

# **The entrepreneurial ecosystem in rural regions: Transforming entrepreneurs' values and engagement with sustainability**

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**Purpose.** – Rural regions differ from urban regions in culture, institutions, and resources. These ecosystem characteristics, we argue, shape entrepreneurs' values and engagement with sustainability.

**Research design.** – A random sample of entrepreneurs around the world was surveyed in 2021 or 2022 by the Global Entrepreneurship Monitor.

**Findings.** – Increasingly, entrepreneurs value making a difference in the world. The rural ecosystem strengthens entrepreneurs' value of tradition of enterprising in their families and the value of earning a living through enterprising when it is hard to get a job, but the rural ecosystem weakens the value of accumulating own wealth. The value of family tradition and the value of making a difference are enhancing sustainability pursuits, whereas the value of accumulating wealth reduces engagement with sustainability. These effects tend to be similar across developed and developing societies.

**Contribution.** – The findings contribute to accounting for how the rural ecosystem for entrepreneurship, partly through transforming entrepreneurs' values, is reshaping engagement with environmental and social sustainability.

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# 1 Introduction

Cultural values around the world are changing toward sustainability and are adopted in local ecosystems. The entrepreneurial ecosystem in a region comprises local values, institutions, and resource endowments in the region. The entrepreneurial ecosystem differs between rural and urban regions. Rural regions tend to have a more traditional culture, less elaborated institutions and infrastructure, and lesser resources in form of wealth and education. The ecosystem in rural versus urban regions, we argue, transforms entrepreneurs' values and engagement with sustainability.

Scholarship has conceptualized the entrepreneurial ecosystem in a region as a local system of interrelated values, institutions and resources (Leendertse et al., 2022; Spigel, 2022, Stam and van de Ven, 2021). Conceptualizations appear universal and applicable everywhere, without contextual distinctions such as between rural and urban regions. The entrepreneurial ecosystem expectedly shapes all kinds of entrepreneurial phenomena, ranging from entrepreneurs' values to pursuits such as engagement with sustainability. The entrepreneur has mostly been considered as *homo economicus*, valuing income both if pulled to exploit opportunity by starting a business and if pushed to start a business by the dire necessity to earn a living when it is hard to get a job (Dencker et al., 2021). The personal value of accumulating own wealth through pursuit of entrepreneurial opportunity is promoted by ecosystem institutions such as education and training programs. The personal value of earning a living by starting a business when jobs are scarce is promoted in ecosystems with meager resources, e.g. low wealth and skills such as in rural regions (Anderson, 2000). Scholarship departing from considering the entrepreneur as *homo economicus* broadens the spectrum of an entrepreneur's values to consider the entrepreneurial tradition in the entrepreneur's family as instilling a value guiding the entrepreneur (Jakiewicz et al., 2015). Recent scholarship, departing even further from a focus on economic matters, also considers the personal value of desiring to make a difference in the world as a value that may be transforming endeavors, especially in social entrepreneurship and in environmental entrepreneurship, notably in rural regions (Dietz et al., 2021; Johannisson, 1990; Johannisson and Nilsson, 1989; York et al., 2016).

These considerations frame our research question, *what are the effects of the changing cultural values and rural and urban ecosystems on entrepreneurs' values and engagement with sustainability?*

The question is addressed by analyzing random sampled entrepreneurs surveyed around the world, and specifically in rural and urban regions in five countries. Developed Spain is contrasted

with developing Colombia, Turkey, Egypt and Morocco to examine whether rural vs urban entrepreneurship is shaped and transformed by development of the society or seems more universal. Random sampling enables generalization of findings to the entrepreneurs around the world and specifically in the rural and urban regions in the five societies.

The value of making a difference in the world is found to be an important value for entrepreneurs as a reason motivating their upstart. Increasingly, entrepreneurs around the world are motivated by the value of making a difference. The rural ecosystem is found to strengthen entrepreneurs' value of a tradition of enterprising in families and the value of earning a living through enterprising when it is hard to get a job, but the rural ecosystem weakens the value of accumulating own wealth. The value of family tradition and the value of making a difference are enhancing sustainability pursuits, whereas the value of accumulating own wealth reduces engagement with sustainability. The effects tend to be rather similar across developed and developing societies.

The findings contribute to accounting for how the global transformation of cultural values and the rural ecosystem for entrepreneurship, partly through shaping entrepreneurs' values, are transforming entrepreneurial engagement with environmental and social sustainability.

The following offers a theoretical perspective, describes our research design, reports results, and discusses findings, contributions, and further research.

## **2 Theoretical perspective and hypotheses**

The global transformation of cultural values toward sustainability is our starting point for considering how rural and urban regions differ in their entrepreneurial ecosystems. We theorize that rural and urban ecosystems shape entrepreneurs' values. Going a step further, we theorize that rural and urban ecosystems influence engagement with sustainability. Taking this yet another step further, we theorize that also entrepreneurs' values influence engagement with sustainability.

### **2.1 Global transformation of cultural values and entrepreneurs' values toward sustainability**

The cultural value that has been dominating the world for several centuries is the value of accumulating own wealth, the spirit of capitalism (Weber, 1905). In recent decades, however, the world has been experiencing a transformation of cultural values toward sustainability. This cultural transformation is manifest in the United Nations Sustainable Development Goals, established in 2015. The core of the transformation in culture is the value attached to improving life around the world.

The value of improving life is institutionally supported by cognitive, normative, and regulative pillars. The value has a cognitive pillar in form of widely accepted knowledge and beliefs about the natural environment. The value has a normative pillar, notably the expectation for serious engagement with sustainability. The value has a regulative pillar in form of laws requiring reporting and compliance with principles for sustainability (Dietz et al., 2005).

