

Regional Opportunities and Policy Initiatives for New Venture Creation

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Regional Opportunities and Policy Initiatives for New Venture Creation

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Abstract: This paper investigates the determinants of new venture creation across industries and locations for 103 Italian provinces between 1997 and 2003. We allow for differences in regional opportunities across industries and investigate the impact of a range of factors on entrepreneurship in different industries: manufacturing, retailing and wholesaling, hotels and restaurants. Our results show that wage costs deter entry in manufacturing and that regions with industrial districts are characterized by higher start-up rates. Firm entry in commercial sectors appears higher in large cities and areas with strong economic progress. For hotels and restaurants we find that tourism positively influences new firm formation. In terms of policy we do not find a significant effect of recently introduced regional laws promoting new firm formation.

1. Introduction

Although a high birth rate of new enterprises is not a necessary condition for economic progress, many researchers and policy makers acknowledge the importance of continuous flows of firm entry (and exit) for economic welfare. It can be considered a seedbed of new activities from which new and successful business and industries emerge (Beesley and Hamilton, 1984). Industries and regions with low firm birth and death rates risk a misallocation of resources, formal or tacit collusion, and limited innovativeness (Geroski and Jacquemin, 1985).

There are various reasons why some regions are more attractive to start a new venture than others. Some regions have characteristics that make them fertile ground for firm births across a broad range of industries, while others attract firm entries only in particular industries (Audretsch and Fritsch, 1999). Entrepreneurs in retailing may be attracted to regions with high population density and high incomes, while entrepreneurs in manufacturing may be attracted to regions with low wages and a well-developed infrastructure. Generally, the choice for a location is driven by regional opportunities and the absence or presence of barriers to entry.

There is a growing empirical literature on the determinants of regional new firm formation. Researchers have linked a wide range of determinants to the firm birth rate in regions. Reynolds et al. (1994) provide a valuable overview of no less than nineteen different regional characteristics and their relation to firm births in regions for six countries. This study covers all economic sectors and focuses on manufacturing in particular. More recent studies include that of Sutaria and Hicks (2004) and Okamuro and Kobayashi (2006). Although these studies provide important insights into the factors promoting or hindering firm births, several determining factors, such as networking, have not been taken into account. Again, for other factors as the unemployment rate, mixed results have been found (e.g. Reynolds et al., 1994).

An important issue that has been neglected in the existing literature is the fact that determinants of firm entry may differ across industries. In this study we stress that the presence of regional opportunities, conducive to firm births, may differ across industries. We investigate the factors influencing new venture creation in different industries. More specifically, we examine the importance of technological activity, wage costs and industrial districts for start ups in manufacturing. For retailing and wholesaling we pay attention in particular to city size, regional economic welfare and growth. For hotels and restaurants we

take into account tourism. In addition to sector-specific effects, we investigate the impact of the (recent) introduction of laws providing entrepreneurs with direct subsidies and/or fiscal incentives at the regional level. Policy initiatives may decrease barriers to entry but research on their effectiveness has been rare and showed ambiguous outcomes (Parker, 2004, Chapter 10). Our analysis reveals the importance of various facilitating conditions (regional opportunities) for entrepreneurial activity.

The focus is on explaining regional start-up rates in Italy, a country with three different ‘economies’: that of the industrial North; the rural South; and the Third Italy networks in-between. This economic diversity makes Italy an interesting test case. The analyses incorporate a range of variables measuring opportunities for entrepreneurs in each of the 103 Italian provinces in the period between 1997 and 2003. We argue that regions providing ample opportunities for entrepreneurial activity will not only have their own inhabitants starting up new firms, but will also attract (potential) entrepreneurs from other regions. From this perspective investigating the characteristics of the supply of entrepreneurship from within the region can be considered a partial approach at best. The remainder of this paper is organized as follows. In the next section we briefly discuss regional opportunities to start new ventures. We will pay attention in particular to the effects of the Italian regional laws aimed at promoting new firm formation.¹ Section 3 presents the data and Section 4 presents the empirical results. Finally, Section 5 concludes.

