation of the full impact of deregulation. Furthermore, we find that highly educated hybrid entrepreneurs are most responsive to entry deregulation. These highly educated individuals may seek to explore and test business opportunities without giving up their well-paid job. As such exploration by highly educated people might be desirable for developing an entrepreneurial society, our results imply that policymakers should not marginalize hybrid entrepreneurs. Instead, we propose to explicitly take hybrid entrepreneurship into account when designing and evaluating entrepreneurship policies.

The paper is organized as follows: Section 3 discusses the importance of hybrid entrepreneurs in policy evaluations, explaining why they can be expected to be more responsive to firm entry deregulation than full-time entrepreneurs. Section 4 describes our data and empirical approach. Section 5 presents results and selected robustness checks. Theoretical and practical implications of our findings are discussed in Section 6. Section 7 concludes.

3. Theoretical background

Our theoretical and empirical analyses focus on individuals who simultaneously engage in entrepreneurship and paid employment, which we take as a defining characteristic of *hybrid entrepreneurship*. We follow [Raffiee and Feng \(2014\)](#) and require no assumption regarding whether self-employment or paid employment is indicated as the “primary job.” We, thus, do not make a difference between individuals who classify entrepreneurship as their main or second job, but only require that time is spent in both entrepreneurship and paid employment.

3.1. The problem of neglecting hybrid entrepreneurship in evaluations of entry policies

In evaluations of entry policies, several problems arise when hybrid entrepreneurs are neglected or wrongly classified. First, if hybrid entrepreneurs are treated as paid employees, an evaluation of firm entry deregulation underestimates the true impact of the reform, because the possible increase in hybrid entrepreneurship is ignored (which is the case, for example, for second-job entrepreneurs in [Bruhn, 2011](#)). The corresponding distortion can be substantial given that in many countries, irrespective of per capita income, people start ventures while holding other jobs ([Minniti, 2010](#)). For example, in 2013 hybrid entrepreneurship accounted for 64% of all firm entries in Germany ([Metzger, 2014](#)). Furthermore, as hybrid entrepreneurship is one way to enter full-time entrepreneurship ([Folta et al., 2010](#)) and we do not know how rapidly this transition occurs, treating entry into full-time entrepreneurship as the only way to enter entrepreneurship may hamper the identification of the immediate effects of entry policies. The large number of hybrid entrepreneurs implies that including them into the analysis is important when evaluating the immediate impact of entrepreneurship policies.

Second, the importance of accounting for hybrid entrepreneurship in entry policy evaluations does not just stem from the need to observe all entries, but also from the fact that hybrid entrepreneurs share characteristics that make them particularly relevant for policymakers seeking to encourage entrepreneurship. Hybrid entrepreneurs are, on average, found to be more capable and better educated than full-time entrepreneurs ([Folta et al., 2010](#); [Raffiee and Feng, 2014](#)), which suggests that hybrid entrepreneurs may start relatively more high-growth businesses than do full-time entrepreneurs (e.g., [Folta et al., 2010](#)). Furthermore, full-time entrepreneurs who initially started as hybrid entrepreneurs are found to survive longer ([Raffiee and Feng, 2014](#)) and the share of hybrid entrepreneurs employing others is not much below the corresponding share among full-time entrepreneurs ([Melillo et al., 2013](#)). The observed patterns for survival and job creation as well as the suggested relationship with business growth are relevant for entrepreneurship policy ([Gilbert et al., 2004](#)). Therefore, the group of hybrid entrepreneurs should not be omitted from the analysis of entrepreneurship policy reforms.

Third, treating hybrid entrepreneurs like their full-time equivalents (e.g. [Branstetter et al., 2014](#); [Kaplan et al., 2011](#)) may mask relevant heterogeneity in underlying characteristics, motives, and entrepreneurial outcomes ([Folta et al., 2010](#); [Raffiee and Feng, 2014](#)). Knowing how individuals respond to policy reforms is highly relevant when designing well-targeted policies ([Parker, 2009](#)). For example, if hybrid entrepreneurs are especially hampered by entry regulation and if they differ substantially from full-time entrepreneurs, their specific needs and characteristics should be considered in order to meet aspired policy goals. Being able to estimate the impact of entry deregulation on full-time and hybrid entrepreneurship, respectively, and thereby taking

into account heterogeneity across entrepreneurs can help to better target and design entrepreneurship policies (cf., Parker, 2009; Welter and Smallbone, 2011).

3.2. The impact of entry deregulation on hybrid entrepreneurship

To simplify our theorizing and without lack of generalizability, we develop our theory on potential hybrid and potential full-time entrepreneurs' responsiveness to entry deregulation based on discussing the case of firm entry *regulation*. In fact, entry deregulation is considered to be reversing the effects of entry regulation, such that potential entrepreneurs' responses to deregulation are the inverse of entrepreneurs' responses to regulation. The *responsiveness* of hybrid (respectively full-time entrepreneurs) to entry regulation is defined as the probability of hybrid (respectively full-time entrepreneurs) to suspend their plans due to entry barriers. We focus on firm entry regulation in terms of an increase of registration costs, that is, lump-sum costs for the establishment of a new venture. We assume that registration costs are the same for entry into both hybrid and full-time entrepreneurship.

We can simplify our analysis by focusing on whether or not hybrid and full-time entrepreneurs abandon their plans to enter entrepreneurship. We argue that as registration costs related to firm entry do not vary with the time spent in entrepreneurship, prospective hybrid and full-time entrepreneurs are unlikely to suddenly alter their entry mode preferences. These entry costs do not affect the optimal level of time allocated to entrepreneurship, which includes the decision between hybrid and full-time entrepreneurship. Thus, when analyzing the effects of registration costs on hybrid and full-time entrepreneurs we can focus on whether or not hybrid and full-time entrepreneurs abandon their plans to enter entrepreneurship.

To analyze how registration costs affect hybrid entrepreneurs' (respectively full-time entrepreneurs') decision to enter entrepreneurship, we build on Branstetter et al. (2014) analysis of how entrepreneurs are, in general, affected by entry regulation. In their model, a rational entrepreneur compares her expected earnings in entrepreneurship and in paid employment, then choosing the occupation with higher earnings. If, because of the introduction of registration costs, the discounted future earnings from entrepreneurship decrease so much as to make the individual better off by staying in paid employment, the individual refrains from starting the venture. This is only the case if the increase in registration cost is higher than the expected increase in income from entering entrepreneurship compared to staying in paid employment. Thus, only individuals with comparably lower returns from entering entrepreneurship (called "marginal entrepreneurs") refrain from entering entrepreneurship (Branstetter et al., 2014). A difference between hybrid and full-time entrepreneurs with respect to their probabilities of being marginal entrepreneurs would, therefore, suggest that they also differ in their responsiveness to entry regulation.

In the following we propose three motives for entering hybrid entrepreneurship, which are also likely to increase the probability of hybrid entrepreneurs to be marginal entrepreneurs.¹ First, hybrid entrepreneurship can be an optimal choice if individuals face risky returns in self-employment (Parker, 1996). Even if total earnings in full-time entrepreneurship are higher than earnings in full-time paid employment, risk-averse individuals might prefer to keep their paid employment in addition to the entrepreneurial activity if income from paid employment is safer than income from entrepreneurship (Parker, 1997). Supporting this notion, empirical studies show that an individual's risk aversion increases the likelihood of hybrid entrepreneurship (Elston and Audretsch, 2010; Raffee and Feng, 2014). According to Parker (1996), individuals enter full-time entrepreneurship if prospective earnings increases are sufficient to compensate for the disutility of dedicating all working time to this risky activity. Thus, hybrid entrepreneurs can be expected to have lower increases in expected earnings when entering entrepreneurship, which makes them more likely to be marginal entrepreneurs than their full-time counterparts.

The interplay of risk and expected earnings as motive to enter hybrid entrepreneurship also implies that higher income from paid employment makes hybrid entrepreneurship, *ceteris paribus*, more likely, as it decreases the expected earnings increase from entering entrepreneurship. Given that higher wages and salaries are associated with higher education (Card, 1999), this might explain why hybrid entrepreneurs are found to be better educated than full-time entrepreneurs (Folta et al., 2010). Furthermore, higher education as determinant of hybrid entrepreneurship might also explain the fact that hybrid entrepreneurs are found to represent a substantial share of entry into high-tech industries (Bretz et al., 2015; Folta et al., 2010). On the one hand, start-ups in high-tech industries are associated with comparably higher growth prospects (thereby favoring full-time entrepreneurship). On the other hand, entrepreneurship in these industries tends to require a considerable degree of education, which increases prospective entrepreneurs' opportunity costs due to their expected earnings in paid employment. This, in turn, increases the likelihood of starting a business as hybrid entrepreneur. Therefore, hybrid entrepreneurship is not restricted to low-tech businesses, but is also prevalent among high-tech businesses.