The global transformation of cultural values is an external enabler that may be reshaping entrepreneurial endeavors (Davidsson et al., 2020). The mechanism is that cultural values in society may be adopted by people and become personal values (Sagiv et al., 2011). An entrepreneur may adopt a value and this personal value may even become a motive for starting and running a business. We test the proposition that the global shift to a cultural value of improving life around the world has been adopted by entrepreneurs as a personal value expressed as a value attached to making a difference in the world by starting and running a business.

Entrepreneurs' values may shape their strategy and practice for sustainability. Entrepreneurs' adoption of values and value-guided engagement with sustainability may be shaped, not only by the global external enabler, but also by their embeddedness in a local ecosystem. For considering environmental and social sustainability, it is expectedly especially informative to focus on ecosystems in rural versus urban regions.

## **2.2 Entrepreneurial ecosystems: Rural and urban**

The entrepreneurial ecosystem in a region comprises culture, institutions and resource endowments (Spigel, 2022, Stam and van de Ven, 2021). Rural and urban regions have distinct cultures, institutions, and resources (Stathopoulou et al., 2004; Steyaert and Katz, 2004; Trettin and Welter, 2011). The distinctively rural and urban cultures, institutions and resources are well-known; specifically, they prevail within each of the five societies that are our research site (as we document in Section 3 on research design).

Rural and urban regions differ in culture. Traditional culture is stronger in rural regions. The traditionality in rural regions appreciates stability, whereas the modernity in urban regions celebrates change, often called progress. Collectivism is stronger and individualism is weaker in rural regions than in urban regions. Greater importance is given to the family in rural regions. Concretely, extended families in large households are more common in rural regions. Family ownership and family management of businesses are more typical in rural regions.

Rural and urban regions differ in institutions. In the economy, extraction from the natural environment is a large sector in rural regions, while services for businesses is a small sector in rural regions, and networking with entrepreneurs and others is less extensive in rural regions (e.g. Meccheri and Pelloni, 2006). Rural and urban regions are also unequal in resources. Levels of education and income tend to be lower in the rural regions.

The distinctive culture, institutions, and resources in rural versus urban regions are ecosystem conditions that expectedly shape entrepreneurs' values, as we consider next.

### **2.3 Entrepreneurs' values**

A person has personal values that guide life (Schwartz, 1992, 2007). Here we consider that an entrepreneur has personal values that guide business endeavoring (Arieli et al., 2020). We consider four personal values that the entrepreneur may plausibly have.

First, as discussed above, the entrepreneur may value making a difference in the world. This value is salient among social and environmental entrepreneurs, but the value may also be held by commercial entrepreneurs as a belief that their commercial endeavors may contribute to changing the world for the better. This value is expressed in the *Harmonious Entrepreneurship Society* which endeavors to make this value a motive for starting and running businesses (Harmonious Entrepreneurship Society, 2023).

Second, the entrepreneur may come from a family that has a tradition of entrepreneurial enterprising (Jaskiewicz et al., 2015; Suddaby and Jaskiewicz, 2020). Such a tradition of running business is an established practice in the family and is institutionalized in the family with legitimacy, appreciation, and moral support. The family is transmitting the tradition to its young members as an expectation that they pursue a career of running a business, by joining a business already led by some in the family, by succeeding a business leader from the family, or by starting a new business (Dou et al., 2021). Thereby the entrepreneurial tradition in the family is valued by the entrepreneur and is expressed as a motive for running a business.

Third, the entrepreneur may value earning a living by pursuing entrepreneurial endeavoring when it is hard to get a job (Dencker et al., 2021). When jobs are scarce, people may give up in resignation. However, Mohammad Yunis has advocated the guiding principle that anybody is able to start and run a business to earn a living, however modest it might be (Yunus, 1999). An entrepreneur adopting this belief is thus expressing a value of earning a living by entrepreneurial enterprising when jobs are scarce.

Fourth, the entrepreneur may value accumulating own wealth. The value of accumulating wealth is the spirit and salient motive in capitalism as found by Max Weber and his followers (Weber, 1905), and presumed when considering the entrepreneur as *homo economicus*. This value is expressed by the Nobel laureate Milton Friedman advocating that "*the social responsibility of business is to increase its profits*" (Friedman, 1970).

The entrepreneur may hold such values concurrently (Markman et al., 2016). The values may be more or less aligned or misaligned. Notably, the value of accumulating wealth is considered misaligned with the value of making a difference in the world by the prominent activist Greta Thunberg writing "*We are ... dependent on companies' efforts and willingness to find sustainable solutions. But ... the primary purpose of a corporation is, after all, to produce economic profit. Not to save the world. Claims that there is no contradiction between these two conflicting goals ring ... false.*" (Thunberg et al., 2020, p.133).

The rural and urban ecosystems are influencing entrepreneurs' values, we here argue (Hindle, 2010).

First, the rural ecosystem's culture of great importance of the family will expectedly increase a rural entrepreneur's value attached to continuing a family's tradition of enterprising.

Second, the rural ecosystem's resources in terms of less wealth and education will expectedly increase a rural entrepreneur's value attached to earning a living by starting and running a business when it is difficult to get a job.

Third, the rural ecosystem's culture emphasizing collectivism and deemphasizing individualism will expectedly decrease a rural entrepreneur's value attached to accumulating own wealth.

Fourth, the rural ecosystem's culture of traditionality, emphasizing stability, will expectedly decrease a rural entrepreneur's value of making a difference in the world.

