

Chapter 5

Social Progress Orientation, Entrepreneurship and Economic Development



5.1 Introduction

As it was mentioned, since Schumpeter (1911) attributed to entrepreneurs the capacity to influence the business cycle and its subsequent path dependence through innovation, many scholars have studied the importance of entrepreneurship and small business on economic development (Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Audretsch & Keilbach, 2004a; Meagher, 2007; van Stel, Storey, & Thurik, 2007; Wennekers & Thurik, 1999; Wennekers, van Stel, Thurik, & Reynolds, 2005). Given the importance of entrepreneurship in the development process, academia has been interested in the factors that promote entrepreneurship by different approaches (Anderson, Dana, & Dana, 2006; Bruton, Ahlstrom, & Li, 2010; Shane & Venkataraman, 2000; Urbano, Aparicio, & Audretsch, 2018; Veciana & Urbano, 2008; Verheul, Wennekers, Audretsch, & Thurik, 2002). Among those factors, some authors suggest that socioeconomic factors determine new business formation (Carree, van Stel, Thurik, & Wennekers, 2002, 2007; Freytag & Thurik, 2007; Naudé, Amorós, & Cristi, 2014; Uhlaner & Thurik, 2007; Wennekers et al., 2005). In addition, those factors framed by institutional economics have been considered a promising and useful approach for the study of entrepreneurship (Bruton et al., 2010; Thornton, Ribeiro-Soriano, & Urbano, 2011; Veciana & Urbano, 2008). In this sense, institutions can be formal or informal (North, 1990, 2005).

Formal institutions are commonly known as laws or regulations, whereas informal institutions are seen as values, beliefs and so on. In the light of this approach, we introduce social progress orientation (SPO) as a value beyond economic terms that promotes social welfare. Societies oriented towards social progress may provide an adequate climate for the deployment of the individual's full potential. In this sense, we could consider SPO as an informal institution. In that regard, Stephan and Uhlaner (2010) find that a social supportive culture, in contrast to a performance-based society, encourages independence-based entrepreneurship, which is associated

by Reynolds et al. (2005) with entrepreneurial activity driven by opportunity (TEA OPP). Others such as Naudé, Amorós, and Cristi (2013) and Naudé et al. (2014) find that subjective well-being and life satisfaction promote entrepreneurship driven by opportunity, which in turn could affect positively the economic development level (Carlsson et al., 2013).

Although institutions have been generally associated with economic development (Acemoglu & Robinson, 2012; North, 1990), since the early 2000s some scholars have suggested that institutions condition the endogenous factors instead of impacting directly on the development process (Acemoglu, Gallego, & Robinson, 2014; Rodrik, 2003). In that sense, entrepreneurial activity can affect economic development (Acs, Desai, & Hessels, 2008; Ács, Autio, & Szerb, 2014; Audretsch & Keilbach, 2004a, 2004b, 2005, 2008; Audretsch, Bönte, & Keilbach, 2008). Moreover, some authors suggest a positive impact of knowledge-based entrepreneurship on economic development (Audretsch et al., 2008; Carlsson et al., 2013). Given that entrepreneurship is generally seen as a conduit of knowledge (Agarwal, Audretsch, & Sarkar, 2007; Audretsch, 2007; Audretsch & Keilbach, 2008; Noseleit, 2013), where TEA OPP increases knowledge spillovers, enabling positive impact on economic development (Aparicio, Urbano, & Gómez, 2016; Audretsch et al., 2008). The literature presented above shows that the factors influencing TEA OPP and the sequence that links TEA OPP with economic development are analyzed in isolation.

Thus, the objective of this chapter is to examine how SPO through opportunity entrepreneurship affects economic development. Because of the interaction and interdependence involving SPO, opportunity entrepreneurship and economic development, a unidirectional model would lead to biased results. For that reason, we consider simultaneously the impact of SPO on opportunity entrepreneurship and that of this variable on economic development. The virtue of this approach is not only in the correction of the statistical bias. By explicitly instrumenting opportunity entrepreneurship in a second equation, we are able to analyse how policy could actually influence economic development by generating more entrepreneurial activity based on opportunity. With this two-equation approach, we implicitly link the two disparate literatures presented above.

Estimating these two equations through three-stage least-square (3SLS) method and using pooled data with information for 2005 and 2012 from the Global Entrepreneurship Monitor (GEM), the Indices of Social Development (ISD), and World Development Indicators (WDI), we provide empirical evidence of the impact of civic activism, voluntary spirit and inclusion of minorities as a measure of SPO on entrepreneurship driven by opportunity and this variable on economic development. By introducing the concept of SPO and examining the impact on opportunity entrepreneurship and subsequently on economic development, these findings advance the application of the institutional approach to the study of the determinants of the entrepreneurship driven by opportunity and economic development in an integrative manner. So far, these two phenomena have been analysed in isolation by the extant literature, and therefore this research provides comprehensive insights into the complex interrelations among environmental factors such as SPO,

opportunity entrepreneurship and economic development. In addition, this research combines the traditional approach to progress based on economic development (Engelbrecht, 2014; Porter, 2013; Stiglitz, Sen, & Fitoussi, 2009) with the SPO through entrepreneurship driven by opportunity.

After this introduction, the chapter is structured as follows. In Sect. 5.2, we discuss the theoretical framework, which is based on an institutional approach and the link between entrepreneurship and economic development. In Sect. 5.3, we present the data and the model. Results and discussion are presented in Sect. 5.4. Finally, Sect. 5.5 concludes and highlights the future research lines.