Second, hybrid entrepreneurship becomes more likely if individuals face costs that are specific to quitting a paid employment or specific to investing full-time into entrepreneurship. Such opportunity costs arise, for example, from the loss of retirement benefits with an employer, lost seniority status, or high start-up capital (Folta et al., 2010). By keeping their paid employment, hybrid entrepreneurs can test a business opportunity and gather more information about its possible success without facing such costs (Folta et al., 2010). Higher opportunity costs are, thus, associated with higher probability to enter entrepreneurship

¹ There might be more motives to enter hybrid entrepreneurship than those discussed here. However, we believe that other motives for entering hybrid entrepreneurship do not imply that hybrid entrepreneurs are less likely to be marginal entrepreneurs than their full-time counterparts, such that the effects discussed here should not be balanced or even inverted.

as hybrid entrepreneur.² Hybrid entrepreneurship thereby creates a real option to observe the likelihood of business success and enter full-time entrepreneurship once the expected earnings increase from entering full-time entrepreneurship is high enough to cover these opportunity costs (Raffiee and Feng, 2014). Entry into full-time entrepreneurship without such a hybrid entrepreneurship transition phase arises, instead, if the expected earnings increase from entering full-time entrepreneurship is high enough to cover the associated opportunity costs right from the start. These immediate full-time entrepreneurs have no need to explore their business idea on a small scale-basis. Therefore, hybrid entrepreneurship is, *ceteris paribus*, more likely, the less beneficial the business idea, which is why hybrid entrepreneurs are more likely to be marginal entrepreneurs.

Third, decreasing marginal returns in entrepreneurship can induce an individual to take on additional paid employment if the business is not valuable enough to permit full-time entrepreneurship (Lévesque and MacCrimmon, 1997). Businesses with decreasing marginal returns that make the owner seek additional paid employment can plausibly be assumed to represent, on average, worse businesses than those enabling full-time entrepreneurship. Consequently, individuals entering hybrid entrepreneurship due to decreasing marginal returns are, *ceteris paribus*, more likely to be marginal entrepreneurs, as their business prospects are not good enough to permit full-time entrepreneurship.

In sum, we conclude that hybrid entrepreneurs are, on average, more likely to be “marginal entrepreneurs.” Consequently, hybrid entrepreneurs are more likely to be affected by entry regulation and, hence, can be expected to be more responsive to such policy measures than their full-time counterparts. Thus we formulate our proposition as follows:

Hypothesis. *Prospective hybrid entrepreneurs are more responsive to entry regulation than prospective full-time entrepreneurs, such that entry deregulation leads to a stronger relative increase in hybrid entrepreneurship compared to the relative increase in full-time entrepreneurship.*

4. Method

In order to empirically assess the impact of firm entry deregulation on both hybrid and full-time entrepreneurship, we focus on the introduction of one-stop shops. This reform is strongly encouraged by the World Bank and the OECD and has been very popular worldwide (World Bank, 2013). One-stop shops are special offices where prospective entrepreneurs can register a firm with a single visit. Simplified procedures decrease the complexity and duration of the business registration process. To determine the impact of these one-stop shops on firm creation, the Mexican reform SARE has received researchers' particular attention. The reform was adopted in 2002 and sequentially introduced among municipalities throughout the whole country. SARE's staggered implementation provides an interesting setting for reliable empirical analyses (Bruhn, 2011; Kaplan et al., 2011).

SARE aims to make firm registration faster, more transparent, and cost-efficient for a subset of industries that are considered to be of low risk to society. This applies, for instance, to the production of food, textile, IT equipment, as well as trade commerce and services, but not to chemical and plastic production or important infrastructure and utility providers such as electricity, water and gas (Bruhn, 2008). By gathering several administrative agencies and guaranteeing a response to an application within 72 hours (conditional on complying with all remaining administrative requirements and paperwork within the next three months (OECD, 2014)), the SARE reform streamlined the administrative procedures and tremendously shortened the registration period: The average time necessary to start a business in Mexico decreased from 58 days in 2003 to 6 days in 2013. The average cost incurred by a prospective entrepreneur dropped from 29.5% to 19.7% in terms of income per capita (World Bank, 2014). Based on Bruhn's (2011) results, the SARE reform is responsible for up to 251 newly registered firms per municipality and quarter in targeted industries between 2002 and 2004 (Kaplan et al., 2011). Using a different data source, which in contrast to Bruhn (2011) only captures firms with employees, Kaplan et al. (2011) find the effect to amount to 15 newly registered firms per municipality and quarter between 2002 and 2006. No impact on non-targeted industries is observed (Bruhn, 2011).

Our analysis is based on newly available data from the Mexican National Survey for Occupation and Employment (ENOE). ENOE is a household panel conducted quarterly since its inauguration in 2005 by the Mexican Statistical Office (INEGI). ENOE was designed in cooperation with the OECD and covers 120,260 Mexican households per quarter. All household members aged 12 years or older are interviewed for five consecutive quarters. ENOE operates as a rotating panel so that in every quarter 20% of the interviewed households are replaced with a new set. The data comes with the advantage that it is representative at the national and regional levels (Instituto Nacional de Estadística, Geografía e Informática, 2007). However, as each person is only tracked for five quarters, long-run outcomes of individuals cannot be observed. ENOE includes people's employment status in their primary and secondary job, thus enabling us to identify hybrid entrepreneurs.

In order to avoid disturbances by the financial crisis in 2008/09,³ we only include households observed between the 4th quarter of 2009 and the 4th quarter of 2013. Following Bruhn (2011), we restrict our sample to municipalities for which we can observe a SARE implementation during our time frame, with information available from at least one quarter before and one quarter after the introduction of the reform. SARE implementation dates and the list of targeted industries are taken from the website of the Mexican Commission for the Improvement of Regulation (COFEMER). From our sample, we exclude individuals

² Indeed, employees starting as hybrid entrepreneurs in comparison to employees starting as full-time entrepreneurs tend to possess longer industry tenure and tend to work at larger firms, which both are argued to increase opportunity costs (Folta et al., 2010).

³ In Mexico, the crisis led to a negative GDP growth rate from the 3rd quarter of 2008 through the 2nd quarter of 2009.

who are not able to work (e.g., strong physical or mental disabilities). In our initial analysis we also drop part-time workers, i.e. individuals who work less than 30 hours in their job. In a second step we separately address these part-time workers. Our final dataset contains 212,523 individuals aged between 20 and 65.

As in previous one-stop shop evaluations (Branstetter et al., 2014; Bruhn, 2011; Kaplan et al., 2011), the variable of interest (i.e., SARE) is a dummy that is zero for all quarters before implementation and becomes one with implementation of SARE in that municipality. As dependent variable we use an individual's classification as hybrid (=1) or full-time entrepreneur (=2) in industries eligible for the facilitated SARE-registration, or not being an entrepreneur in these industries (=0). We define an individual as *full-time entrepreneur* who reports to be self-employed in the primary job and does not work as paid employee in a second job.⁴ If an individual reports to work as paid employee in her primary job and is self-employed in a secondary job (or vice versa), she is classified as *hybrid entrepreneur*. This approach differs from previous studies on hybrid entrepreneurship, which, disposing of longitudinal individual-level data, are able to explicitly analyze the transition into hybrid or full-time entrepreneurship (Folta et al., 2010; Raffiee and Feng, 2014). Our analysis, instead, relies on longitudinal data at the municipality-level where the SARE reform applies. Following Bruhn (2011), we identify the impact of SARE on entrepreneurship by focusing on the stocks of entrepreneurs.

We employ dummy variables to control for *gender* and *marital status* because related literature on multiple jobholding suggests gender- and marital status-related differences between employees in dual-jobs and those in single jobs (Kimmel and Powell, 1999; Krishnan, 1990), which might equally apply to differences between hybrid and full-time entrepreneurs.

To control for education, we use a set of educational attainment dummies for people with *no education*, *low education* (referring to a primary or secondary school degree), *middle education* (Bachelor degree or Normal degree, which is a special career degree permitting work as a teacher), *technical education* (referring to the vocational degree “Carrera Tecnica” in the Mexican education system) and *high education* (Master's degree or Ph.D.).⁵

We further include an individual's *age* and *age squared* to account for an inverse u-shaped relationship between age and the probability of starting a venture (e.g. Bönthe et al., 2009).