The four expected effects can be specified as our first hypothesis,

*Hypothesis 1. The ecosystem affects entrepreneurs' values.*

*Specifically, the rural ecosystem, compared to the urban ecosystem,*

*increases the value of the entrepreneurial tradition in families (H1a);*

*increases the value of earning a living through enterprising (H1b);*

*decreases the value of accumulating own wealth (H1c); and*

*decreases the value of making a difference in the world (H1d).*

Entrepreneurs' values are guides to their sustainability endeavors, as we consider below.

## **2.4 The rural vs urban ecosystem affecting engagement with sustainability**

An entrepreneur may engage with environmental and social sustainability. Engagement is likely to be influenced by context, whether the business is in a rural or urban ecosystem (Carter 1988; Korsgaard et al., 2015).

The rural ecosystem depends directly on the natural environment. The natural environment is an immediate existential condition in the rural ecosystem. Notably, extraction is a large sector in the rural ecosystem. Therefore, we theorize that rural entrepreneurs, more than their urban counterparts, are pursuing environmental sustainability.

Engagement with social sustainability may also differ between rural and urban entrepreneurs. Engaging with social sustainability is an explicit expectation in the ideologies of change and progress in modern culture, but not in traditional culture.

This theorizing can be stated as hypothesized effects of the ecosystems on engagement,

*Hypothesis 2. The ecosystem affects engagement with sustainability.*

*Specifically, the rural ecosystem, compared to the urban ecosystem, increases engagement with environmental sustainability (H2a); but decreases engagement with social sustainability (H2b).*

## **2.5 Values affecting engagement with Sustainability**

A person's values guide life. Here we consider whether an entrepreneur's values guide engagement with sustainability. Each of the above four values may guide engagement.

First, an entrepreneur's value of making a difference in the world is aligned with the ideology of sustainability (Schultz et al., 2011). Therefore, we should expect that an entrepreneur's value of making a difference will promote engagement with sustainability.

Second, an entrepreneur's value of continuing a family tradition of entrepreneurs will expectedly promote engagement with environmental sustainability. A theoretical argument for such an effect has been made by de Massis and colleagues and supported empirically (Miroshnychenko and De Massis, 2022). Family enterprises appear to translate family values into engagement with sustainability (Sharma and Sharma, 2021). However, a global analysis indicates that family businesses practice environmental sustainability less than nonfamily businesses (Miroshnychenko and De Massis, 2022). An entrepreneur's value of continuing a family tradition of enterprising may also promote engagement with social sustainability. Such a family tradition includes preserving long-



term socio-emotional wealth in the family rather than economic wealth. Therefore, we expect an emphasis on social sustainability rather than economic gain.

Third, an entrepreneur's value of earning a living through enterprising, when jobs are difficult to find, indicates an existential situation where the dire necessity to make a living is pressuring the entrepreneur to prioritize income higher than other considerations such as sustainability (Dencker et al., 2021). Therefore, the value of earning a living will expectedly reduce engagement with sustainability.

Fourth, an entrepreneur's value of accumulating wealth will expectedly focus business operations on profits and reduce consideration of competing goals. Milton Friedman (1970) and Greta Thunberg (2020), quoted above, both consider pursuit of sustainability to incur costs. Accordingly, we should expect that the value of accumulating wealth decreases engagement with sustainability.

This theorizing can be stated as hypothesized effects of values on engagement,

*Hypothesis 3. Entrepreneurs' values affect engagement with sustainability. Specifically,*

*the value of making a difference affects pursuit positively (H3a);*

*the value of continuing a family tradition affects pursuit positively (H3b);*

*the value of earning a living by enterprising affects pursuit negatively (H3c);*

*the value of accumulating own wealth affects pursuit negatively (H3c);*

The hypothesized effects form a causal model, indicated in Figure 1.

**Figure 1 here**

### **3 Research design**

First, to ascertain changes in entrepreneurs' values, we analyze the random sample of entrepreneurs surveyed in 2020 or 2021 in the 36 countries covered in both years by the annual survey by the Global Entrepreneurship Monitor, GEM (2021; 2022; GEM makes its surveys publicly available on its website [www.gemconsortium.org](http://www.gemconsortium.org)). The analysis of national aggregate measures in 2020 and 2021 will reveal the global transformation of values, specifically the value of making a difference.

Second, focusing on rural entrepreneurship, we contrast rural and urban regions in a country. Furthermore, to explore whether rural versus urban contexts in a society depend on development, we consider both developed and developing societies. Accordingly, we study entrepreneurs in the rural and urban regions in developed and developing societies. Data on rural vs urban regions are available from five societies. We surveyed a random sample of 12,246

entrepreneurs in the rural and urban regions in developed Spain and developing Colombia, Turkey, Egypt, and Morocco in 2021-2022 with GEM (Ismail et al., 2022).

### **3.1 Research site: Rural and urban regions**

Our research site is the five countries for which we obtained a rural versus urban classification of the respondents. Spain, Colombia, Turkey, Egypt, and Morocco differ in economy and culture. Egypt and Morocco are low-income societies with traditional culture. Spain is comparatively wealthy with modern culture. Colombia and Turkey are middle-income societies with a culture that has been developing from traditionality toward modernity ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)). Therefore, the five societies are fairly suitable for ascertaining whether rural-urban differences are unique or similar in developed and developing societies.

Rural life differs from urban life. The difference in the five societies is our starting point and should be documented here (Bosma, 2013). Rural and urban culture, institutions, and resources in the five societies are indicated in Table 1 (based on the data in the public domain on GEM's website; details available from the authors). In all five societies, culture in terms of egalitarianism regarding income is stronger in the rural areas than in the urban areas. In all five societies, households tend to be larger and family ownership and family management tend to be more common in rural areas. In all five societies, institutions in terms of networking and business services tend to be less elaborate in rural areas. In all five societies, resources in terms of levels of education and income tend to be less extensive in rural areas. In short, in all five societies, the rural regions are more traditional, less institutionally elaborate, and less endowed with resources.