2. Regional opportunities, industrial districts and regional laws

We assume that an entrepreneur i would, if perfectly mobile, choose to start up a business in the region in which his/her (expected) profitability is highest. Although there may be several other motives for starting up a business (e.g., the wish to be independent, tax reasons, the challenge), it can be argued that if there is no potential to earn a living, the desire for new venture creation is low. Let’s assume, for convenience, that the entrepreneur wants to start a small firm employing L_i units of labor. The profitability of starting up in region j then equals:

$$(1) \pi_{ij} = P_j Q_{ij}(L_i) - w_j L_i - S_j$$

where P_j is the price for the product or service in region j ; $Q_{ij}(\cdot)$ is the production function for producing in region j ; w_j is the wage level in region j ; and S_j are the start up costs in that

¹ We are grateful to Roberta Piergiovanni who collected these data. For a more elaborate discussion see Piergiovanni et al. (2007).

region. Obviously, the likelihood of choosing region j increases with the price and the productivity of labor, while it decreases with the wage level and the start up costs.²

Equation (1) clearly shows why the decision for the location of a new venture may differ across industries. Some ventures (e.g., shops and restaurants) are highly dependent upon the local market, whereas others (e.g., manufacturing firms) produce products for a broader market. Although entrepreneurs of both types of ventures will be discouraged by high regional wages and start-up costs, we expect an important difference in the role of price and productivity.

Manufacturing firms that serve (inter)national markets usually do not care much about local prices for their products, simply because they can transport their products to regions where demand is highest and prices are best. These firms tend to be more concerned about labor productivity in the region since they are in need of well-trained personnel, a well-developed infrastructure and networks of clients, suppliers and other firms. Shops and restaurants depend more on local demand and price levels. Accordingly, they prefer to be located in areas with a high number of (possible) consumers, possibly with relatively high average earnings (e.g., Carree, 2002). Labor productivity in shops or restaurants will usually not differ much across regions: often labor is relatively low-skilled and there are little network advantages to achieve.

Taking into account the above considerations, we expect the effect of region-specific factors on new venture creation to vary across industries. For example, the local wage level is likely to be positively related to local income levels and may therefore have a mixed effect on venture performance of shops and restaurants. The entrepreneurs in these ventures may raise their prices due to high average earnings in the region and, at the same time, pay higher labor costs. For manufacturing firms local demand is less important and the negative effect of wage costs will dominate. There are also factors, such as tourism, that are likely to be irrelevant for manufacturing firms but very important for hotels and restaurants. In addition, the presence of networks (industrial districts) may not be important for retail firms but may be crucial for ventures in specialized manufacturing. In our empirical investigation we investigate whether there is evidence for such differences.

² Another possible interpretation using equation (1) is that individuals of the labor force in region j stay in their region but choose between starting a venture, earning a profit, and remaining employed (or unemployed). This does not alter the rest of our discussion: price and productivity have a positive effect and wage and start up costs a negative one.

Here we want to pay specific attention to two possibly important determinants of start-up activity in Italy. First, we focus on industrial districts, a peculiar characteristic of the so-called 'Third Italy'. Second, we examine the impact of regional Italian policy initiatives on firm formation which may reduce start-up costs.

Industrial districts can be seen as local production systems stimulating new firm formation through an accelerated process of labor division and specialization (Becattini, 1990; Brusco, 1982). These districts are characterized by many small firms that subcontract production to other small firms and specialize in one or a few industries taking advantage from the local accumulation of skills (European Commission, 2002, p. 24; Santarelli, 2006). This accumulation results from a pooled labor market, greater provision of non traded inputs, and knowledge spillovers (Soubeyran and Thisse, 1999; Giovannetti et al., 2007; Santarelli, 2006).

District firms achieve the benefits usually associated with large scale production by exploiting external rather than internal economies, created by a learning-by-doing process that allow workers to improve their productivity through continuous exchange of information (Soubeyran and Thisse, 1999, p. 158)³. Small firms operating in cooperative networks are able to push down transaction costs and to increase their likelihood of success in highly competitive international markets (Santarelli, 2006, p. 163). Hence, opportunities for new venture creation, especially in manufacturing, are unevenly distributed across regions, where new firm entry is easier and the likelihood of success higher in regions with industrial districts than elsewhere.