5.2 Theoretical Framework

5.2.1 *Understanding the Relationship Between Social Progress Orientation and Entrepreneurship Driven by Opportunity*

As mentioned before, Schumpeter (1911) gave entrepreneurship a capital role for the understanding of how the economic system works. That mechanism is driven by entrepreneurs with an inseparable and embedded innovative component. The innovations implemented by the entrepreneurs within the markets produce disturbances that lead to new path dependency producing economic development. In that context, entrepreneurship driven by opportunity is predominantly found in countries characterized by the innovation-driven stage such as Nordic countries, Western European countries and English speaking countries (Amorós & Bosma, 2014). Similarly, these countries are traditionally associated to a high level of social progress. Although the traditional approach to social progress is GDP-oriented, a more people-centred perspective is gaining momentum among international bodies and scholars (Alkire & Santos, 2010; Engelbrecht, 2014; Porter, 2013; Rojas, 2011; Stiglitz, Sen, & Fitoussi, 2009). In that regard, the World Bank (WB), with the World Development Indicators (WDI), and the United Nations Development Programme (UNDP), with the Human Development Index (HDI), have devised measurements that consider other social outcomes beyond GDP such as poverty, inequality, education and health care, among others. A similar approach is followed by Porter (2013), who devised the Social Progress Index to measure the social progress of countries. The index is formed of three dimensions, basic human needs, (nutrition, basic medical care, water and sanitation, shelter and personal safety), foundations of well-being (access to basic knowledge, communication and information, good health and ecosystem sustainability) and opportunity (personal rights, freedom of choice, tolerance and inclusion and access to advanced education).

The reviewed literature shows that alternatives to GDP consider a broad range of outcomes when it comes to defining and measuring social progress; however, our research considers social progress orientation (SPO) as a value beyond economic terms that promotes social welfare. The relationship between SPO and entrepreneurship that is driven by innovation and opportunity can be understood

through the institutional approach (North, 1990, 2005). According to North (North, 1990, 2005), the institutional framework can be classified in terms of formal institutions (set of rules, laws, procedures, regulations and constitutions) and informal institutions (set of values, taboos, customs, beliefs and attitudes embedded in a society commonly known as culture). Building on North, Scott (1995) suggested that institutions are formed by three elements or pillars (regulative, normative, and cultural-cognitive) that, combined with activities and resources, provide meaning to social life and can explain current behavior. These institutions act as constraints of social interaction and thus provide incentives and opportunities for economic development (Kwon & Yi, 2009) that would otherwise not exist (Hodgson, 2006, p. 2). Drawing from this approach some authors suggest that institutional factors determine entrepreneurial activity (Aidis, Estrin, & Mickiewicz, 2008; Bruton et al., 2010; Hayton, George, & Zahra, 2002; Salimath & Cullen, 2010; Thornton et al., 2011; Welter, 2005). Others suggest that procedures for starting a business affect entrepreneurship negatively (van Stel et al., 2007), and that risk-taking and creativity encourage entrepreneurial behavior (Alvarez & Urbano, 2012). If we focus on informal institutions, some authors probe the cultural dimensions¹ affecting entrepreneurship (Aidis et al., 2008; Davidsson & Wiklund, 1997; McGrath, MacMillan, Yang, & Tsai, 1992; Shane, 1993, 1995; Thomas & Mueller, 2000; Wennekers, Thurik, van Stel, & Noorderhaven, 2007). Therefore, it is in informal institutions where SPO is embedded.

As mentioned before, our research considers SPO as a value beyond economic terms that promotes social welfare. In that sense, postmaterialism (Inglehart, 1977, 1990) puts a similar emphasis on values beyond material terms. Postmaterialism addresses the cultural change toward values beyond material and economic goals that post-industrial societies have set in the last decades. This shift from traditional survival values to secular values of self-expression is known as the development sequence (Inglehart & Baker, 2000). As economic development takes place, modern societies give more attention to the quality of life, non-monetary well-being (health care and public education), freedom of choice and association (Inglehart & Welzel, 2005). The relationship between postmaterialist values and entrepreneurship has been explored by few researchers (Morales & Holtschlag, 2013; Uhlaner & Thurik, 2007). This relationship is found to be pervasive, meaning that postmaterialist values affect entrepreneurship negatively (Uhlaner & Thurik, 2007). Nevertheless, taking into account the different stages of development among countries, some questions remain open, especially when it comes to differentiating between the underlying motivations behind the entrepreneurial activity. Previous research has shown that as development rises from a certain level, so does opportunity and innovative entrepreneurship. This pattern is characterized by a U-shaped relationship and suggests that development offers more opportunities for entrepreneurs (Carree et al., 2002, 2007; Urbano, Aparicio, S., & Querol, 2016; Wennekers et al., 2005). Accordingly, entrepreneurship that is driven by innovation and opportunity is predominant in countries that are in the innovation-driven stage of development and

¹As defined by Hofstede (1980, 2005): “Individualism vs. Collectivism”; “Power Distance”; “Masculinity vs. Femininity”; “Uncertainty Avoidance”; and “Long Term Orientation”.

have higher rates of subjective well-being (Amorós & Bosma, 2014; Baron, Hmieleski, & Henry, 2012). In that sense, some researchers, such as Naudé et al. (2013, 2014), suggest that entrepreneurship can be boosted by subjective well-being and life satisfaction since individuals can deploy more innovative potential when survival needs are satisfied. Others, such as Stephan, Patterson, Kelly, and Mair (2016) and Stephan and Uhlaner (2010), find that a socially supportive culture, as opposed to a performance-oriented culture, can encourage entrepreneurial activity. Socially supportive cultures reflect a set of values related to a more human-centered orientation (encouragement and rewards for being fair, altruistic, generous, caring and kind to one another) (House, Hanges, Javidan, Dorfman, & Gupta, 2004).