**Table 1 here**

### **3.1 Sampling of entrepreneurs**

In each country, GEM randomly sampled adults (age 18 to 64) and administered a structured questionnaire with the same questions in all countries (Bosma, 2013). The questionnaire identifies entrepreneurs as the adults who own a starting or operating business, and asks about their endeavors. The random sampling implies that findings can be generalized, with usual statistical uncertainty, to the entrepreneurs in the country.

### **3.2 Measurements**

In 2021 and 2022, the GEM survey in the five countries classified the respondents as either rural or urban and queried their values and engagement with sustainability.

### **3.2.1 Sustainability pursuits**

Environmental sustainability pursuit is indicated by posing two statements,

- *When making decisions about the future of your business, you always consider environmental implications such as preservation of green areas, reduction of the emission of pollutants and toxic gases, selective garbage collection, conscious consumption of water, electricity and fuels, etc.*
- *Have you taken any steps to minimize the environmental impact of your business over the past year? This could include energy saving measures, measures to reduce carbon emissions or introducing more efficient machinery, take care of the solid waste generated, use of recyclable material, use of alternative means of transportation, such as cycling, walking, collective rides, public transportation, etc.*

The two variables are positively correlated, so we standardize each and average them as our index of engagement with environmental sustainability (Ismail et al., 2022).

Social sustainability engagement is indicated by posing two statements,

- *When making decisions about the future of your business, you always consider social implications such as access to education, health, safety, inclusive work, housing, transportation, quality of life at work, etc.*
- *Have you taken any steps to maximize the social impact of your business over the past year? This could include creating posts for young unemployed and other groups with limited access to the labor market; including social enterprises into your supply chain; ensuring a diverse workforce; prioritize companies and/or suppliers that take actions that respect human rights and the environment, when buying a product or service; fight against any form of child or slave labor; invest or support projects or social organizations that develop the community and include less favored groups.*

The two variables are positively correlated, so we standardize each and average them as our index of engagement with social sustainability (Ismail et al., 2022).

### **3.2.2 Values**

The GEM survey operationalizes entrepreneurs' values by asking them to rate each of the four motives: family tradition, earning a living, accumulating wealth, and making a difference,

- *Please tell me the extent to which the following statements reflect the reasons you are trying to start a business.*

*To continue a family tradition.*

*To earn a living because jobs are scarce.*

*To build great wealth or a very high income.*

*To make a difference in the world.*

The response to each of the four reasons was given on a five-point Likert scale, from strongly disagree to strongly agree, coded 1 to 5. We use these individual-level measures for our analyses of the individual entrepreneurs in our five societies (all tables except Table 4).

Furthermore, GEM has provided national-level aggregate measures of the values from each of the 36 countries covered in both 2020 and 2021, adequate for analyzing the global transformation of values (Table 4).

### **3.2.3 Rural and urban regions**

Each entrepreneur's location was classified by the survey staff as either urban or rural, which for the multivariate analyses is coded 0 and 1, respectively.

### **3.2.4 Development of society**

The world is differentiated culturally and economically in ways that are similar to the differentiation between rural and urban regions. Our research site of five societies is differentiated between modern and wealthy Spain and traditional and less wealthy Colombia, Turkey, Egypt and Morocco ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)). This distinguishing criterion is commonly termed development (as traditional and less wealthy societies tend to be developing toward modernity and wealth). We operationalize development dichotomously, coding Spain as 1 and the other societies as 0.

### **3.2.5 Control variables**

The GEM survey asks about several characteristics of the entrepreneurs and their businesses, which in the multivariate analyses serve as control variables (Bosma, 2013),

- Gender, coded 0 for males and 1 for females.
- Age of the entrepreneur, in years.

- Education, in years of schooling to highest completed degree.
- Self-efficacy, on a Likert scale going from 1 to 5.
- Opportunity-perception, on the Likert scale.
- Risk-willingness, on the Likert scale.
- Know-how networking, on a scale from 0 to 3.
- Sector (extracting, transforming, business services, consumer-oriented sector).
- Age of the business, in years, logged to reduce skewness.
- Owners, as a count of owners, logged to reduce skewness.
- Employees, as a count of employees, logged to reduce skewness.

### **3.3 Technique for analyzing the data**

The data on entrepreneurs nested in societies form a two-level hierarchy. Such hierarchical data are appropriately analyzed by hierarchical linear modeling (Snijders and Bosker, 2012). Hierarchical linear modelling is similar to linear regression but also takes into account that the data are hierarchical and that persons within a country tend to behave similarly.

## **4 Results**

Here we first describe the background characteristics of the entrepreneurs and their businesses, and then test our hypotheses.

### **4.1 Background of the entrepreneurs and their businesses.**

The background is described by frequencies and means (and standard deviations) of characteristics, Table 2.

**Table 2 here**

The entrepreneurs are further described by the correlations among variables of interest, Table 3. Social sustainability pursuit and environmental sustainability pursuit are positively correlated, but not strongly, so it is appropriate to analyze them separately.

**Table 3 here**

### **4.2 Global transformation of entrepreneurs' values**

Before focusing on rural and urban entrepreneurship, we briefly examine the global transformation of values. We argued, in section 2.1, for the proposition that the global transformation in cultural values entails a change in entrepreneurs' values. This proposition is tested by measuring values expressed by early-stage entrepreneurs in the 36 countries covered by the GEM survey in both 2020 and 2021, Table 4. The percentage of early-stage entrepreneurs who were motivated by a desire to make a difference was 43.19% in mid-2020, on average across the 36 countries. By mid-2021, the rate had risen considerably, by 2.75%. None of the other values changed significantly. The available evidence thus leads to the conclusion that entrepreneurs' value attached to making a difference is a global transformation.