Regional policies have been introduced to support new firm formation in regions with limited industry dynamics due to adverse environmental conditions and the absence of industrial districts. These policies were adopted by the regional governments soon after the introduction of National Law No. 44/1986. Most policies were introduced from the early 1990s onwards as an attempt to counter the effects of the recession, i.e., increasing unemployment and decreasing living standard of disadvantaged workers. The rationale for introducing such policies (as is the case of most industrial policies in the European Union) is that supporting new firm formation is a straightforward way to promote employment creation (Birley and Westhead, 1992). In the late 1990s the level of unemployment started to decrease

³ This definition is consistent with the hypothesis put forward by Fujita and Thisse (2002) who identify the centripetal effect exerted by localized positive externalities as one of the main factors producing the economic landscapes where agglomeration of economic activities is determined.

considerably, shifting the focus of small business policy in several European countries from job creation towards creating an enterprise culture (Curran, 2000).

Despite the alleged importance of policy intervention in the entrepreneurship arena, there have been relatively few empirical studies linking enterprise policy to new firm entry. Hoffmann (2007) finds evidence for a positive relationship between the business environment (covering multiple policy areas) and performance indicators of entrepreneurship (capturing measures of firm entry and growth)⁴. Fonseca et al. (2001) find that high start-up costs, in terms of number of procedures and time required to complete these procedures, lead to a decrease in the rate at which new firms are started. Similarly, Kannianen and Vesala (2005) show that the degree of labor market legislation negatively impacts the rate of new firm formation across countries. However, there are also more critical evaluations of entrepreneurship policy (Parker, 2004, Chapter 10; Storey, 1990).

3. Entry rates and their determinants in Italy

Entry and exit rate of firms can be measured either in terms of labor, assuming that one firm represents one self-employed individual (labor market approach), or in terms of number of firms (ecological approach) (Armington and Acs, 2002). In this paper entry and exit rates are measured relative to the total labor force⁵. We use data on entry and exit rates for all 103 provinces in Italy (Source: Unioncamere). Table 1 gives an overview of the lowest and highest provincial entry and exit rates in Italy, presenting the seven top and bottom provinces.

There is substantial variation in entry and exit rates across provinces. We find relatively high entry rates in several provinces in Toscana (Massa, Prato, Livorno) and Emilia Romagna (Reggio Emilia, Rimini). Although some provinces with high entry rates are characterized by a low value added per capita (Vibo Valentia), there are also 'low entry' provinces with a relatively high value added per capita (Bolzano-Bozen). The two major cities in Italy (Roma and Milano) are characterized by relatively low entry rates. We see that the 'poorest' provinces in terms of value added per capita, mainly situated in the Southern part of Italy, also have the lowest exit rates. The two provinces with the lowest entry rates are on the island of Sicilia (Messina and Palermo).

⁴ Hoffmann (2007, p. 162) includes the following policy indicators: tech-transfer regulation, entry barriers, access to foreign markets, loans, venture capital, bankruptcy or exit legislation, fiscal legislation, restart opportunities, entrepreneurship and business education, administrative burden, labor market legislation and indicators of entrepreneurial culture.

⁵ We also examined the results including entry and exit rates relative to the number of incumbent firms (in the previous period). These results are very similar to those including entry and exit rates relative to total labor force.

Table 1: Provincial entry and exit rates (average yearly rates)

| Province | Entry rate (average) | Province | Exit rate (average) |
|---------------|----------------------|-----------------|---------------------|
| Messina | 5.41 | Messina | 4.10 |
| Biella | 6.19 | Palermo | 4.37 |
| Bolzano-Bozen | 6.33 | Reggio Calabria | 4.39 |
| Roma | 6.38 | Roma | 4.46 |
| Lodi | 6.52 | Catania | 4.74 |
| Sondrio | 6.54 | Nuoro | 4.75 |
| Milano | 6.63 | Napoli | 4.80 |
| | | | |
| Rovigo | 8.57 | Torino | 7.00 |
| Prato | 8.60 | Ferrara | 7.04 |
| Vibo Valentia | 8.60 | Livorno | 7.07 |
| Caserta | 8.75 | Udine | 7.08 |
| Rimini | 8.79 | Rimini | 7.09 |
| Livorno | 8.84 | Savona | 7.46 |
| Reggio Emilia | 9.64 | Prato | 7.96 |

Note: The seven provinces with the lowest entry and exit rates are presented in the upper part of the table, while the seven provinces with the highest rates are presented in the lower part. The averages are for the 1997-2003 period.