A similar approach was developed by the International Institute of Social Studies (ISS) of the Hague, part of Erasmus University, with the Indices of Social Development (ISD) in 2011² to track the informal institutions that promote human and social development. These informal institutions are measured through six dimensions (Foa & Tanner, 2012; van Staveren, Webbink, de Haan, & Foa, 2014; Webbink, 2012): civic activism, clubs and associations, intergroup cohesion, interpersonal safety and trust, gender equality and inclusion of minorities. Therefore, some of these dimensions could be elements of social progress orientation (Urbano et al., 2016). Civic activism refers to the social norms that enable greater citizen participation in public decisions, media, and social movements such as protests and negotiations. The mechanism behind the civic activism that promotes entrepreneurship can be addressed through institutional entrepreneurship, which is considered an important stream of research (Bruton et al., 2010). Following this stream, institutional entrepreneurship is defined as the social movements that create new forms of organizations in order to solve social problems (Dees, 1998; DiMaggio, 1988; Rao, Morrill, & Zald, 2000). These social problems are market failures and also constitute a source of opportunities for institutional entrepreneurs/activists that can mobilize resources to fulfill these underserved needs through new forms of organization (Rao et al., 2000, pp. 238–239). Building on that stream of research, the social entrepreneurship literature describes new forms of organization as opportunity-exploitation startup processes triggered by the recognition of a social disequilibrium (Martin & Osberg, 2007). Other defining elements of social entrepreneurship are its innovative nature and its capacity to add value as the ultimate goal (Austin, Stevenson, & Wei-Skillern, 2006; Mair & Marti, 2006). Given that, we propose the following hypotheses:

Hypothesis 1: Social progress orientation positively affects entrepreneurial activity driven by opportunity.

Hypothesis 1a: Civic activism positively affects entrepreneurship driven by opportunity.

The voluntary spirit (VOL) to engage in community membership could also be seen as a dimension of social progress orientation and therefore influence entrepreneurial activity. Similarly, the clubs and associations of ISD are defined as the com-

²The methodology of these indices is matching percentiles; further details can be found in Foa and Tanner (2012). <http://www.indsocdev.org/resources>.

munity ties that act as a safety net for the poor by facilitating economic and social assistance. Social ties and connections, such as those found within families and local communities, help individuals to survive. Given the definition of voluntary spirit, it is possible to link this dimension with the social capital approach. The existing literature recognizes the positive impact of social capital on entrepreneurial activity (Aldrich & Kim, 2007; Davidsson & Honig, 2003; Kim & Kang, 2014; Lee, 2012; Schulz & Baumgartner, 2013; among others). According to Casson and Della Giusta (2007), the role of social capital in entrepreneurship can be analyzed in terms of the entrepreneurship process. This stepwise process is composed of opportunity seeking, resource mobilization and market organization. The first step, opportunity seeking, is highly influenced by information gathering. Entrepreneurs with access to social capital (clubs, associations, informal networks, and other meetings) can also gain access to information about business opportunities and thus exploit them (Bauernschuster, Falck, & Heblich, 2010). In the same vein, Kwon, Heflin, and Ruef (2013) find empirical evidence for this virtuous feedback loop, which is propelled by the enhanced flow of information among potential customers, entrepreneurs and partners. A similar logic can be applied for resource mobilization, where the trust gained through social capital is key for the acquisition of the financial, tangible and intangible resources that entrepreneurs otherwise cannot possess (Aldrich & Martinez, 2001; Liao & Welsch, 2005). Finally, when an entrepreneur tries to access the market, social capital is shown to be a valid conduit for transforming opportunities into innovative products (Alvarez & Busenitz, 2001; Anderson, Park, & Jack, 2007). For each one of the steps of the entrepreneurship process, social capital is shown as a factor promoting entrepreneurship. Others find that the social capital in high-tech and innovative sectors (Anderson et al., 2007; Sorenson, 2003) is especially determinant. Thus, given the suggested link between innovation and opportunity entrepreneurship, we propose the following hypothesis:

Hypothesis 1b: Voluntary spirit positively affects entrepreneurship driven by opportunity.

The capacity to accept cultural diversity could also be seen as a dimension of social progress orientation. Therefore, the interpersonal safety and trust account for the capacity of acceptance of diverse groups and cultures. This type of entrepreneurship is found in communities that share a common cultural heritage or origin where social interrelations influence behavior and economic transactions (Aldrich & Waldinger, 1990; Zhou, 2004). Generally, ethnic entrepreneurs are characterized by an integrative social component, which includes trust and solidarity (Portes & Zhou, 1992). This integrative social component can be found in environments characterized by ethnic diversity and it attracts human capital, which in turn encourages creativity, innovativeness, long-term investment decisions and entrepreneurship (Florida, 2002; Lee, Florida, & Acs, 2004; Turok, 2004). Existing qualitative literature suggests that ethnic diversity brings new perspectives into the entrepreneurship process, especially into opportunity seeking (Nijkamp, Sahin, & Baycan-Levent, 2010; Ram & Jones, 2008; van Delft, Gorter, & Nijkamp, 1999). Empirical studies also find a positive impact of group associations on entrepreneurship because of the different perspec-

tives brought to the stage of opportunity seeking. In that sense, Levie (2007) finds that ethnic minorities are more likely to engage in entrepreneurship than their UK correspondents thanks to a better level of education, skills, different perceptions of opportunities and attitudes toward new business activity. Other empirical studies link ethnicity, cultural diversity, interpersonal safety and trust with superior proactive entrepreneurship (Nathan & Lee, 2013; Pathak & Muralidharan, 2016), innovative start-ups (Audretsch, Dohse, & Niebuhr, 2010) and opportunity entrepreneurship (Alvarez & Urbano, 2013). Thus, we propose the following hypothesis:

Hypothesis 1c: Inclusion of minorities positively affects entrepreneurship driven by opportunity.