Our data allows including information on an oft neglected but important determinant of hybrid entrepreneurship. Specifically, we control for the number of *dependents* in a household, i.e. children aged below 20 and elderly people above 65. On the one hand, individuals with a larger number of dependents might be less willing to take risks by entering full-time entrepreneurship. On the other hand, a higher number of dependent people might induce a greater need for supplementary income obtained by working in a business on the side. This effect might be offset by the number of *working people*, aged 20–65 and living in the same household, who could provide additional income while another household member starts a venture.

Moreover, as urban areas offer both better infrastructure and human capital than rural areas (Eliasson and Westlund, 2013), living in an urban area reduces the costs and risks of entrepreneurship and might therefore affect the decision to become an entrepreneur. We include two dummy variables indicating if an individual is living in a city with more than 100,000 inhabitants (*city*) or less than 2500 inhabitants (*rural*), respectively, with the base group reflecting the intermediate environments (*town*). To control for economic development in general, we merge our data with data from INEGI, from which we draw an *economic index* of quarterly economic activity at the state level.

Table 1 provides descriptive statistics for the 4th quarter of 2009, in which none of the municipalities had yet received treatment, i.e. introducing SARE. Respondents are on average 38 years old and primarily low-educated (68%). Full-time and hybrid entrepreneurs account for 20% and 3% in our sample, respectively.⁶ Among the entrepreneurs, 85% are active in industries that are eligible for the SARE reform. Table 2 gives more details on the characteristics of hybrid and full-time entrepreneurs in SARE-eligible industries. Hybrid entrepreneurs are younger and better educated than full-time entrepreneurs. Furthermore, both hybrid and full-time entrepreneurs operate their business mainly in the service and trade sector, but hybrid entrepreneurs are more often engaged in agriculture than full-time entrepreneurs.

To compare how hybrid and full-time entrepreneurs, respectively, respond to SARE, we extend Bruhn's (2011) dichotomous model by a multinomial model with three outcomes: Hybrid entrepreneurship in SARE industries, full-time entrepreneurship in SARE industries, and not being self-employed in a SARE-industry (base group). The relative strength of responsiveness to SARE is provided by comparing the corresponding relative risk ratios from a multinomial logit model. Relative risk ratios are the exponentiated coefficients, which are sometimes referred to as odds ratios (Cameron and Trivedi, 2010). In order to verify that the estimations of the multinomial logit are not biased by a possible violation of the independence of irrelevant alternatives (IIA) assumption, we also run our regressions using a multinomial probit model, which is not subject to the IIA assumption (Hausman and McFadden, 1984), but

⁴ Due to the nature of our data, we identify individuals as being self-employed according to their self-reported occupation in the household panel. If individuals hide information on informal self-employment, this would imply that a switch from informal to formal self-employment is treated as increase in self-employment. Such misleading reporting is less likely in our data compared to, for example, tax data, as respondents of ENOE are assured that their responses are solely used for statistical purposes and strictly confidential. Furthermore, even if people hide their activity, such a switch might increase tax participation as well as growth prospects of previously informal businesses (McKenzie and Seynabou Sakho, 2010). These effects are likewise important for the development of an economy in general and entrepreneurship policy, in particular. Future research could address and compare hybrid entrepreneurship with respect to both firm creation and firm registration. We thank an anonymous referee for pointing out this potential problem.

⁵ 79 individuals reporting only pre-school education are classified as having no education.

⁶ Note that hybrid entrepreneurs represent 13% of all entrepreneurs in our sample, which is lower than in other studies (e.g. Folta et al., 2010). One reason is that we observe stocks of hybrid and full-time entrepreneurs, but not individuals switching between occupations. People might enter entrepreneurship in a hybrid mode and subsequently switch to full-time entrepreneurship. The latter switch negatively affects the stock of hybrid entrepreneurship and positively affects the stock of full-time entrepreneurship, but it does not affect the entry mode of entrepreneurs, as observed in the data of Folta et al. (2010).

Table 1
Pre-treatment sample summary statistics

	Mean	S.D.	Min	Max
Full-time entrepreneur				
- In industries eligible for SARE	0.168	0.374	0	1
- In industries not eligible for SARE	0.030	0.170	0	1
Hybrid entrepreneur				
- In industries eligible for SARE	0.025	0.156	0	1
- In industries not eligible for SARE	0.004	0.065	0	1
Female	0.406	0.491	0	1
Married	0.486	0.500	0	1
No education	0.033	0.178	0	1
Low education	0.679	0.467	0	1
Technical education	0.071	0.257	0	1
Middle education	0.204	0.404	0	1
High education	0.013	0.114	0	1
Age	37.60	11.70	20	65
No. dependents in household	1.798	1.529	0	12
No. working in household	1.068	1.005	0	7
City	0.603	0.489	0	1
Town	0.307	0.461	0	1
Rural	0.090	0.287	0	1
Agriculture	0.060	0.238	0	1
Construction	0.091	0.287	0	1
Manufacturing	0.099	0.299	0	1
Trade	0.176	0.381	0	1
Service	0.323	0.468	0	1
Economic index	97.126	2.313	94.87	104.73

Note: The summary statistics refer to the 4th quarter of 2009. N = 12,234, S.D. = standard deviation.

does not deliver relative risk ratios. We then compare the marginal effects of the multinomial probit model with those of the multinomial logit model. The results do not show relevant differences between the marginal effects of both models (the two models are provided in Appendix A).⁷ Consequently, we opt for the multinomial logit model as its estimates, formulated as odds ratios, best suit our test of the responsiveness of hybrid and full-time entrepreneurship to SARE, respectively. As individuals are observed for multiple quarters, standard errors are clustered at the individual level.

We incorporate measures to reduce the likelihood that our results are driven by unobserved events. First, we include two sets of fixed effects and trends. Quarter fixed effects capture macroeconomic patterns, while municipality fixed effects control for unobserved heterogeneity between municipalities. Likewise, linear time trends for each municipality control for the possibility that municipalities experience different trends in entrepreneurship rates that are unrelated to the SARE reform. Second, we take advantage of the staggered implementation of SARE in the observed municipalities. In our data, 43% of the SARE implementations take place in 2010, 38% in 2011, 12% in 2012 and 7% in 2013. Therefore, the identification of the SARE impact stems from temporally separated implementations, which further reduces the likelihood that unobserved events influence our results.

5. Result

Table 3 reports the results of the multinomial logit estimation. The two outcomes refer to hybrid entrepreneurship (column 1) and full-time entrepreneurship (column 2) in SARE industries compared to the base outcome of not being entrepreneur in a SARE industry. Overall, significant differences in the control variables for hybrid and full-time entrepreneurs are discernible (column 3). For example, women are less likely to be hybrid entrepreneurs. Being married, instead, increases the odds of being a full-time entrepreneur by 17%, but has no statistically significant influence on the propensity to be a hybrid entrepreneur. Further differences can be noted concerning education: The odds for hybrid entrepreneurship increase by 60% if a person has middle level of education and by 154% when highly educated. The corresponding odds for full-time entrepreneurship decrease by 22 and 50%, respectively. Thus, our data is consistent with previous research indicating that better educated people favor hybrid entrepreneurship (Folta et al., 2010).⁸ This is of particular interest, as the characteristic of hybrid entrepreneurs being better educated than full-time entrepreneurs seems to hold not only in industrialized countries, which have been the focus of research in hybrid entrepreneurship so far (e.g. Sweden (Folta et al., 2010) and USA (Raffiee and Feng, 2014)), but also in developing countries such as Mexico.

⁷ The marginal effects of the SARE-dummy, which is our main variable of interest, differ by a negligible 0.00015 for full-time entrepreneurship and 0.00019 for hybrid entrepreneurship, respectively.

⁸ The coefficients as well as significance levels of control variables barely change when omitting the SARE-dummy (this regression is not reported here for reasons of brevity). Therefore, these results can be compared to earlier studies on the general determinants of hybrid entrepreneurship (Folta et al., 2010; Raffiee and Feng, 2014). When comparing our results to results of former studies, note that we differ in our approach from former studies (Folta et al., 2010; Raffiee and Feng, 2014) by observing stocks of entrepreneurs.