#### **Table 4 here**

This global transformation of entrepreneurs' values toward making difference in the world frames our focus on entrepreneurs' values and engagement with sustainability in rural and urban regions.

### **4.3 Values in rural and urban regions.**

Our first question about rural entrepreneurship is, what are the effects of the rural and urban ecosystems upon entrepreneurs' values? Effects of ecosystems on values are ascertain by linear modeling, controlling for other conditions, Table 5. Hypothesis 1 posits that the ecosystem affects values. This comprises four more specific hypotheses.

Hypothesis 1a posits that the rural ecosystem, compared to the urban ecosystem, increases the value of the entrepreneurial tradition in families. H1a is tested in model A. The positive coefficient indicates that the value attached to the entrepreneurial tradition in a family tends to be higher in rural regions than in urban regions (controlling for other conditions). This supports H1a.

Hypothesis 1b posits that the rural ecosystem, compared to the urban ecosystem, increases the value of earning a living through enterprising when it is hard to get a job. H1b is tested in model B. The positive coefficient indicates that the value attached to earning a living through enterprising tends to be higher in rural regions than in urban regions (controlling for other conditions). This supports H1b.

Hypothesis 1c posits that the rural ecosystem decreases the value of accumulating own wealth. H1c is tested in model C. The negative coefficient indicates that the value of accumulating own wealth tends to be lower in rural regions. This supports H1c.

Hypothesis 1d posits that the rural ecosystem decreases the value attached to making a difference in the world. H1d is tested in model D. The insignificant coefficient indicates that the value of making a difference is similar in rural and urban regions. This lends no support for H1d.

**Table 5 here**

In short, partly supporting Hypothesis 1, the rural ecosystem increases the value attached to continuing an entrepreneurial tradition in a family and the value of earning a living through enterprising, but the rural ecosystem decreases the value of accumulating own wealth.

#### **4.4 Engagement with sustainability**

Our second substantive question about rural entrepreneurship is, what are the effects of the ecosystem upon sustainability pursuits? Their effects are ascertained by the models in Table 6, controlling for other conditions. Hypothesis 2 asserts that the ecosystem affects engagement with sustainability. This comprises two more specific hypotheses.

Hypothesis 2a asserts that the rural ecosystem, compared to the urban ecosystem, increases pursuit of environmental sustainability. This hypothesis is tested in model E. The coefficient is insignificant, unexpectedly, i.e., we are not discerning any effect of ecosystem on environmental sustainability pursuit. Thus, H2a is not supported (holding other conditions constant). Neither is the evidence supporting the opposite claim, i.e., that the rural ecosystem would be decreasing pursuit of environmental sustainability.

Hypothesis 2b claims that the rural ecosystem, compared to the urban ecosystem, decreases social sustainability engagement. This is tested in model F. The negative coefficient suggests that the rural ecosystem reduces social sustainability pursuit. This supports H2b.

In short, partly supporting Hypothesis 2, the rural ecosystem decreases social sustainability pursuit.

**Table 6 here**

Our third substantive question is, what are the effects of entrepreneurs' values upon sustainability pursuits? The effects are ascertained by the modelling in Table 6. Hypothesis 3 asserts that entrepreneurs' values affect engagement with sustainability. Hypothesis 3 comprises several more specific hypotheses.

Hypothesis 3a states that the value of making a difference affects pursuit positively. The coefficients in Table 4 are positive, supporting H3a.

Hypothesis 3b asserts that an entrepreneur's value of continuing a family tradition affects pursuit positively. The coefficients are positive, supporting H3b.

Hypothesis 3c posits that the value of earning a living by enterprising, when jobs are scarce, is affecting pursuit negatively. The coefficients, however, are insignificant. This lends no support for H3c.

Hypothesis 3d claims that the value of accumulating own wealth affects pursuit negatively. The coefficients are negative, supporting H3d.

In short, partly supporting Hypothesis 3, entrepreneurs' value of making a difference in the world and value of continuing a family tradition are both promoting engagement with sustainability, whereas, conversely, the value of accumulating own wealth is reducing engagement with sustainability.

#### **4.5 Rural and urban entrepreneurship in developed and developing societies.**

Our last substantive question is, are the rural versus urban ecosystems with their values and sustainability shaped by development of the wider society? More specifically, we explore whether development of society has a moderating influence on the effects of the rural versus urban ecosystems on values and sustainability pursuits. The main effects were shown in Tables 5 and 6. The moderating influence is ascertained by including an interaction term, the interaction between development and ecosystem, in the modeling, Table 7.

The interaction of development and the rural ecosystem has a positive moderating influence on the value of family tradition, model H. This suggests that the rural ecosystem in a developed society (here Spain), strengthens the value of family tradition (in addition to the separate effects from development and from the rural ecosystem).

The interaction of development and the rural ecosystem also has a positive also has a positive moderating influence on the engagement with social sustainability, model K. This suggests that the rural ecosystem in a developed society (here Spain), strengthens the engagement with social sustainability (in addition to any distinct effects from development and from the rural ecosystem).

#### **Table 7 here**

In short, the effects of the rural vs urban ecosystem appear rather similar in developed and developing societies.

## **5 Discussion**



The analyses address the question, *what are the effects of the changing cultural values and rural and urban ecosystems on entrepreneurs' values and engagement with sustainability?* Here we discuss findings, and contributions.