5.2.2 Entrepreneurship Driven by Opportunity to Achieve Economic Development

The relationship between entrepreneurship and economic development has been widely studied in the literature (Acs et al., 2012, 2014; Acs & Szerb, 2007; Audretsch et al., 2008, among others). However, as Aparicio, Urbano, and Audretsch (2016) and Aparicio, Urbano, and Gómez (2016), Wennekers et al. (2005), and Wong, Ho, and Autio (2005) discuss and suggest, more empirical recent evidence is needed given the fluctuations of GDP across countries. Thus, entrepreneurship (especially that based on innovation and opportunity) still attracts the attention of many scholars from different disciplines (Coad, Segarra, & Teruel, 2016; Segarra & Teruel, 2014; Thornton et al., 2011). According to Carlsson et al. (2013), it is argued that entrepreneurship is a factor that mediates the development process. Therefore, the study of entrepreneurship comprises two streams; namely, the antecedents and consequences of entrepreneurial activity. One stream of entrepreneurship research is focused on exploring its determinants. The previous section above tried to explore the institutional factors that determine entrepreneurship.

However, the question of how the role of entrepreneurship driven by innovation and opportunity not only in economic growth but also in economic development still remains (Aparicio, Urbano, & Audretsch, 2016; Dean & McMullen, 2007; Wong et al., 2005). The answer of this might lead to explore the new firms' capacity to create and spark knowledge at the same time into society (Acs et al., 2012). Indeed, Audretsch and Keilbach (2008) and Acs et al. (2012) suggest that entrepreneurship could be a vehicle for transferring knowledge to the economy and, thus, creating social value.

Rodrik (2003) suggests that to achieve economic development it is important to take into consideration three components: (1) endogenous factors, which contain the determinants that are directly related to economic growth, (2) partly endogenous factors, which could interact to affect economic growth (i.e. institutions), and (3) exogenous factors which consist of geography and natural resources. The positive interrelationship between these components could be reflected as a dynamic of economic develop-

ment. As we have mentioned, entrepreneurship has been assessed as an endogenous factor in economic growth, which is a necessary condition for development.

In the field of economic growth, Romer (1986) includes a variable of knowledge in the neo-classical production function. Likewise, Aghion and Howitt (1992) and Romer (1990) suggest an endogenous growth model, which contains both knowledge and innovative entrepreneurs generating higher economic development through creative destruction. Nevertheless, other authors suggest that a “chain” may exist that links institutions to economic growth throughout entrepreneurial activity (Agarwal et al., 2007; Audretsch, 2007; Audretsch & Keilbach, 2008; Noseleit, 2013; Urbano & Aparicio, 2016). McMullen (2011) suggests that an innovation process may be achieved if the institutions encourage individuals to pursue innovative initiatives. According to this author, it is possible to generate inclusive growth through entrepreneurship, which in turn is affected by the institutional environment. Similar literature argues that innovative projects are the key to solving the poverty puzzle. Hall, Matos, Sheehan, and Silvestre (2012) and Khavul and Bruton (2013) highlight the importance of innovation and entrepreneurship as a recipe to include all society into the economic system. Drawing on this literature, we propose the following hypothesis:

Hypothesis 2: Entrepreneurship driven by opportunity has a positive effect on economic development.

5.3 Data and Methods

As we noted before, this chapter examines how social progress orientation (SPO) through entrepreneurship driven by opportunity affects economic development, and they influence each other. The specification of a growth function assumes implicitly that entrepreneurial activity is exogenous. However, as we mentioned in previous chapters, entrepreneurship needs to be endogenized. In this regard, Carlsson et al. (2013) suggest that future studies in this research field should consider the factors that affect entrepreneurial activity and its role in socioeconomic outcomes. By simultaneously treating entrepreneurship and economic growth, it is possible to overcome the endogeneity problem between these two variables (Acs et al., 2012; Audretsch et al., 2008; Urbano & Aparicio, 2016). Taking this into account, we specify a set of equations that enable us to understand the causal chain running through SPO, entrepreneurship and inclusive growth. Hence, the first equation considers this recursive structure explicitly as well as other control variables that affect entrepreneurial activity. Namely, the equation of entrepreneurship (E_i) takes the form:

$$E_{it} = f(CVA_{it}, VOL_{it}, ICM_{it}, v_{it}) \quad (5.1)$$

where CVA_{it} , VOL_{it} and ICM_{it} are vectors collecting information about civic activism, the voluntary spirit and the inclusion of minorities, respectively, that are used as proxies of SPO and v_{it} is the controlling vector that influences entrepreneur-

ial activity in country i . The vector of control is referred to economic growth. The relationship between economic outcome and entrepreneurship is thought to exhibit a feedback effect (Acs & Szerb, 2007; Audretsch et al., 2008; Mueller, 2007; Noseleit, 2013; Wennekers & Thurik, 1999). However, for the purpose of this research, we assume the impact of economic development on entrepreneurship through the opportunities for entrepreneurs that growth can provide (Galindo & Méndez, 2014).

To specify the sequence from SPO, opportunity entrepreneurship and economic development, an augmented production function that includes an explicit measure of entrepreneurship driven by opportunity is estimated. Drawing on this, we are able to assess the impact of SPO on opportunity entrepreneurship on the one hand, and the impact of this last variable on economic development on the other. The second equation is a Cobb-Douglas function of the form:

$$Y_i = \alpha OE_i^{\beta_1} K_i^{\beta_2} HE_i^{\beta_3} I_i^{\beta_4} EL_i^{\beta_5} L_i^{\beta_6}$$