Table 2
Summary statistics of entrepreneurs in SARE-eligible industries

	Hybrid SARE entrepreneur		Full-time SARE entrepreneur		Difference
	Mean	S.D.	Mean	S.D.	
Female	0.32	(0.47)	0.39	(0.49)	0.07**
Married	0.60	(0.49)	0.59	(0.49)	–0.00
No education	0.02	(0.14)	0.04	(0.20)	0.02*
Low education	0.61	(0.49)	0.72	(0.45)	0.11***
Technical education	0.08	(0.27)	0.06	(0.24)	–0.02
Middle education	0.27	(0.44)	0.16	(0.37)	–0.10***
High education	0.02	(0.14)	0.01	(0.10)	–0.01*
Age	40.45	(10.24)	43.23	(10.85)	–2.78***
No. dependents in household	1.74	(1.37)	1.83	(1.58)	0.10
No. working in household	0.97	(0.87)	0.98	(0.97)	0.01
City	0.56	(0.50)	0.56	(0.50)	–0.00
Town	0.33	(0.47)	0.32	(0.47)	–0.01
Rural	0.11	(0.32)	0.12	(0.33)	0.01
Agriculture	0.21	(0.41)	0.11	(0.32)	–0.09***
Construction	0.04	(0.19)	0.07	(0.25)	0.03**
Manufacturing	0.09	(0.28)	0.12	(0.33)	0.03*
Trade	0.32	(0.47)	0.37	(0.48)	0.05*
Service	0.34	(0.48)	0.32	(0.47)	–0.02
Economic Index	97.29	(2.56)	97.28	(2.28)	–0.01
No. Observations		306		2057	

Note: The summary statistics refer to the 4th quarter of 2009. For the comparison of binary variables we used a two-sample test of proportions. For other variables a t-test was employed. S.D. = standard deviation

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The household composition provides new interesting insights on the determinants of hybrid entrepreneurship: The number of children and elderly dependents does not change the optimal time spent in the venture, as it alters neither the propensity for hybrid nor full-time entrepreneurship. In contrast, the number of household members providing additional household income slightly decreases the propensity to be a hybrid entrepreneur but has no impact on full-time entrepreneurship. This indicates that indeed some hybrid entrepreneurs are driven by the need to provide income if there are relatively few other household members working. Furthermore, hybrid entrepreneurship is more common in rural regions. Although this result also holds for full-time entrepreneurship, the effect is stronger for hybrid entrepreneurship; probably due to the higher probability of hybrid entrepreneurs being engaged in agriculture (see Table 2).

Turning to the impact of SARE on targeted industries, the results reported in Table 3 suggest a positive impact on entrepreneurship, in general. Even though an exact comparison with studies excluding hybrid entrepreneurship or firms without employees is not possible (due to different data sources and time frames), our results support earlier country analyses suggesting a positive impact of entry deregulation on firm creation (Aghion et al., 2008; Amici et al., 2015; Branstetter et al., 2014; Bruhn, 2011; Kaplan et al., 2011).

Going beyond previous research, our findings demonstrate that the impact of SARE is stronger for hybrid than for full-time entrepreneurship. The odds of being a hybrid entrepreneur increase by 19% after SARE, whereas the odds of being a full-time entrepreneur increase by 4%, with only the former being statistically significant.⁹ Employing a χ^2 -test, the null-hypothesis that these coefficients are equal is rejected at the 5%-level (column 3). Thus, SARE is found to especially stimulate hybrid entrepreneurship, which is in line with our hypothesis.

To better assess the economic impact of the SARE reform, we approximate the magnitude of our estimated effect of SARE on hybrid entrepreneurship using data from the Demographic Census, conducted by INEGI. In 2010 a total of 3,035,985 people aged between 20 and 64 lived in the observed municipalities. According to our data 29% of the population were either not able to work or only working part-time in the 4th quarter of 2009, which leaves us with a group of 2,155,549 individuals (71% of all people aged between 20 and 64) comparable to the sample of our estimation. The number of hybrid entrepreneurs in SARE-eligible industries therefore approximates to 53,889 according to our data (equivalent to the 2.5% in Table 1). Based on the marginal effects reported in Appendix A, the impact of SARE between 2010 and 2013 amounts to approximately 8975 people who registered their business as hybrid entrepreneurs.

Gruenert (1999) notes that a large portion of hybrid entrepreneurship, especially by people with low education, is attributable to agriculture. This sort of entrepreneurship, however, is unlikely to have a substantial economic impact. Given that in our Mexican data, hybrid entrepreneurship – in contrast to full-time entrepreneurship – is rather prominent in agriculture (see Table 2), our results

⁹ One reason why former studies might find positive effects of SARE despite having neglected hybrid entrepreneurship (Bruhn, 2011) are differences in the sample composition. If the group of full-time SARE entrepreneurs also includes part-time entrepreneurs, as in Bruhn (2011), the exponentiated SARE-coefficient would indicate an increase in the odds to enter full-time entrepreneurship by 5%, the coefficient being statistically significant at the 10%-level. The difference between hybrid and full-time entrepreneurship with respect to the impact of SARE would still be statistically significant at the 10%-level. The results are available from the authors upon request. As later shown, differences in the sample composition regarding educational attainment may also influence the observed effect of the SARE reform.

Table 3
Impact of SARE on hybrid and full-time entrepreneurship in SARE industries

	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)		Difference (3)
SARE	1.19***	(0.08)	1.04	(0.03)	**
Female	0.86***	(0.03)	1.02	(0.02)	***
Married	1.05	(0.04)	1.17***	(0.03)	***
No education	0.90	(0.09)	0.87***	(0.04)	
Technical education	1.10	(0.09)	0.82***	(0.04)	***
Middle education	1.60***	(0.07)	0.78***	(0.02)	***
High education	2.54***	(0.30)	0.50***	(0.05)	***
Age	1.19***	(0.01)	1.16***	(0.01)	*
Age ²	1.00***	(0.00)	1.00***	(0.00)	***
No. dependents in household	1.01	(0.02)	0.99	(0.01)	
No. working in household	0.91***	(0.02)	1.01	(0.01)	***
City	1.08	(0.11)	1.14**	(0.05)	
Rural	1.84***	(0.13)	1.29***	(0.05)	***
Economic index	0.99	(0.01)	1.00	(0.00)	
Constant	0.00***	(0.00)	0.00***	(0.00)	
Quarter fixed effects			Yes		
Municipality fixed effects			Yes		
Municipality linear time trends			Yes		
Pseudo R-squared			0.074		
Log-pseudo-likelihood			−110,313.51		
Observations			212,523		

Notes: Multinomial logit model reporting exponentiated coefficients and clustered standard errors in parentheses (clustered at the individual level). The base group of the dependent variable is formed by people who are not engaged in entrepreneurship in a SARE-industry. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

could also be driven by agriculture-related entrepreneurship. Thus, we re-run our analysis dropping entrepreneurs in the agriculture sector (see Table 4). The difference between hybrid and full-time entrepreneurs with respect to education is even more pronounced than in our previous analyses; that is, hybrid entrepreneurship is favored by better educated people, but full-time entrepreneurship is relatively more favored by the less educated people. The change in the odds ratio due to SARE is

Table 4
Impact of SARE on hybrid and full-time entrepreneurship in SARE industries when excluding agricultural entrepreneurship

	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)	
SARE	1.26***	(0.09)	1.05	(0.03)
Female	1.13***	(0.05)	1.17***	(0.03)
Married	0.98	(0.04)	1.19***	(0.03)
No education	0.84	(0.11)	0.85***	(0.05)
Technical education	1.17*	(0.10)	0.82***	(0.04)
Middle education	1.72***	(0.08)	0.78***	(0.02)
High education	2.89***	(0.34)	0.51***	(0.05)
Age	1.20***	(0.02)	1.16***	(0.01)
Age ²	1.00***	(0.00)	1.00***	(0.00)
No. dependents in household	0.99	(0.01)	0.99*	(0.01)
No. working in household	0.94***	(0.02)	1.03***	(0.01)
City	1.04	(0.11)	1.11**	(0.05)
Rural	1.03	(0.09)	0.85***	(0.04)
Economic index	1.00	(0.01)	1.00	(0.00)
Constant	0.00***	(0.00)	0.00***	(0.00)
Quarter fixed effects			Yes	
Municipality fixed effects			Yes	
Municipality linear time trends			Yes	
Pseudo R-squared			0.057	
Log-pseudo-likelihood			−101,570.05	
Observations			207,450	

Notes: Multinomial logit model reporting exponentiated coefficients and clustered standard errors in parentheses (clustered at the individual level). The base group is formed by people who are not engaged in entrepreneurship in a SARE-industry. Entrepreneurship in agriculture is dropped from the sample. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy.