## 5.1 Findings

Globally, entrepreneurs' values are found to be changing toward attaching greater value to making a difference in the world. Their value change is explained by the transformation in cultural values toward sustainability in society, as manifest in adoption of regulation and other public initiatives in most societies. Studies of change of values have focused on changes in ordinary people's mindset (e.g. Schultz and Zelezny, 1998). Our findings add to this literature by showing that entrepreneurs' values – specifically, as their values motivate starting a business – are changing.

The rural ecosystem is found to strengthen its entrepreneurs' value attached to an entrepreneurial tradition in their families. This strengthening of the value of family tradition is accounted for by the greater traditionality in rural regions than in urban regions and is consistent with earlier scholarship proposing that entrepreneurs' values are aligned with and embedded in cultural values in their context (Hindle, 2010).

Likewise, the rural ecosystem strengthens its entrepreneurs' value attached to earning a living through enterprising when it is hard to get a job. This value is explained by the lesser levels of income and education in rural regions than in urban regions. Our finding contextualizes earlier studies of necessity-entrepreneurship (e.g. Dencker et al., 2021).

Conversely, the rural ecosystem weakens its entrepreneurs' value attached to accumulating own wealth, which is more valued in the urban ecosystem. This difference in value is accounted for by the greater modernity and individualism in urban regions. This contextualizes earlier studies finding that individualism promotes entrepreneurial endeavors.

The modernity in urban regions, with its greater ideological movements, also explain entrepreneurs' higher engagement with social sustainability in the urban ecosystem than in the rural ecosystem, consistent with studies of modernism versus traditionalism (e.g. Shils, 1981).

Entrepreneurs' attachment of value to making a difference in the world is greatly enhancing their pursuit of both environmental and social sustainability. This is consistent with earlier studies showing that ordinary persons' values influence their engagement with sustainability (Schultz et al., 2011).

Conversely, entrepreneurs' attachment of value to accumulating own wealth is found to reduce engagement with sustainability. Our finding supports the often-made assertion that prioritizing economic gain is incompatible with prioritizing sustainability, e.g. in the quote from the activist Thunberg (2020).

The effects of the rural ecosystem, compared to the urban ecosystem, tend to be rather similar in developed and developing societies.

## **5.2 Contributions**

The findings provide evidence for the following theoretical account of the rural entrepreneurs' values and sustainability pursuits.

The global transformation of cultural values toward sustainability, as manifest in the UN Sustainable Development Goals, is leading entrepreneurs to increasingly adopting a value of making a difference in the world. Values of entrepreneurs in rural and urban regions are also influenced by the regional entrepreneurial ecosystems with their distinct culture, infrastructure, and resources. The traditional culture in rural regions strengthens rural entrepreneurs' value of continuing an entrepreneurial tradition in their families. The fewer resources in rural regions strengthens rural entrepreneurs' value of earning a living by enterprising when it is hard to get a job. The traditional culture in the rural regions, contrasted the modernity and individualism in the urban regions, induces rural entrepreneurs to attach less value to accumulating own wealth.

The embeddedness of entrepreneurs in entrepreneurial ecosystems in rural and urban regions also influence their pursuit of sustainability. Rural entrepreneurs pursue environmental sustainability more than urban entrepreneurs, apparently mainly through their different values. Rural entrepreneurs pursue social sustainability less than urban entrepreneurs when values and other conditions are considered.

Sustainability pursuits are also shaped by values. Entrepreneurs who value making a difference in the world tend to be very engaged with both social and environmental sustainability. Likewise, entrepreneurs' value of continuing an entrepreneurial tradition in their families promotes engagement with both social and environmental sustainability. But, conversely, entrepreneurs attaching value to accumulating own wealth are less likely to pursue sustainability.

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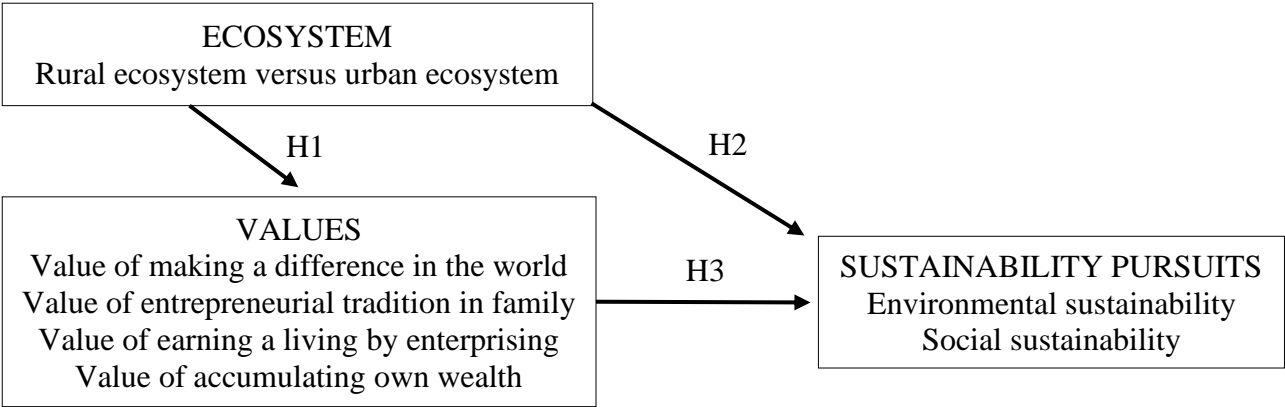
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**Figure 1.**