Given that we do not control for education level, we follow Romer (1986) and assume that the labor coefficient (β_6) is set at one. It means that there exist externalities, knowledge is given (and expressed through opportunity entrepreneurship), and capital is foregone consumption. Dividing output by labor we obtain:

$$Y_i / L_i = \alpha OE_i^{\beta_1} K_i^{\beta_2} HE_i^{\beta_3} I_i^{\beta_4} EL_i^{\beta_5} \quad (5.2)$$

where Y_i is economic outcome of country i , measured as GDP, L_i is total labour force (thus Y_i/L_i is labour productivity, one of the proxies of economic development), OE_i represents its endowment of entrepreneurship by opportunity, K_i , HE_i , I_i and EL_i are country i 's endowment of capital, health expenditures, inflation rate and expectancy life rate, as control variables in production function, respectively. Hence, this specifies formally that opportunity entrepreneurship could impact on the economic development of countries. In Eq. (5.2), our approach is an extension of that chosen by Audretsch and Keilbach (Audretsch & Keilbach, 2004a, 2004b, 2005) and Audretsch et al. (2008) who emphasize that the impact of entrepreneurship on economic development should consider institutional factors; therefore we focus on these equations. Using three-stage least-squares regression (3SLS), we estimate these two equations simultaneously in order to correct for the simultaneity bias (e.g. Intriligator, Bodkin, & Hsiao, 1996). Given that this technique considers the correlation of the disturbance of each simultaneous equation, its estimators are considered asymptotically more efficient than ordinal least square (OLS) estimators whether each equation is regressed separately or not (Wooldridge, 2010; Zellner & Theil, 1962). According to Wooldridge (2010), the technique, by estimating the coefficients within a generalized least square (GLS) framework, adjusts the weighting matrix for potential heteroskedasticity of the errors.

Thus, we use pooling data for the periods 2005 and 2012. Our first dependent variable, opportunity entrepreneurship, is the best-known indicator of the Global Entrepreneurship Monitor (GEM), which is measured through opportunity total

entrepreneurial activity (TEA). Entrepreneurship driven by opportunity shows those entrepreneurs that are motivated to pursue perceived business opportunities. The second dependent variable is the economic performance indicator, obtained through the GDP constant prices at 2005 \$US divided by the total labour force (L), which is one of the best-known proxies of economic development. The sources of data for measuring these dependent variables are GEM and the World Development Indicator (WDI) of the World Bank.

The data on independent variables were obtained from the Indices of Social Development (ISD) website database. Data on control variables for Eq. (5.2) were sourced from WDI by World Bank. The variable K is measured in constant values at 2010 \$US, L is the percentage of the labor force available in each economy, GC is the final government consumption at constant prices, P is the number of inhabitants in each country and HE is the percentage of government expenditures in health. According to Bleaney and Nishiyama (2002), the previous variables have been proved to be accurate control variables in a growth model. Following the methodology used by Wong et al. (2005), we used natural logarithms in those level variables to estimate the three equations. Accordingly, by transforming these variables it is possible to interpret the coefficient as a percentage change in the dependent variable given by one percentage change of the independent variables. Table 5.1 presents a list of dependent and independent variables used in this study, including their sources. Our final sample consists of pooled data on 81 observations and 56 countries (see Appendix 6).

5.4 Results and Discussion

Table 5.2 reports the means, standard deviations, and correlation coefficients of the variables used in this study. As Table 5.2 shows, entrepreneurship driven by opportunity (TEA OPP) is significantly correlated with some of the dimensions used to measure social progress orientation (SPO). Also, labour productivity was significantly correlated with the control variables and TEA OPP. Given the correlations among independent variables, we tested for the problem of multicollinearity of both equations through variance inflation factor (VIF) computations, which might affect the significance of the main parameters in the regressions. Although 3SLS does not allow us to obtain VIF directly, we computed this test for each equation. The VIF values were low (lower than 1.77 for Eq. 5.1, and 1.03 for Eq. 5.2).

Table 5.3 shows the results of linear regressions with robust variance estimates. Model 1 considers only the linear regression with robust variance estimates of the first equation (TEA OPP is a function of SPO's dimensions), Model 2 assesses the second equation (economic development is a function of TEA OPP) through robust variance estimates, and Model 3, Model 4 and Model 5 estimate both equations simultaneously using OLS, 2SLS and the method presented in the previous section (3SLS), respectively. All the models are highly significant ($p < 0.01$) and have high explanatory power, explaining 49.0% of the variance of TEA OPP and 65.3% of the

Table 5.1 Description of variables

Equation 1		
Dependent variable	Description	Source^a
Entrepreneurship driven by opportunity (TEA OPP)	Percentage of those involved in TEA (Total Entrepreneurial Activity) who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income	Global entrepreneurship Monitor (GEM) for the period 2005 and 2012
Independent variable	Description	Source
Civic activism (CVA)	Measure the social norms, organizations, and practices which facilitate greater citizen involvement in public policies and decisions. Values from 0 to 1	The Indices of Social Development (ISD) for the years 2005 and 2010
Voluntary spirit (VOL)	Measure the membership in local voluntary associations. Data is based on the clubs and associations dimension. Values from 0 to 1	The Indices of Social Development (ISD) for the years 2005 and 2010
Inclusion of minorities (ICM)	Measure the levels of discrimination against vulnerable groups such as indigenous peoples, migrants, refugees, or lower caste groups. Values from 0 to 1	The Indices of Social Development (ISD) for the years 2005 and 2010
Control variables	Economic growth _{t,t-1} . Percentage of variation of the GDP (\$US constant of 2005) lagged one period	World Development Indicators (WDI) for the period 2004 and 2011
Equation 2		
Dependent variable	Description	Source
Gross Domestic Product (GDP)/total labour population (Y/L)	GDP at purchaser's prices is the sum of gross value added. Data are in constant 2005 U.S. The total labour force is the supply of labour available for producing goods and services in an economy	WDI for the years 2005 and 2012
Independent variable	Description	Source
Entrepreneurship driven by opportunity (TEA OPP)	Percentage of those involved in TEA (Total Entrepreneurial Activity) who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income	GEM for the years 2005 and 2012
Gross capital formation (constant 2005 US\$)	Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Data are in constant 2005 U.S. Dollars	WDI for the years 2005 and 2012