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5
Impact of SARE interacted with educational degrees on hybrid and full-time entrepreneurship in SARE industries

	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)	
SARE	1.15**	(0.08)	0.98	(0.03)
SARE*No education	1.24	(0.23)	1.41***	(0.14)
SARE*Technical education	1.08	(0.17)	1.15*	(0.09)
SARE*Middle Education	1.02	(0.09)	1.23***	(0.06)
SARE*High Education	1.63**	(0.36)	1.23	(0.23)
Female	0.85***	(0.10)	1.02	(0.05)
Married	1.05	(0.13)	1.17***	(0.05)
No education	0.78	(0.02)	0.68***	(0.01)
Technical education	1.05	(0.02)	0.75***	(0.01)
Middle education	1.57***	(0.03)	0.68***	(0.02)
High education	1.88***	(0.04)	0.44***	(0.03)
Age	1.19***	(0.01)	1.16***	(0.01)
Age ²	1.00***	(0.00)	1.00***	(0.00)
No. dependents in household	1.01	(0.12)	0.99	(0.06)
No. working in household	0.91***	(0.13)	1.01	(0.05)
City	1.08	(0.11)	1.11**	(0.03)
Rural	1.84***	(0.36)	1.29***	(0.07)
Economic index	0.99	(0.01)	1.00	(0.00)
Constant	0.00***	(0.00)	0.00***	(0.00)
Quarter fixed effects			Yes	
Municipality fixed effects			Yes	
Municipality linear time trends			Yes	
Pseudo R-squared			0.075	
Log-pseudo-likelihood			−110,279.52	
Observations			212,523	

Notes: Multinomial logit model reporting exponentiated coefficients and clustered standard errors in parentheses (clustered at the individual level). The base group of the dependent variable is formed by people who are not engaged in entrepreneurship in a SARE-industry. *Low education* forms the educational base group. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy.

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

now slightly higher for hybrid entrepreneurship compared to the previous analysis (1.26 vs. 1.19); the difference between hybrid and full-time entrepreneurship is still statistically significant at the 5%-level. These results indicate that agriculture-related effects do not drive our previous conclusions.

Education is found to enhance successful entrepreneurship (van Praag and Cramer, 2001) and firms' chance of survival (Cooper et al., 1994; Parker, 2009; Robinson and Sexton, 1994; Rocha et al., 2015). We therefore test whether entrepreneurs who founded their ventures as a response to SARE display a distinct level of education. We moderated the SARE-dummy with educational degrees; the results are reported in Table 5. To simplify interpretation, Table 6 summarizes the estimates of the SARE effect calculated for each educational level. Interestingly, we observe the largest effects for very low and very high educational attainment levels. The effects tend to be larger for hybrid compared to full-time entrepreneurs across almost all educational levels.¹⁰ The estimation also reveals that SARE not only triggers entry by hybrid entrepreneurs, but also by full-time entrepreneurs either without education or with middle education. Those who benefit most from SARE (reflected in an odds increase by 89%) are the hybrid entrepreneurs with a Master's or Ph.D.

Having shown that SARE has a positive but different impact on hybrid and full-time entrepreneurship in targeted industries, we now consider possible externalities on hybrid and full-time entrepreneurship in industries that were not targeted by SARE. Negative externalities could arise from an increase in the relative attractiveness of SARE industries compared to non-SARE industries for prospective entrepreneurs who take entry barriers into account when deciding on which industry to enter (Shane, 2009). Positive externalities could arise from general publicity effects associated with the introduction of the reform, making entrepreneurship more salient to people and, thus, also increasing the likelihood of entering industries not eligible for SARE. The latter effect could confound our results regarding cost reductions. We explore these effects by extending our analysis and estimating SARE-related effects for full-time entrepreneurship and hybrid entrepreneurship in non-SARE industries as third and fourth outcomes (see Table 7). The effect of SARE is close to one, implying no change in the odds of being hybrid or full-time entrepreneur, and is not statistically significant for either hybrid or for full-time entrepreneurship in non-SARE industries (columns 3 and 4). We therefore cannot detect any substantial externality from the SARE reform for non-SARE industries. This observation is in line with the results of Bruhn (2011), who does not find any impact of SARE on entrepreneurship in non-targeted industries. Not observing externalities suggests that the effects observed in SARE industries are less likely to be spurious, e.g. due to a general increase in salience of entrepreneurship.

¹⁰ Note that the significance levels strongly depend on the number of observed people within an educational level and that some of these groups are quite small, e.g. *no education* for hybrid entrepreneurs and *high education* for full-time entrepreneurs.

Table 6
Education-specific effect of SARE on hybrid and full-time entrepreneurship in SARE industries

	Calculation of education-specific relative risk ratio of the SARE effect	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)	
No education	$\exp(\beta_{\text{SARE}} + \beta_{\text{SARE} \cdot \text{No edu.}}) =$	1.43*	(0.19)	1.38***	(0.10)
Low education	$\exp(\beta_{\text{SARE}}) =$	1.15**	(0.07)	0.98	(0.03)
Technical education	$\exp(\beta_{\text{SARE}} + \beta_{\text{SARE} \cdot \text{Techn. edu.}}) =$	1.25	(0.16)	1.13	(0.08)
Middle education	$\exp(\beta_{\text{SARE}} + \beta_{\text{SARE} \cdot \text{Middle edu.}}) =$	1.18*	(0.09)	1.20***	(0.05)
High education	$\exp(\beta_{\text{SARE}} + \beta_{\text{SARE} \cdot \text{High edu.}}) =$	1.89***	(0.22)	1.21	(0.19)

Notes: Calculations based on multinomial logit model reported in Table 5, with *Low education* being the base group of the education dummies. Standard errors are approximated through the delta method. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy.

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As discussed in Section 2.2, we propose three motives to enter hybrid entrepreneurship that can, on average, increase the probability that hybrid entrepreneurs will be affected by entry deregulation. The motives of mitigating risk by keeping paid employment (Parker, 1996) and of testing the waters of entrepreneurship while mitigating opportunity costs from leaving a paid employment (Folta et al., 2010; Raffiee and Feng, 2014) are indeed unique to hybrid entrepreneurship, as they require holding a second job. The third motive, which relates to strongly decreasing marginal returns in entrepreneurship (Lévesque and MacCrimmon, 1997), and those aspects of the second motive that only relate to costs arising from entering full-time entrepreneurship do not necessarily imply holding another paid employment – some entrepreneurs might also opt for part-time entrepreneurship instead of hybrid entrepreneurship. These part-time entrepreneurs might also be affected by entry deregulation, for example due to considering business opportunities in market niches, which are too small for full-time entrepreneurship (Block and Landgraf, 2014). We tested for the responsiveness of part-time entrepreneurs by re-estimating our main regression, this time including part-time employed individuals (working less than 30 hours) and adding part-time self-employment as third outcome. The estimation results reported in Table 8 indicate that part-time entrepreneurs are indeed responsive to SARE, though at smaller magnitude than hybrid entrepreneurs. Furthermore, in contrast to hybrid entrepreneurship, where high education is one of the most distinguished features, part-time entrepreneurship is most prevalent among low educated individuals (base group) and the probability to be a part-time entrepreneur decreases significantly as education increases. Given that education plays an important role in entry motives that are specific to hybrid entrepreneurship, this difference in education supports the idea that motives to enter part-time entrepreneurship are substantially different from motives to enter hybrid

Table 7
Impact of SARE on hybrid and full-time entrepreneurship in SARE and non-SARE industries