**Hypothesized effects.**



**Table 1.**

**Rural and urban culture, institutions, resources in Spain, Colombia, Turkey, Egypt, Morocco.**

	<b>Spain</b>		<b>Colombia</b>		<b>Turkey</b>		<b>Egypt</b>		<b>Morocco</b>	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Culture</b>										
<b>Egalitarian</b>	3.64	3.58	2.9	2.8	3.2	3.1	3.9	3.8	3.7	3.3
<b>Family ownership</b>	92%	88%	94%	90%	86%	76%	78%	76%	85%	85% <sup>n</sup>
<b>Family management</b>	87%	83%	89%	85%	62%	52%	60%	51%	35%	40% <sup>n</sup>
<b>Household size</b>	3.1	3.1	3.9	3.6	3.8	3.8	5.4	4.9	5.5	4.7
<b>Institutions</b>										
<b>Networking</b>	.6	.7	1.0	1.1	.87	.89	.7	.8	.4	.8
<b>Business services</b>	18%	36%	3%	10%	11%	15%	4%	9%	0%	0%
<b>Extracting sector</b>	18%	4%	4%	1%	12%	9%	16%	8%	24%	3%
<b>Transforming sector</b>	20%	18%	18%	21%	30%	39%	36%	37%	41%	27%
<b>Consumer oriented</b>	44%	42%	75%	68%	47%	37%	44%	46%	35%	62%
<b>Resources</b>										
<b>Education</b>	11.6	12.5	9.8	11.7	12.6	12.7	11.0	12.1	9.6	12.7
<b>Income</b>	1.9	2.1	1.7	2.2	2.0	2.1	1.9	2.0	1.9	2.1

Source: The GEM survey of adults in the five countries.



**Table 2.**

**Frequencies and means (and standard deviations) of characteristics of entrepreneurs and their businesses in rural and urban regions. (n = 12,246 entrepreneurs).**

		<b>Rural</b>	<b>Urban</b>	<b>Significance</b>
<b>Sample</b>	Whole sample	2,481	9,765	
	Spain	1,450	7,339	
	Colombia	364	911	
	Turkey	279	598	
	Egypt	368	302	
	Morocco	20	615	
<b>Gender of entrepreneur: Female</b>	Percent females	45%	45%	Insignificant
<b>Age of entrepreneur</b>	Years, mean (SD)	43.7 (13.1)	44.2 (12.0)	†
<b>Education of entrepreneur</b>	Years, mean (SD)	11.4 (4.5)	13.2 (4.4)	***
<b>Self-efficacy</b>	Scale 1-5, mean (SD)	4.0	4.0	Insignificant
<b>Opportunity-perception</b>	Scale 1-5, mean (SD)	2.7	2.8	Insignificant
<b>Risk-willingness</b>	Scale 1-5, mean (SD)	3.2	3.2	Insignificant
<b>Know-how networking</b>	Scale 0-3, mean (SD)	1.1	1.2	insignificant
<b>Sector: Extraction</b>	Percent in this sector	16%	4%	***
<b>Sector: Transformation</b>	Percent in this sector	23%	20%	**
<b>Sector: Business services</b>	Percent in this sector	13%	30%	***
<b>Sector: Consumer-oriented</b>	Percent in this sector	48%	46%	*
<b>Age of business</b>	Years, mean (SD)	8.9 (12.5)	8.5 (12.0)	†
<b>Owners of business</b>	Persons, mean (SD)	1.8 (1.9)	1.7 (1.8)	†
<b>Employees in business</b>	Persons, mean (SD)	3.2 (11.6)	3.0 (10.2)	Insignificant
† p<.10    * p<.05    ** p<.01    *** p<.001				

**Table 3.**

**Correlations among variables of interest.**

	<b>Social sustain- ability pursuit</b>	<b>Environ -mental sustain- ability</b>	<b>Value: accumulate own wealth</b>	<b>Value: earning a living</b>	<b>Value: continuing a family tradition</b>	<b>Value: making a difference in world</b>
<b>Social sustainability pursuit</b>						
<b>Environmental sustainability</b>	.51 ***					
<b>Value: Accumulating wealth</b>	.10 ***	.02 **				
<b>Value: Earning a living</b>	.01	.02 **	.06 ***			
<b>Value: Family tradition</b>	.05 ***	.09 ***	.11 ***	.02 **		
<b>Value: Making a difference</b>	.24 ***	.15 ***	.40 ***	.01	.09 ***	
<b>Ecosystem: Rural vs urban</b>	.00	.03 **	.00	.03 ***	.10 ***	.02 *
† p<.10    * p<.05    ** p<.01    *** p<.001						

**Table 4.**

**Change of entrepreneurs' values in 36 societies.**

	<b>2020</b>	<b>2021</b>	<b>Change</b>	<b>Significance</b>
<b>Value of making a difference in the world</b>	43.19	45.94	2.75	*
<b>Value of continuing a family tradition</b>	29.98	29.85	-.13	
<b>Value of accumulating own wealth</b>	59.28	59.55	.27	
<b>Value of earning a living as jobs are scarce</b>	65.19	63.79	-1.40	

Source: GEM Adult Population Survey, 2020 and 2021, in the 36 countries covered in both years.