(continued)

Table 5.1 (continued)

Health expenditures	Capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds. (Percentage of government expenditure)	WDI for the years 2005 and 2012
Inflation	Annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly	WDI for the years 2005 and 2012
Life expectancy	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life	WDI for the years 2005 and 2012

*GEM Global Entrepreneurship Monitor: <http://www.gemconsortium.org/>, ISD Indices of Social Development: <http://www.indsocdev.org/data-access.html>; WDI, World Development Indicators: <http://data.worldbank.org/data-catalog/world-development-indicators>

Table 5.2 Descriptive statistics and correlation matrix

Variable	Mean	Std. Dev.	1	2	3	4
1 Lnteapp	3.880	0.289	1			
2 Ln civic_ activism	-0.582	0.097	0.452***	1		
3 Ln clubs_and_ associations	-0.677	0.164	0.421***	0.420***	1	
4 Ln inclusion	-0.681	0.126	0.457***	0.702***	0.269	1
5 Ln GDP growth t-1	1.276	0.822	0.110	-0.440***	-0.158	-0.351***
6 Ln Y/L	10.262	1.176	0.447***	0.880***	0.362***	0.709***
7 Ln capital	24.844	1.673	0.167	0.449***	0.259	0.211
8 Ln health expenditures	2.623	0.328	0.409***	0.443***	0.315***	0.541***
9 Ln inflation	1.074	0.689	-0.286	-0.652***	-0.365***	-0.581***
10 Ln life expectancy	4.329	0.106	0.298***	0.590***	0.162	0.586***
Variable	5	6	7	8	9	10
5 Ln GDP growth t-1	1					
6 Ln Y/L	-0.450***	1				
7 Ln capital	-0.342***	0.421***	1			
8 Ln health expenditures	-0.214	0.453***	0.189	1		
9 Ln inflation	0.297	-0.683***	-0.341***	-0.273	1	
10 Ln life expectancy	-0.316***	0.653***	0.397***	0.368***	-0.508***	1

It means that t-test of correlations tends to be stochastically different from zero

*** $p < 0.01$

Table 5.3 Estimating entrepreneurship driven by opportunity and economic development

	(1)	(2)	(3)	(4)	(5)
Dependent variable Eq. 5.1	Ln TEA opp		Ln TEA opp	Ln TEA opp	Ln TEA opp
Ln civic_activism	0.696* (0.407)		0.651 (0.410)	0.703* (0.402)	0.888** (0.380)
Ln clubs_and_associations	0.525*** (0.162)		0.538*** (0.178)	0.485*** (0.164)	0.409*** (0.156)
Ln inclusion	0.781*** (0.278)		0.796*** (0.297)	0.775*** (0.279)	0.753*** (0.265)
Ln GDP growth t-1	0.134*** (0.041)		0.150*** (0.036)	0.169*** (0.053)	0.163*** (0.050)
Constant	5.007*** (0.139)		4.982*** (0.168)	4.938*** (0.160)	4.989*** (0.154)
R-sq	0.447 [0.000]		0.472 [0.000]	0.490 [0.000]	0.486 [0.000]
Dependent variable Eq. 5.2		Ln Y/L	Ln Y/L	Ln Y/L	Ln Y/L
Ln TEA opp		0.619* (0.368)	0.638* (0.344)	1.195 (0.774)	1.175+ (0.733)
Ln capital		0.076 (0.071)	0.078 (0.058)	0.228* (0.130)	0.235* (0.123)
Ln health expenditures		0.560** (0.276)	0.556* (0.306)	0.416 (0.385)	0.487 (0.360)
Ln inflation		-0.705*** (0.180)	-0.702*** (0.155)	-0.614*** (0.183)	-0.580*** (0.171)
Ln life expectancy		3.372** (1.617)	3.350*** (1.007)	2.122* (1.252)	2.169* (1.174)
Constant		-9.308 (6.674)	-9.337** (4.219)	-9.694** (4.867)	-10.226** (4.553)
N	77	74	71	64	64
R-sq		0.653 [0.000]	0.652 [0.000]	0.603 [0.000]	0.599 [0.000]
<i>Hausman specification tests</i>					
2SLS vs. OLS			0.000		
3SLS vs. OLS			0.298		
3SLS vs. 2SLS			0.298		

Heteroskedasticity corrected standard errors are shown in parentheses

***p < 0.01; **p < 0.05; *p < 0.10; + = 0.10

variance of economic development, respectively. In addition, for robustness check purpose, we computed the Hausman test to compare systematic differences between the coefficients obtained with OLS, 2SLS and 3SLS. The results show that there are not systematic differences in coefficients of both equations modelled through 3SLS vs. OLS and 3SLS vs. 2SLS. Although the standard errors of 3SLS coefficients are

marginally higher than OLS for Eq. 5.2, these results are lower than 2SLS, meaning that the endogeneity problem is overcome through different stages. In this case, the estimation results are more efficient than 2SLS. Thus, according to Zellner and Theil (1962), the 3SLS may provide more consistent estimators than OLS, which are suitable for the analysis.