	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)		Hybrid non-SARE entrepreneur (3)		Full-time non-SARE entrepreneur (4)	
SARE	1.19***	(0.08)	1.04	(0.03)	1.00	(0.16)	1.01	(0.06)
Female	0.80***	(0.03)	0.94***	(0.02)	0.19***	(0.02)	0.18***	(0.01)
Married	1.05	(0.04)	1.18***	(0.03)	1.27***	(0.11)	1.01	(0.04)
No education	0.91	(0.09)	0.87**	(0.04)	1.19	(0.28)	1.16	(0.11)
Technical education	1.08	(0.09)	0.81***	(0.04)	1.15	(0.21)	0.71***	(0.07)
Middle education	1.54***	(0.07)	0.75***	(0.02)	0.66***	(0.07)	0.42***	(0.03)
High education	2.37***	(0.28)	0.47***	(0.05)	0.44**	(0.16)	0.09***	(0.03)
Age	1.20***	(0.01)	1.17***	(0.01)	1.24***	(0.03)	1.21***	(0.01)
Age ²	1.00***	(0.00)	1.00***	(0.00)	1.00***	(0.00)	1.00***	(0.00)
No. dependents in household	1.01	(0.01)	0.99	(0.01)	0.98	(0.03)	1.04***	(0.01)
No. working in household	0.91***	(0.02)	1.01	(0.01)	0.88***	(0.04)	1.01	(0.02)
City	1.09	(0.11)	1.12**	(0.05)	1.18	(0.22)	1.10	(0.09)
Rural	1.81***	(0.13)	1.27***	(0.05)	1.12	(0.20)	0.75***	(0.07)
Economic index	0.99	(0.01)	1.00	(0.00)	0.98	(0.02)	1.01	(0.01)
Constant	0.00***	(0.00)	0.00***	(0.00)	0.00***	(0.00)	0.00***	(0.00)
Quarter fixed effects					Yes			
Municipality fixed effects					Yes			
Municipality linear time trends					Yes			
Pseudo R-squared					0.085			
Log-pseudo-likelihood					– 141,072.44			
Observations					212,523			

Notes: Multinomial logit model reporting exponentiated coefficients and clustered standard errors in parentheses (clustered at the individual level). The base group of the dependent variable is formed by people who are not engaged in entrepreneurship neither in a SARE-industry nor in a non-SARE industry. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy. Significance levels: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 8
Impact of SARE on hybrid, full-time and part-time entrepreneurship in SARE industries

	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)		Part-time SARE entrepreneur (3)	
SARE	1.18***	(0.07)	1.04	(0.03)	1.13**	(0.07)
Female	0.77***	(0.03)	0.92***	(0.02)	5.32***	(0.22)
Married	1.04	(0.04)	1.17***	(0.03)	1.41***	(0.05)
No education	0.89	(0.08)	0.86***	(0.04)	0.88	(0.07)
Technical education	1.13	(0.09)	0.85***	(0.04)	0.76***	(0.05)
Middle education	1.54***	(0.07)	0.75***	(0.02)	0.48***	(0.03)
High education	2.46***	(0.28)	0.49***	(0.05)	0.35***	(0.07)
Age	1.20***	(0.01)	1.17***	(0.01)	1.03***	(0.01)
Age ²	1.00***	(0.00)	1.00***	(0.00)	1.00	(0.00)
No. dependents in household	1.01	(0.01)	0.99	(0.01)	1.01	(0.01)
No. working in household	0.90***	(0.02)	1.00	(0.01)	0.98	(0.02)
City	1.10	(0.11)	1.12***	(0.05)	0.95	(0.08)
Rural	1.80***	(0.13)	1.26***	(0.05)	1.27***	(0.09)
Economic index	0.99	(0.01)	1.00	(0.00)	1.01	(0.01)
Constant	0.00***	(0.00)	0.00***	(0.00)	0.00***	(0.00)
Quarter fixed effects				Yes		
Municipality fixed effects				Yes		
Municipality linear time trends				Yes		
Pseudo R-squared				0.078		
Log-pseudo-likelihood				−136,863.99		
Observations				230,889		

Notes: Multinomial logit model reporting exponentiated coefficients and clustered standard errors in parentheses (clustered at the individual level). The base group of the dependent variable is formed by people who are not engaged in entrepreneurship in a SARE-industry. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy. Significance levels: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

entrepreneurship. Nevertheless, the finding that SARE additionally triggers entry by part-time entrepreneurs, which are also more likely marginal entrepreneurs, confirms the validity of our assumption that entry deregulation triggers entry by marginal entrepreneurs (Branstetter et al., 2014).

6. Discussion and limitations

6.1. Discussion

Firm entry deregulation represents a widely used policy tool to facilitate entrepreneurship and innovation. Using data available from the Mexican SARE entry deregulation reform, we confirm prior research on the positive impact of entry deregulation on entrepreneurship in general and, specifically, SARE (e.g. Aghion et al., 2008; Amici et al., 2015; Bruhn, 2011; Kaplan et al., 2011; Klapper et al., 2006). Consistent with an earlier analysis of the same reform (Bruhn, 2011), we do not observe externalities with respect to entrepreneurship in non-targeted industries. Our research is first to explicitly differentiate between hybrid and full-time entrepreneurship when evaluating effects of a firm entry deregulation reform. We demonstrate that the previously neglected group of hybrid entrepreneurs is particularly responsive to the Mexican entry deregulation reform SARE. The effect is largest for highly educated hybrid entrepreneurs.

Our study extends research on differences between the characteristics of hybrid and full-time entrepreneurs (Folta et al., 2010; Raffiee and Feng, 2014), suggesting that these differences also translate into different responses to institutional changes. We thereby highlight the importance of the heterogeneity of entrepreneurial responses to institutional contexts (Welter and Smallbone, 2011). While we focus on the decision to enter entrepreneurship, such differences might also apply to the decision to exit the venture (see, for instance, Jenkins et al., 2014). On the one hand, hybrid entrepreneurs could be expected to exit more quickly than full-time entrepreneurs if the venture turns out to be unsuccessful, because—due to already holding an employment—they have less or no search costs for (alternative) employment. A faster exit might also result from the fact that hybrids tend to have a lower relative benefit from entrepreneurship, such that already a small crisis might trigger their exit. On the other hand, hybrids might be able to survive longer in a market despite losses, subsidizing the venture with income from their paid employment (see the theoretical discussion by Petrova, 2012). More research is needed to explore and test such differences in decision-making between hybrid and full-time entrepreneurs and how this translates into differing responsiveness to institutional changes. Such analyses might go beyond the entry and exit decision, also relating, for example, to how both types of entrepreneurs run their businesses.

Furthermore, our findings contribute to research on entry deregulation (Branstetter et al., 2014; Bruhn, 2011; Kaplan et al., 2011). Our results highlight the need to consider hybrid entry when evaluating the impact of firm entry deregulation. The estimated number of approximately 9000 new hybrid entrepreneurs between 2010 and 2013 in the analyzed municipalities represents a significant share of the overall increase in entrepreneurship due to the introduction of one-stop shops. Studies not

accounting for hybrid entrepreneurship not only severely underestimate entrepreneurial entry, but might in fact neglect a highly relevant type of entry. As hybrid entrepreneurship mitigates income risks and allows for exploration with lower opportunity costs, it enables the exploration of innovative but uncertain opportunities. Given that the highly educated have a preference to select into hybrid entrepreneurship, this exploration might lead to the discovery of rather valuable business opportunities that would have been ignored by full-time entrepreneurs at the outset. Furthermore, even if hybrid entrepreneurship is associated with smaller individual wealth generation and higher exit and failure rates, at a societal level it can have substantial positive spillovers. These externalities can include the diffusion of knowledge about the otherwise unexplored opportunities (Bernardo and Welch, 2001), the availability of entrepreneurially experienced employees and related know-how that can be exploited by other firms (Audretsch, 2009), and substantial social externalities resulting from social entrepreneurship with potentially small individual benefits (Mair and Martí, 2006).

Informing entrepreneurship policy making, our theoretical considerations and empirical results demonstrate that differences between hybrid and full-time entrepreneurs matter in the design and evaluation of entrepreneurship policies. Fabre and Smith (2003) report that 65% of all start-ups in Mexico fail due to the founders' lack of adequate education and argue that, "young well-educated people in technical fields (those with high opportunity costs) are more likely to initiate high-value-added, high-growth ventures [...] However, these individuals also are the most likely [...] to reject entrepreneurship to remain in current employment" (p. 18). Regulations, which in particular represent a barrier to enter hybrid entrepreneurship, might impede entrepreneurship of those well-educated individuals who strive to launch and test an innovation in the market (Panos et al., 2014), possibly starting a venture with high growth prospects (Folta et al., 2010). The relevance of hybrid entrepreneurship as means of testing a business idea by the highly-educated, however, stands in contrast to current policy making, which rather hampers hybrid entrepreneurship (Folta et al., 2010). For example, in Germany, many instruments stimulating entrepreneurship (e.g. public credit programs) are unavailable for part-time entrepreneurs (Welter, 2004), which equally hampers hybrid entrepreneurs. We encourage policymakers to review existing programs, focusing on the accessibility of hybrid entrepreneurs in order to enable the testing of business opportunities by highly educated individuals, and leveraging the full potential of entrepreneurial activity.