There are various proxies for regional opportunities for new venture creation. Following equation (1), we concentrate on measures of local demand, labor productivity, wages and start-up costs. The following nine variables are incorporated in our empirical analysis:

- (i) *Time dummies* are included because of the relaxation of entry regulation in Italy in the period under consideration. For example, Schivardi and Viviano (2007) discuss the 1998 Bersani Law that reformed the Italian retail trade sector⁶.
- (ii) The variable *patents* captures the (potential) effect of technological intensity on new firm formation and is measured by the number of patents in 2003 per 1000 firms (source: Unioncamere). Following Armington and Acs (2002) we allow firm entry (and exit) rates to differ between low- and high-tech regions. Choi and Phan (2006) find that patent application per capita is negatively associated with new firm formation in the U.S. and argue that patents are an indicator of venture success rather than a cause of firm formation. However, their research uses nation-wide time-series data instead of regional panel data. Fritsch and Falck (2007) find no clear effect of the number patents per employee on total new business formation but a positive effect for the manufacturing sector.

⁶ Before the Bersani Law retail establishments were required to have a permit from the town council. The law abolished this need for small outlets, which now only have to hand in a notification. See Carree and Nijkamp (2001) for the estimated effects of a similar deregulation on entry and exit rates in Dutch retailing.

- (iii) The variable *growth* is measured by the relative change in the provincial value added (valore aggiunto a prezzi base – al netto dei SIFIM, source: ISTAT) in the previous period. Most studies at the industry level have found a positive and significant effect of profitability and market growth on both gross and net entry (cf. Carree and Thurik, 1996). We want to test whether the same effect arises at the provincial level. A thriving economy may be especially important for firms that depend upon the local market.
- (iv) The variable *tourists* is measured as the ration of number of tourists to the labor force and represents the extent to which the provincial economy benefits from tourism. Regions with high levels of tourism, such as Firenze and Venezia, may be characterized by high start-up rates in certain industries, but these rates may diminish when a certain threshold level of visiting tourists is reached. Overexploitation of local resources may be a reason for firms to abandon central locations (Russo, 2002).
- (v) The variable *city* is a dummy variable with value 1 for the four largest cities in terms of population (Torino, Milano, Napoli and Roma) and 0 otherwise. We control for the possibility that provinces with large Italian metropolitan cities display relatively high entry rates for certain industries⁷. This is consistent with Reilly’s Law (Reilly, 1931) positing that the larger the city, the larger the trade area around it. Large metropolitan areas are likely to attract new firms in the surrounding area (Fotopoulos and Loury, 2000). Other studies have alluded to the attractiveness of urban areas for new firm formation, including the “inner-city incubator” hypothesis by Vernon (1960) and the “filtering down” hypothesis by Thompson (1968).
- (vi) The presence of industrial districts is captured by the dummy variable *inddist* with value 1 for provinces with at least one industrial district and 0 otherwise (Source: Unioncamere). There are 22 provinces with *inddist* equal to 1.⁸ We

⁷ Studies by Garofoli (1994) and Santarelli and Piergiovanni (1995) found contrasting evidence for this hypothesis.

⁸ Provinces with at least one important “traditional” (according to the definition used by Unioncamere) industrial district are: Ascoli Piceno (shoes), Arezzo (golden jewelry), Avellino (leather), Bari (footwear), Biella (textiles – wool), Brescia (metal household artifacts and machinery for textile industry), Como (silk), Ferrara (mechanical engineering), Macerata (leather products), Mantova (stockings), Modena (knitwear and biomedical industry and ceramics), Pisa (leather), Pordenone (cutlery), Prato (textiles), Parma (ham), Pesaro-Urbino (furniture), Pavia (machinery for the footwear industry), Siena (furniture), Treviso (sporting footwear), Vicenza (leather), Verona (furniture) and Viterbo (ceramics). Note that the definition of industrial district used here excludes local systems

expect that in regions with industrial districts entry rates in manufacturing are higher.