The first model considers Eq. 5.1, which contains civic activism (CVA), voluntary spirit (VOL), inclusion of minorities (ICM) and the control variable (GDP growth lagged one period). The results show that CVA, VOL and ICM have a positive and significant influence (0.696, $p < 0.1$; 0.525, $p < 0.01$; 0.781, $p < 0.01$, respectively) on TEA OPP. Model 1 explains 44.7% of the variation in entrepreneurship by opportunity, indicating that in terms of R² the model has a good fit. The second model considers the second equation, which assesses the relationship between TEA OPP and economic development. The results show that TEA OPP has positive and significant influence (0.619, $p < 0.1$) on economic development. Model 2 also explains 65.3% of the variation in economic development, indicating that in terms of R² the model also has a good fit. In respect of the models 3–5, which consider both equations simultaneously, the results show that the dimensions of SPO – CVA (0.651, $p > 0.1$ in Model 3; 0.703, $p < 0.1$ in Model 4; and 0.888, $p < 0.05$ in Model 5); VOL (0.538, $p < 0.01$ in Model 3; 0.485, $p < 0.01$ in Model 4; and 0.409, $p < 0.01$ in Model 5); and ICM (0.796, $p < 0.01$ in Model 3; 0.775, $p < 0.01$ in Model 4; and 0.753, $p < 0.01$ in Model 5) – affect economic development through TEA OPP. Also using this method, Model 3 explains 47.2% and 65.2% of the variation of TEA OPP and economic development, respectively; Model 4 explains 49.0% and 60.3%; while Model 5 fits in 48.6% for TEA OPP and 59.9% for economic development. The control variable, GDP growth_{t-1}, is found to affect positively TEA OPP in all models, keeping track with the existing literature (Galindo & Méndez, 2014). Thus, we could suggest the feedback effects that economic growth and entrepreneurship enjoy are a source of new business opportunities that need to be detected and exploited.

As regards hypotheses testing, in Hypothesis 1a we suggest a positive impact of civic activism (CVA) on entrepreneurship driven by opportunity (TEA OPP). According to the results, societies with greater CVA enjoy greater TEA OPP; therefore, hypothesis 1a is not rejected. In this sense, existing literature links civic activism with new firm formation as a means to challenge market failures and to create social value through the detection and exploitation of the opportunities embedded in the political environment (Dees, 1998; DiMaggio, 1988; Rao et al., 2000). Other authors posit social entrepreneurship as a process where the combination of resources and innovation is convergent with social improvement (Austin et al., 2006; Mair & Marti, 2006). Thus, this innovative character of social entrepreneurship can be translated into new firm creation based on opportunity motives. For Hypothesis 1b, we suggest a positive impact of voluntary spirit (VOL) on entrepreneurship driven by opportunity (TEA OPP). According to the results, societies with greater VOL exhibit greater TEA OPP, and thus hypothesis 1b is not rejected. As noted in the theoretical section, we associate VOL with social capital. Therefore, in environments where VOL is high the information can flow smoothly among entre-

preneurs, customers and suppliers, allowing better access to opportunities, resources and markets (Aldrich & Martinez, 2001; Anderson et al., 2007; Bauernschuster et al., 2010). Consequently, and consistent with the existing research, we find that TEA OPP can flourish in environments more prone to social capital (networks, associations, and so on). Social capital is found to be a factor that influences entrepreneurship positively (Aidis et al., 2008; Davidsson & Honig, 2003; Kwon et al., 2013; among others). For Hypothesis 1c we suggested a positive impact of inclusion of minorities (ICM) on entrepreneurship driven by opportunity (TEA OPP). According to the results, societies with greater ICM have greater TEA OPP, and thus hypothesis 1c is not rejected. ICM can be translated into a more social cohesion in communities characterized by high cultural diversity and in turn provide an appropriate environment for attracting creative and innovative entrepreneurs (Florida, 2002; Turok, 2004). These results are consistent with Alvarez and Urbano (2013), who suggest a positive impact of cultural diversity on TEA OPP. Others suggest that this type of environment can also be seen as a source of opportunities because of the variety of needs that the diverse cultures may express (Ram & Jones, 2008; van Delft et al., 1999).

Coming back to Hypothesis 1, we predicted that social progress orientation (SPO) would impact positively on entrepreneurship driven by opportunity (TEA OPP). As presented before, this study finds that societies with a stronger SPO characterized by civic activism (CVA), voluntary spirit (VOL) and inclusion of minorities (ICM) exhibit superior TEA OPP; thus, Hypothesis 1 is not rejected. These results may suggest that SPO provides a set of environmental factors that allow the deployment of people's potential and is manifested through TEA OPP. Inglehart (1977, 1990) stated that postmaterialist values are about free choice, self-realization and the deployment of the full personal potential. In that sense, behind TEA OPP there are motives related to personal improvement that can be accommodated in the postmaterialist perspective. Our results are also consistent with Stephan and Uhlaner (2010), who find that a socially supportive culture encourages TEA OPP. This socially supportive culture is characterized by a humane orientation. In the same vein, Naudé et al. (2013, 2014), also suggest that subjective well-being and life satisfaction influence TEA OPP positively. When controlled for economic development, this environment is alleged to bring opportunities for entrepreneurs who possess agency (the motivations behind TEA OPP may find a better fit in more socially progressed environments). The results are also aligned with the existing literature that suggests a "U-shaped" relationship between development and entrepreneurial activity. As development takes place entrepreneurial activity decreases to the point where TEA OPP increases (Carree et al., 2002; Wennekers et al., 2005).