Apart from revising existing policy tools, policymakers could also design policies that specifically target hybrid entrepreneurs. Hybrid entrepreneurs likely have specific needs for information when setting up a business; for example, on taxation due to having two income streams. Indeed, evidence from Sweden indicates that hybrid entrepreneurs are more likely than full-time entrepreneurs to seek advice on tax issues (Lougui and Nyström, 2014). The same could hold for the payment of social security and obligatory pension schemes, which might become more complex with two income streams. Governments should consider training programs that specifically target the information needs of hybrid entrepreneurs. The need for training can be further aggravated by the fact that, due to their paid employment, hybrid entrepreneurs might have less time and flexibility than full-time entrepreneurs. Such time constraints might hinder hybrid entrepreneurs wishing to attend existing training programs, if these are not flexible enough. Consequently, policymakers might consider training and information programs that have a high of flexibility; for example, internet-based training programs that do not require personal attendance at a fixed place and time.

In sum, we urge policymakers to proactively take hybrid entrepreneurship into account when crafting policies that aim to foster entrepreneurship. While the World Bank and OECD strongly support entry deregulation, which—as our analysis demonstrates—most strongly affects hybrid entrepreneurs, it is noteworthy that hybrid entrepreneurs are often neglected in related policy analyses. Ignoring or trivializing hybrid entrepreneurship in policy instruments and evaluations is likely to lead to blurred if not distorted conclusions, rendering the development of an entrepreneurial society, an important pillar for economic growth, less effective.

6.2. Limitations

Although our study on hybrid entrepreneurship has profound implications for policymakers and researchers, it does not come without limitations. We follow Bruhn (2011) and analyze stocks of hybrid and full-time entrepreneurs using household data from a rotating panel (instead of individual-level switches to entrepreneurship, as analyzed by previous hybrid entrepreneurship research, e.g., Folta et al., 2010; Raffee and Feng, 2014). As noted in the method section, this comes with the disadvantage of exploiting the panel data structure only at the level of the municipality, the level where the reform was implemented. Furthermore, although we are able to incorporate important previously neglected individual-level control variables, we cannot evaluate detailed characteristics of the newly created firms to identify, for instance, their long-term economic performance. One could extrapolate the economic importance based on prior studies (e.g. van Praag and Cramer, 2001) suggesting that highly qualified individuals, who are the most affected by the deregulation reform, also tend to start businesses that are of high economic relevance. Further research should consider the type and economic impact of companies founded by hybrid entrepreneurs, possibly in comparison to companies founded by full-time entrepreneurs. These analyses should, however, take into account that the relative performance of hybrid entrepreneurship not only depends on whether the selection into hybrid vis-à-vis full-time entrepreneurship improves the quality of resulting ventures (i.e., a causal effect), but it also depends on the quality of individuals selecting into hybrid entrepreneurship (i.e., a selection effect). Furthermore, theoretical as well as empirical analyses of the impact of hybrid versus full-time entrepreneurship at the micro- and macroeconomic level are needed in order to discuss welfare effects of hybrid entrepreneurship. Such analyses should also consider potential drawbacks of hybrid entrepreneurship, such as a possible lower productivity of employees who simultaneously engage in hybrid entrepreneurship.

Implementations of policy reforms like SARE usually do not mirror a fully randomized and controlled experimental setting. Although we cannot rule out hidden political considerations, previous research suggests that the SARE reform provides a reliable setting for estimating the impact of firm entry deregulation (Bruhn, 2011; Kaplan et al., 2011). We further assured reliability of our results by employing fixed effects and time trends for each municipality. The time trends, for instance, capture possible limiting biases resulting from a tendency to implement SARE in municipalities experiencing an economic growth or decline.

We acknowledge that the motives for hybrid entrepreneurship and the response of hybrid entrepreneurs to entry deregulation might differ between Mexico and more industrialized countries. Following Bruhn (2011) and Kaplan et al. (2011), we chose the SARE reform due to its appealing setup for a solid empirical estimation. Studying hybrid entrepreneurs' responses to entry deregulation in more industrialized countries would, thus, represent an interesting avenue for future research, which is needed to validate the generalization of our findings. With respect to the characteristics of hybrid entrepreneurs, however, we can add to the generalizability of results: Individuals' high education as driver for hybrid entrepreneurship is only tested in industrialized countries, such as Sweden (Folta et al., 2010) and the United States (Raffiee and Feng, 2014), so far. Our research suggests that this relationship also holds for an emerging country like Mexico.

Furthermore, our empirical study is limited to a very specific type of reform. Nevertheless, we believe that the relatively higher responsiveness of hybrid entrepreneurs to entry deregulation compared to full-time entrepreneurs is likely to hold for a much broader range of policy measures. For instance, overloaded insolvency laws might discourage risk-averse people from testing a business opportunity, which could mainly apply to prospective hybrid entrepreneurs. Apart from institutional circumstances, other environmental conditions, such as strikes or demand shocks, might also trigger different responses by hybrid and full-time entrepreneurs, respectively. Given the high number of hybrid entrants around the world (Minniti, 2010), future research should explore the responsiveness of hybrid entrepreneurs to other types of institutional and environmental changes. This will enhance our knowledge of the opportunities for policymakers to further enable and leverage entrepreneurial activities in society.

7. Conclusion

Treating entrepreneurship as an “all or none” decision between entrepreneurship and paid employment is shown to severely bias our understanding of the determinants of entrepreneurship (Folta et al., 2010; Raffiee and Feng, 2014). We argue and empirically show that hybrid entrepreneurs are especially responsive to firm entry deregulation, an oft encouraged and implemented entrepreneurship policy. We hope that our research encourages other researchers as well as policymakers to better address the case of hybrid entrepreneurship in order to continue building a sound base of knowledge about this type of entrepreneurship and to adjust policy measures, accordingly.

Appendix A

Impact of SARE: Marginal effects of multinomial logit and multinomial probit model

	Multinomial Logit Model				Multinomial Probit Model			
	Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)		Hybrid SARE entrepreneur (1)		Full-time SARE entrepreneur (2)	
SARE	0.004***	(0.002)	0.004	(0.004)	0.004***	(0.002)	0.004	(0.004)
Female	−0.004***	(0.001)	0.003	(0.003)	−0.003***	(0.001)	0.003	(0.003)
Married	0.000	(0.001)	0.020***	(0.003)	0.000	(0.001)	0.020***	(0.003)
No education	−0.002	(0.002)	−0.018***	(0.006)	−0.002	(0.002)	−0.016**	(0.006)
Technical education	0.003	(0.002)	−0.026***	(0.006)	0.003	(0.002)	−0.025***	(0.006)
Middle education	0.013***	(0.001)	−0.034***	(0.004)	0.013***	(0.001)	−0.031***	(0.003)
High education	0.027***	(0.003)	−0.092***	(0.013)	0.028***	(0.003)	−0.083***	(0.012)
Age	0.004***	(0.000)	0.018***	(0.001)	0.003***	(0.000)	0.017***	(0.001)
Age ²	0.000***	(0.000)	−0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
No. dependents in household	0.000	(0.000)	−0.001	(0.001)	0.000	(0.000)	−0.001	(0.001)
No. working in household	−0.002***	(0.000)	0.002*	(0.001)	−0.002***	(0.000)	0.002*	(0.001)
City	0.001	(0.002)	0.013**	(0.006)	0.001	(0.002)	0.014**	(0.006)
Rural	0.014***	(0.002)	0.029***	(0.005)	0.014***	(0.002)	0.028***	(0.005)
Economic index	−0.000	(0.000)	−0.000	(0.001)	0.000	(0.000)	0.000	(0.001)
Constant	0.026***	(0.000)	0.164***	(0.001)	0.026***	(0.000)	0.164***	(0.001)
Quarter fixed effects			Yes				Yes	
Municipality fixed effects			Yes				Yes	
Municipality linear time trends			Yes				Yes	
Log-pseudo-likelihood			110,313.51				110,323.32	
Observations			212,523				212,523	

Notes: Marginal effects of multinomial logit and multinomial probit model and clustered standard errors in parentheses (clustered at the individual level). Base group is formed by people who are not engaged in entrepreneurship in a SARE-industry. We report two-tailed significance tests, even though the hypothesis on SARE is a directional hypothesis; a one-tailed test would further increase the statistical significance of the SARE-dummy. Significance levels:

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

References

- Aghion, P., Burgess, R., Redding, S.J., Zilibotti, F., 2008. The unequal effects of liberalization: evidence from dismantling the license raj in India. *Am. Econ. Rev.* 98 (4), 1397–1412.
- Amici, M., Giacomelli, S., Manaresi, F., Tonello, M., 2015. Red tape reduction and firm entry: evidence from an Italian reform. *Questioni di Economia e Finanza (Occasional Papers)*. 285.
- Audretsch, D.B., 2009. Entrepreneurship policy and the strategic management of places. In: Hart, D.M. (Ed.), *The emergence of entrepreneurship policy Governance, start-ups, and growth in the US knowledge economy*. Cambridge University Press, Cambridge.
- Bernardo, A.E., Welch, I., 2001. On the evolution of overconfidence and entrepreneurs. *J. Econ. Manag. Strateg.* 10 (3), 301–330.
- Block, J.H., Landgraf, A., 2014. Transition from part-time entrepreneurship to full-time entrepreneurship: the role of financial and non-financial motives. *Int. Entrep. Manag. J.* 1–24.
- Bönte, W., Falck, O., Heblich, S., 2009. The impact of regional age structure on entrepreneurship. *Econ. Geogr.* 85 (3), 269–287.
- Branstetter, L., Lima, F., Taylor, L.J., Venâncio, A., 2014. Do Entry Regulations deter entrepreneurship and job creation? evidence from recent reforms in Portugal. *Econ. J.* 124 (577), 805–832.
- Bretz, M., Egelin, J., Gottschalk, S., Murmann, M., Niefert, M., Wagner, Simona C., 2015. *Mannheimer Gründungspanel 2014: Junge Unternehmen zurückhaltend Bei Investitionen Und FuE*. Zentrum für Europäische Wirtschaftsforschung, Mannheim.
- Bruhn, M., 2008. License to Sell: The Effect of Business Registration Reform on Entrepreneurial Activity in Mexico. *World Bank Policy Research Working Paper Series* 4538.
- Bruhn, M., 2011. License to sell: the effect of business registration reform on entrepreneurial activity in Mexico. *Rev. Econ. Stat.* 93 (1), 382–386.
- Bruhn, M., McKenzie, D., 2013. Using administrative data to evaluate municipal reforms: An evaluation of the impact of *minas Fácil* expresso. *J. Dev. Eff.* 5 (3), 319–338.
- Burmeister-Lamp, K., Lévesque, M., Schade, C., 2012. Are entrepreneurs influenced by risk attitude, regulatory focus or both? An experiment on entrepreneurs' time allocation. *J. Bus. Ventur.* 27 (4), 456–476.
- Cameron, A.C., Trivedi, P.K. (Eds.), 2010. *Microeconometrics using Stata*, Rev. ed., 2010 Ed. Stata Press, College Station, Texas.
- Card, D., 1999. The Causal Effect of Education on Earnings. *Handbook of Labor Economics* vol. 3. Elsevier, pp. 1801–1863.
- Cooper, A.C., Gimeno-Gascon, F., Woo, C.Y., 1994. Initial human and financial capital as predictors of new venture performance. *J. Bus. Ventur.* 9 (5), 371–395.
- Dennis, W.J., 1997. More than you think: An inclusive estimate of business entries. *J. Bus. Ventur.* 12 (3), 175–196.
- Eliasson, K., Westlund, H., 2013. Attributes influencing self-employment propensity in urban and rural Sweden. *Ann. Reg. Sci.* 50 (2), 479–514.
- Elston, J.A., Audretsch, D.B., 2010. Risk attitudes, wealth and sources of entrepreneurial start-up capital. *J. Econ. Behav. Organ.* 76 (1), 82–89.
- Fabre, F., Smith, R., 2003. *Building the Entrepreneurial Culture of Mexico*.
- Folta, T.B., Delmar, F., Wennberg, K., 2010. Hybrid entrepreneurship. *Manag. Sci.* 56 (2), 253–269.
- Gilbert, B.A., Audretsch, D.B., McDougall, P.P., 2004. The emergence of entrepreneurship policy. *Small Bus. Econ.* 22, 313–323.
- Gruenert, J.C., 1999. *Second job entrepreneurs*. *Occup. Outlook Q.* Fall 1999.
- Hausman, J., McFadden, D., 1984. Specification tests for the multinomial logit model. *Econometrica* 52 (5), 1219–1240.
- Instituto Nacional de Estadística, Geografía e Informática, 2007. *Cómo Se Hace La ENOE. Métodos y procedimientos*.
- Jenkins, A.S., Wiklund, J., Brundin, E., 2014. Individual responses to firm failure: Appraisals, grief, and the influence of prior failure experience. *J. Bus. Ventur.* 29 (1), 17–33.
- Kaplan, D.S., Piedra, E., Seira, E., 2011. Entry regulation and business start-Ups: evidence from Mexico. *J. Public Econ.* 95 (11–12), 1501–1515.
- Kimmel, J., Powell, L.M., 1999. Moonlighting trends and related policy issues in Canada and the United States. *Can. Public Policy* 25 (2), 207–231.
- Klapper, L., Laeven, L., Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. *J. Financ. Econ.* 82 (3), 591–629.
- Krishnan, P., 1990. The economics of moonlighting: A double self-selection model. *Rev. Econ. Stat.* 72 (2), 361–367.
- Lévesque, M., MacCrimmon, K.R., 1997. On the interaction of time and money invested in new ventures. *Enterp. Theory Pract.* 22 (2), 89–110.
- Lougui, M., Nyström, K., 2014. What obstacles do entrepreneurs encounter? *J. Entrep. Public Policy* 3 (2), 275–291.
- Mair, J., Martí, I., 2006. Social entrepreneurship research: A source of explanation, prediction, and delight. *J. World Bus.* 41 (1), 36–44.
- McKenzie, D., Seynabou Sakhó, Y., 2010. Does it pay firms to register for taxes? the impact of formality on firm profitability. *J. Dev. Econ.* 91 (1), 15–24.
- Melillo, F., Folta, T.B., Delmar, F., 2013. *What Determines the Initial Size of New Ventures?* Working Paper
- Metzger, 2014. *KfW-Gründungsmonitor 2014: Gründungstätigkeit Wiederbelebt - Impuls Aus Dem Nebenerwerb*. KfW Bankengruppe (12pp).
- Minniti, M., 2010. Female entrepreneurship and economic activity. *Eur. J. Dev. Res.* 22 (3), 294–312.
- OECD, 2014. *Regulatory Policy in Mexico: Towards a whole-Of-Government Perspective to Regulatory Improvement*. OECD Publishing.
- Panos, G.A., Poulidakis, K., Zangelidis, A., 2014. Multiple job holding, skill diversification, and mobility. *Ind. Relat.* 53 (2), 223–272.
- Parker, 2009. *The Economics of Entrepreneurship*. Cambridge University Press, Cambridge, UK, New York.
- Parker, S.C., 1996. A time series model of self-employment under uncertainty. *Economica* 63 (251), 459–475.
- Parker, S.C., 1997. The effects of risk on self-employment. *Small Bus. Econ.* 9, 515–522.
- Petrova, K., 2012. Part-time entrepreneurship and financial constraints: evidence from the panel study of entrepreneurial dynamics. *Small Bus. Econ.* 39 (2), 473–493.
- Raffee, J., Feng, J., 2014. Should I quit My day job? A hybrid path To entrepreneurship. *Acad. Manag. J.* 57 (4), 936–963.
- Rocha, V., Carneiro, A., Varum, C., 2015. What explains the survival gap of pushed and pulled corporate spin-offs? *Econ. Lett.* 126, 127–130.
- Robinson, P.B., Sexton, E.A., 1994. The effect of education and experience on self-employment success. *J. Bus. Ventur.* 9 (2), 141–156.
- Shane, S., 2009. Why encouraging more people to become entrepreneurs is bad public policy. *Small Bus. Econ.* 33 (2), 141–149.
- van Praag, M., Cramer, J.S., 2001. The roots of entrepreneurship and labour demand: individual ability and low risk aversion. *Economica* 45–62.
- Welter, F., 2004. The environment for female entrepreneurship in Germany. *J. Small Bus. Enterp. Dev.* 11 (2), 212–221.
- Welter, F., Smallbone, D., 2011. Institutional perspectives on entrepreneurial behavior in challenging environments. *J. Small Bus. Manag.* 49 (1), 107–125.
- World Bank, 2013. *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises*. The World Bank.
- World Bank, 2014. <http://www.doingbusiness.org/Custom-Query/mexico> (Accessed 18 September 2014).