- (vii) The variable *wage* represents the regional (manufacturing) wage level (source: ISTAT). This variable is only available at the aggregate level of the 20 Italian regions and not at the provincial level. High wage levels are expected to have a negative effect on firm entry and a positive effect on firm exit. High wages imply high opportunity costs for the self-employed and high wage costs when employing workers. Indeed, Ashcroft et al. (1991) show that average annual wages per employee have a negative influence on new firm formation at the county level in Great Britain. The effect is likely to be stronger for manufacturing firms than for firms that depend heavily on the local market.
- (viii) Value added per capita, *vapc*, is based on provincial value added data. Including this variable controls for the fact that the North, South and Central parts of Italy differ in terms of level of development and productivity. A productive labor force is attractive for firms in many sectors and can therefore be linked to new firm formation.
- (ix) From the early 1990s onwards the 20 regions in Italy have been introducing laws to promote firm formation. These laws may take various forms and include, for example, direct subsidies and fiscal incentives. The variable *laws* measures the number of laws introduced in the previous four years in the region where the province is located. Between 1993 and 2003 a total of 78 laws were introduced (Piergiovanni et al., 2007, p. 216)⁹. In general these laws aimed at reducing financial and psychological start-up costs.

Table 2 presents summary statistics (i.e., mean and standard deviation) for all variables included in the empirical analysis.

dominated by “focal” or leading firms occupying strategic and central positions due to their extensive network of customers and suppliers (for a further specification, cf. Lazerson and Lorenzoni, 1999).

⁹ It is interesting to observe that nearly half of these regional laws targeted female and youth entrepreneurs.

Table 2: Summary statistics

| Variable | Description | Mean | St.dev. |
|-----------|--|-------|---------|
| Entry | Entry rate | 13.97 | 3.91 |
| Exit | Exit rate | 11.09 | 3.28 |
| Net entry | Net entry rate | 2.88 | 2.67 |
| Patents | Number of patents per firm | 0.954 | 1.392 |
| Growth | Value added growth rate | 0.045 | 0.025 |
| Tourists | Number of tourists per labor force | 3.73 | 3.92 |
| City | Dummy 4 largest cities | 0.039 | 0.193 |
| Vapc | Value added per capita | 16.86 | 4.29 |
| Inddist | Industrial district dummy | 0.214 | 0.410 |
| Wage | Average wage level | 15.45 | 1.65 |
| Laws | Number of laws to promote firm formation | 1.62 | 1.50 |

Note: Average values are presented for a 7-year period.

4. Empirical results

The results for the entry models are presented in Tables 3 and 4. The top part of the tables (y1997 through y2003) presents the year-specific fixed effects. The low part shows the results for the eight other explanatory variables. We added the effect of exit in the same period and province (as presented in Table 4) for two reasons. First, a sizeable share of entrants is in fact a take-over of an existing company. Although the entrepreneur who acquires the business may deliberately choose to enter that province, still de novo entry and take-over may differ. Second, exits may also present a market opportunity. Exiting firms may be replaced by new entrants filling in the resulting market room. We discuss both results (including and excluding exit) and do not prefer one above the other.

For the year-specific effects we see an increase over the years, starting at a low level in 1997 and 1998, and increasing to a higher level in the period after 1999. We do not observe a similar time effect for exit rates. Hence, the increased (gross) entry in the period between 1997 and 2003 may be an indication of a range of policy changes at the national level in the 1990s. Indeed, there was deregulation and the introduction of entry subsidies (mostly soft loans) as reported by Santarelli and Vivarelli (2002).

There is little effect of patent activity on entry. In Table 3 we see a negative effect for the manufacturing sector, but this effect is no longer present when including exit (in Table 4). The results suggest that gross entry in manufacturing is lower in provinces characterized by high rates of patenting. Because patenting activity is undertaken mainly by a limited number of large firms in specific industries, the variable may not adequately capture technological opportunities for (very) small firms (Choi and Phan, 2006).

Growth in provincial value added (in the previous period) has the expected positive effect on entry (see Table 4). The effects are significant for the whole economy as well as for the retail and wholesale sector. In thriving (provincial) economies more commercial firms start and survive. Tourism has a significant negative effect on entry in the manufacturing sector. Apparently, tourism and an influx of manufacturing firms do not go well together. On the other hand, tourism has a positive effect on the firm birth rate for hotels and restaurants, but the effect disappears when the exit rate is accounted for in Table 4.