Linking with the previous results, Hypothesis 2 suggested that TEA OPP has a positive effect on economic development. We find that TEA OPP is positively related to economic development ($\beta_1 = 0.638$, $p < 0.1$, in Model 3; and $\beta_1 = 1.175$, $p = 0.1$, in Model 5). Therefore, Hypothesis 2 is not rejected. As we mentioned before, TEA OPP defines a different characteristic in each country in terms of innovation processes. According to Wong et al. (2005) and Urbano and Aparicio (2016), among others, entrepreneurial activity influenced by opportunities tends to impact

positively on economic development. However, they do not find statistically significant evidence. In contrast, our results suggest that for each country in our sample, if TEA OPP increases by 1%, the GDP per labour population increases by 0.638% (Model 3) and 1.175% (Model 5), *ceteris paribus*. This is consistent with Audretsch and Keilbach's (2004a) results. According to these authors, the entrepreneurial activity associated with innovation has a positive impact on economic performance. Also, we point out that the effect of TEA OPP on economic development does not significantly differ among these countries. This idea, supported by Valliere and Peterson (2009), suggests that those countries that encourage entrepreneurial activity based on innovation could obtain improved outcomes in terms of economic performance. Also, according to Braunerhjelm et al. (2010) and Mueller (2007), entrepreneurial activity based on innovation is one missing link in converting knowledge into economically relevant knowledge, and therefore spillovers could be obtained to increase economic development. Therefore, we can suggest that TEA OPP has a relevant role in promoting economic development, where the institutional endowment presents superior SPO.

5.5 Conclusions

The purpose of this chapter was to analyse the effect of social progress orientation (SPO) on economic development through entrepreneurship driven by opportunity. Using a three-stage least squares (3SLS) method and information from the Global Entrepreneurship Monitor (GEM), the Indices of Social Development (ISD) and the World Development Indicators (WDI) from the World Bank (WB), we find that SPO impacts positively on economic development through opportunity entrepreneurship. Building on postmaterialism (Inglehart, 1977, 1990), we conceptualize SPO through the dimensions of civic activism, clubs and associations and inclusion of minorities. The civic activism (CVA) dimension measures participation in public life and the civic engagement. We build on the existing literature on institutional and social entrepreneurship to find a positive impact on opportunity entrepreneurship and subsequently on economic development. The voluntary spirit (VOL) dimension measures the membership in voluntary associations, and thus it can be associated with social capital. We find a positive impact on entrepreneurship driven by opportunity and, in turn, on economic development. For the inclusion of minorities (ICM) dimension, literature on ethnic entrepreneurship and cultural diversity was surveyed and we found that superior ICM encourages opportunity entrepreneurship, which, in turn, promotes economic development. Thus, taking our findings altogether, we suggest that SPO can be a valid instrument for the promotion of economic development through entrepreneurship driven by opportunity.

This research contributes to the existing literature in the following ways. By introducing the concept of SPO, it contributes to the application of the institutional approach to the study of the determinants of entrepreneurship and the endogenous factors of economic development in an integrative manner. So far, the analyzed lit-

erature suggests that these two phenomena have been analyzed in isolation. In addition, this research explores the ISD database, which, to our knowledge, has been neglected to date. Our findings concur with the recent call for a more people-oriented approach to social progress (Porter, 2013; Stiglitz, Sen, & Fitoussi, 2009) and add new insights to the argument that SPO and economic development are not mutually exclusive. To sum up, following the Schumpeterian stream and using the institutional approach, this research serves two different fields of study, the entrepreneurship field and the economic development field.

Regarding implications, our research can offer new insights for entrepreneurs and policy makers. By understanding the factors that promote new firm creation, especially the one that is driven by opportunity, they could direct actions to promote economic development. In this context, we find that SPO can be a factor to take into account. For instance, if we consider the ICM dimension of SPO, Jewish communities of ex-pats require a kosher certificate for the selling and consumption of certain food items. Thus, adapting the portfolio to kosher requirements can be seen as a business opportunity for those entrepreneurs involved in food production and certification.

For policy makers who seek levers for boosting economic performance, we suggest that reinforcing SPO produces a positive impact on opportunity entrepreneurship, which, in turn, affects economic development as an endogenous factor. These insights can be useful for the design of programmes designed to promote economic development through entrepreneurial activity, especially that driven by opportunity. For instance, if we consider the CAS dimension, the social capital accrued in enterprise incubator centres can provide entrepreneurs with the elements to detect and exploit business opportunities that otherwise would be difficult to reach. Incubator centres are at the core of public policies to promote economic development across regions (Bøllingtoft & Uthøi, 2005). In that regard, the European Union (EU) is promoting entrepreneurship with the Entrepreneurship 2020 Action Plan, of which incubators are an important part.

Our research also has some limitations. For instance, we consider two different years, 2005 and 2012, which are separated by the great recession of 2008. This economic downturn may have affected the cultural values from 2008 onwards, bearing in mind that our sample was built with ISD data from 2010 with little reflection of such events. According to Inglehart (1977, 1990), values are stable and cultural change is produced by generational replacement or economic long-standing increase (decrease); thus, we expect that in further deliveries the ISD may offer new waves of data to build new research. Concerning the econometric techniques, ideally and initially a longitudinal analysis was considered; however, the lack of year-to-year data is a common failing of all databases that aim to measure culture, values, attitudes, and so on. The ISD is by no means an exception. This fact led us to adopt pooled regression. Also, the operationalization of SPO through the ISD is open to criticism, especially when the cultural dimensions of Hofstede can offer a better explored and contrasted approach to entrepreneurship research (Hayton et al., 2002; Salimath & Cullen, 2010). The decision to use the dimensions of the ISD was based on theoretical and practical reasons, as stated before; existing research on institu-

tional entrepreneurship, social entrepreneurship, social capital, ethnic entrepreneurship and cultural diversity offered a convenient fit for CVA, VOL and ICM, respectively. For further research and given our first approach to SPO, there is the need to amplify the theoretical foundations and test in the validity of the SPO more extensively, an idea reinforced by the over-identification problem identified through the Lagrange multiplier. As mentioned before, the application of longitudinal analysis can help to validate our findings over time. Other multivariate techniques can also be applied to prove and enhance the construct validity, especially factor analysis. Given that the ISD provides six dimensions, capturing the essence of the construct with factor analysis may enhance the representativeness of the SPO. In that sense, as mentioned before, the usage of Hofstede's cultural dimensions may provide sounder foundations for capturing the essence of social progress orientation (SPO).

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