Entry is found to be higher in the four largest cities. It seems that in the period under consideration there were (still) important agglomeration effects. However, there is an important difference in the effect for manufacturing and commerce. For manufacturing the effect is negative, while for retailing and wholesaling it is positive. The terrain or space that can be used for manufacturing purposes may be quite scarce in the surroundings of the largest cities, thereby forcing these activities to other regions. Retail and wholesale firms appear to benefit from the presence of a large population.

The presence of industrial districts has a significant positive effect on entry in all industries and manufacturing, suggesting that these districts are fruitful areas for new and small firms. The wage variable has the expected negative effect on firm entry indicating that high regional wages discourage entrants. As expected, this mainly holds for the manufacturing sector. For hotels and restaurants wage costs do not play a role as new ventures may be able to benefit from the higher local demand in high income areas.

The results in Table 3 show that productive provinces attract new manufacturing firms. However, value added per capita does not affect entry in the hotels and restaurants sector and even has a negative effect for the retail and wholesale sector. The latter counterintuitive result may be explained by the higher opportunity costs of starting a retail or wholesale venture in areas where labor is highly productive in other sectors.

We find no effect of the regional laws designed to support entrepreneurial activity (in the previous four years) on firm entry. It appears that government policy does not play an instrumental role in creating an entrepreneurial culture. It should be noted that we make use of a simple count of policy initiatives in the previous four years and do not take into account their relative importance. Nevertheless, our results suggest that political division in the entrepreneurship policy arena, leading to the design and implementation of many different policy measures to stimulate firm entry, does not lead to the desired result.

Table 3: Estimation results for gross rates of entry (*exit excluded*)

| Sector | All | Manufacturing | Commerce | HotRest |
|----------------|---------|---------------|----------|---------|
| y1997 | 15.93* | 2.80* | 6.67* | 0.65* |
| | (1.49) | (0.30) | (0.48) | (0.16) |
| y1998 | 15.83* | 2.92* | 6.58* | 0.62* |
| | (1.49) | (0.31) | (0.49) | (0.16) |
| y1999 | 18.92* | 2.75* | 6.83* | 0.49* |
| | (1.53) | (0.31) | (0.50) | (0.17) |
| y2000 | 19.99* | 2.64* | 7.44* | 0.36* |
| | (1.56) | (0.32) | (0.51) | (0.17) |
| y2001 | 20.32* | 2.70* | 7.41* | 0.37* |
| | (1.63) | (0.33) | (0.53) | (0.18) |
| y2002 | 20.32* | 2.63* | 7.48* | 0.43* |
| | (1.68) | (0.34) | (0.54) | (0.18) |
| y2003 | 19.46* | 2.50* | 7.37* | 0.39* |
| | (1.71) | (0.35) | (0.55) | (0.19) |
| patents | -0.191 | -0.070* | 0.037 | -0.012 |
| | (0.124) | (0.025) | (0.040) | (0.013) |
| growth | 2.889 | 0.915 | 2.755 | -0.147 |
| | (5.988) | (1.223) | (1.945) | (0.652) |
| tourists | 0.031 | -0.042* | 0.008 | 0.039* |
| | (0.038) | (0.008) | (0.012) | (0.004) |
| city | 0.932 | -0.246* | 0.648* | -0.221* |
| | (0.731) | (0.149) | (0.238) | (0.080) |
| inndist | 0.667* | 0.453* | 0.016 | -0.036 |
| | (0.340) | (0.069) | (0.111) | (0.037) |
| wage | -0.578* | -0.159* | -0.124* | -0.000 |
| | (0.116) | (0.024) | (0.038) | (0.013) |
| vacap | 0.229* | 0.083* | -0.098* | 0.009 |
| | (0.053) | (0.011) | (0.017) | (0.006) |
| laws | 0.074 | 0.021 | -0.004 | 0.008 |
| | (0.096) | (0.020) | (0.031) | (0.010) |
| R ² | 0.231 | 0.242 | 0.179 | 0.233 |

Note: Standard errors between brackets. Number of observations is 721. * refers to 10% significance level.

Table 4: Estimation results for gross rates of entry (*exit included*)

| Sector | All | Manufacturing | Commerce | HotRest |
|----------------|---------|---------------|----------|---------|
| y1997 | 2.52* | 0.61* | 1.72* | 0.35* |
| | (0.80) | (0.16) | (0.33) | (0.10) |
| y1998 | 3.88* | 0.89* | 1.92* | 0.41* |
| | (0.79) | (0.16) | (0.33) | (0.10) |
| y1999 | 7.20* | 0.81* | 2.07* | 0.30* |
| | (0.81) | (0.16) | (0.33) | (0.10) |
| y2000 | 8.23* | 0.75* | 2.64* | 0.20* |
| | (0.82) | (0.17) | (0.34) | (0.11) |
| y2001 | 8.63* | 0.84* | 2.68* | 0.24* |
| | (0.85) | (0.17) | (0.35) | (0.11) |
| y2002 | 7.87* | 0.67* | 2.58* | 0.28* |
| | (0.88) | (0.18) | (0.36) | (0.11) |
| y2003 | 7.87* | 0.62* | 2.65* | 0.29* |
| | (0.89) | (0.18) | (0.37) | (0.12) |
| patents | -0.011 | 0.000 | 0.031 | 0.002 |
| | (0.062) | (0.013) | (0.025) | (0.008) |
| growth | 6.816* | 0.586 | 3.204* | 0.411 |
| | (2.995) | (0.622) | (1.189) | (0.404) |
| tourists | 0.023 | -0.011* | 0.001 | -0.002 |
| | (0.019) | (0.004) | (0.008) | (0.003) |
| city | 1.288* | -0.111 | 0.595* | 0.015 |
| | (0.366) | (0.076) | (0.145) | (0.050) |
| inndist | 0.374* | 0.062* | 0.096 | 0.012 |
| | (0.170) | (0.036) | (0.068) | (0.023) |
| wage | -0.141* | -0.026* | -0.008 | 0.000 |
| | (0.059) | (0.012) | (0.023) | (0.008) |
| vacap | -0.114* | -0.005 | -0.105* | -0.011* |
| | (0.028) | (0.006) | (0.011) | (0.004) |
| laws | 0.019 | 0.006 | 0.010 | 0.000 |
| | (0.048) | (0.010) | (0.019) | (0.007) |
| exit | 0.986* | 0.747* | 0.759* | 0.794* |
| | (0.021) | (0.017) | (0.022) | (0.024) |
| R ² | 0.808 | 0.804 | 0.694 | 0.706 |

Note: Standard errors between brackets. Number of observations is 721. * refers to 10% significance level.

5. Conclusions

This paper investigates the determinants of new venture creation across industries and locations by examining the way in which regional opportunities have influenced firm entry in 103 Italian provinces between 1997 and 2003. We allow regional opportunities to differ from one industry to another and focus on the impact of several factors on entrepreneurship in manufacturing, retailing and wholesaling, hotels and restaurants. We test for the importance

of technological activity, wage costs and industrial districts for start-ups in manufacturing. Our results show that wage costs limit entry, while regions with industrial districts achieve higher start-up rates. For retailing and wholesaling attention is paid, in particular, to city size and regional economic welfare and growth. Our results confirm our expectation that start-up rates in these commercial sectors are higher in large cities and in areas that achieve strong economic progress. For hotels and restaurants we include tourism as an explanatory factor and find that the relative number of tourists significantly influences new firm formation in this industry.

In our analysis we also incorporate a variable measuring the (recent) introduction of laws at the regional level providing fiscal incentives and direct subsidies for entrepreneurs. These laws are aimed at bringing down start-up costs for entrepreneurs who want to enter a particular industry. Nevertheless, we fail to find a significant effect of recently introduced laws on firm entry rates for all industries incorporated in our analysis. This suggests that regional governments have a relatively limited role in promoting entrepreneurial activity. Our research does suggest another road to a more entrepreneurial society: providing continuous support to the development of industrial districts. According to Feldman (2001) entrepreneurial supports *lags* rather than *leads* entrepreneurial activity, which would suggest that an increase in entrepreneurial activity awakes policy makers, making them aware of the economic importance of firm entry only ex-post. Researchers should devote time and effort into investigating the direction of causality in the relationship between firm start-ups and the design and implementation of regional entrepreneurship policy.

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