† p<.10   \* p<.05   \*\* p<.01   \*\*\* p<.001

**Table 5.**

**Entrepreneurs' values, affected by rural versus urban ecosystem.**

	<b>Value: Continuing tradition in family</b>	<b>Value: Earning a living through enterprising</b>	<b>Value: Accumulating own wealth</b>	<b>Value: Making a difference in the world</b>
	Model A	Model B	Model C	Model D
<b>Ecosystem: Rural</b>	.07 **	.06 *	-.05 *	-.02
	H1a	H1b	H1c	H1d
<b>Development</b>	-.31 †	-.13	-.53	-.26
<b>Gender: Female</b>	-.01	.06 *	-.12 ***	.06 **
<b>Age of entrepreneur</b>	-.08 ***	.00	-.15 ***	-.13 ***
<b>Education</b>	-.10 ***	-.09 ***	.02 *	.03 **
<b>Self-efficacy</b>	-.02 *	-.01	.03 ***	.05 ***
<b>Opportunity-perception</b>	.05 ***	-.04 ***	.11 ***	.12 ***
<b>Risk-willingness</b>	-.05 ***	-.07 ***	.01	.02 *
<b>Know-how networking</b>	.03 **	-.03 *	.02 †	.05 ***
<b>Sector: Extraction</b>	.70 ***	-.08 †	.03	.01
<b>Sector: Transformation</b>	.16 ***	.03	.00	-.03
<b>Sector: Business services</b>	-.19 ***	.05 †	.08 **	-.03
<b>Age of business</b>	.10 ***	-.01	-.11 ***	-.11 ***
<b>Owners</b>	.07 ***	-.04 ***	-.02 *	.01
<b>Employees</b>	.08 ***	-.05 ***	.07 ***	.06 ***
<b>Intercept</b>	-.13	-.06	-.11	-.10
<b>Country</b>	Yes	yes	Yes	yes
N countries	5	5	5	5

Hierarchical linear modeling, with random effect of country.

For Sector, the reference is the consumer-oriented sector that each other sector is compared to.

Dependent variables are standardized.

Independent numerical variables are standardized and centered within country.

Dichotomous variables are 0 and 1 dummies.

† p<.10    \* p<.05    \*\* p<.01    \*\*\* p<.001

Source: GEM surveys in Spain, Colombia, Turkey, Egypt, Morocco in 2020-2021.

Table 6.

Engagement with sustainability, affected by the ecosystem and values.

	<b>Environmental sustainability</b>	<b>Social sustainability</b>
	Model E	Model F
<b>Ecosystem: Rural</b>	.00 H2a	-.03 † H2b
<b>Value: making a difference in the world</b>	.17 *** H3a	.22 *** H3a
<b>Value: continuing a family tradition</b>	.06 *** H3b	.02 † H3b
<b>Value: making a living by enterprising</b>	.02 H3c	.01 H3c
<b>Value: accumulating own wealth</b>	-.05 *** H3d	-.03 ** H3d
<b>Development</b>	.09	-.22
<b>Gender: Female</b>	.11 ***	.07 ***
<b>Age of entrepreneur</b>	.05 ***	.00
<b>Education</b>	-.01	.02 *
<b>Self-efficacy</b>	.06 ***	.04 ***
<b>Opportunity-perception</b>	.02	.05 ***
<b>Risk-willingness</b>	.01	-.01
<b>Know-how networking</b>	.07 ***	.08 ***
<b>Sector: Extraction</b>	.34 ***	.09 *
<b>Sector: Transformation</b>	.05 †	-.04
<b>Sector: Business services</b>	-.08 ***	-.06 *
<b>Age of business</b>	.00	-.06 ***
<b>Owners</b>	.02 †	.03 **
<b>Employees</b>	.06 ***	.13 ***
<b>Intercept</b>	-.03	-.04
<b>Country</b>	Yes	Yes
N countries	5	5

Hierarchical linear modeling, with random effect of country.

For Sector, the reference is the consumer-oriented sector that each other sector is compared to.  
Dependent variables are standardized.

Independent numerical variables are standardized and centered within country.

Dichotomous variables are 0 and 1 dummies.

† p<.10    \* p<.05    \*\* p<.01    \*\*\* p<.001

Source: GEM surveys in Spain, Colombia, Turkey, Egypt, Morocco in 2021-2022.

**Table 7.**

**Values and sustainability pursuits, depending on development and rural vs urban ecosystem.**

	<b>Value: Making a difference in world</b>	<b>Value: Family tradition</b>	<b>Value: Earning a living</b>	<b>Value: Accumu- lating wealth</b>	<b>Sustaina- bility: Social</b>	<b>Sustaina- bility: Environ- mental</b>
	Model G	Model H	Model I	Model J	Model K	Model L
<b>Development of society</b>	-.26	-.36 †	-.13	-.55	-.23	.06
<b>Ecosystem: Rural</b>	-.03	-.07 †	.06	-.10 *	-.17 ***	-.19 ***
<b>Development * Ecosystem</b>	.01	.18 **	.00	.06	.20 ***	.01
<b>Value: making a difference</b>					.22 ***	.17 ***
<b>Value: family tradition</b>					.02	.06 ***
<b>Value: earning a living</b>					.01	.01
<b>Value: accumulating wealth</b>					-.03 **	-.05 ***
<b>Gender: Female</b>	.06 **	-.01	.06 **	-.13 ***	.07 ***	.10 ***
<b>Age of entrepreneur</b>	-.13 ***	-.08 ***	.00	-.15 ***	.00	.06 ***
<b>Education</b>	.03 **	-.10 ***	-.09 ***	.02 *	.02 *	-.02
<b>Self-efficacy</b>	.05 ***	-.02 *	-.01	.03 ***	.04 ***	.06 ***
<b>Opportunity-perception</b>	.12 ***	.05 ***	-.04 ***	.11 ***	.05 ***	.02
<b>Risk-willingness</b>	.02 *	-.05 ***	-.07 ***	.01	-.01	.01
<b>Know-how networking</b>	.05 ***	.03 *	-.03 *	.02 †	.08 ***	.06 ***
<b>Sector: Extraction</b>	.01	.69 ***	-.08 †	.02	.08 †	.32 ***
<b>Sector: Transformation</b>	-.03	.15 ***	.03	.00	-.04	.05 †
<b>Sector: Business services</b>	-.03	-.19 ***	.05 †	.08 **	-.06 *	-.08 **
<b>Age of business</b>	-.11 ***	.10 ***	-.01	-.11 ***	-.06 ***	.00
<b>Owners</b>	.01	.07 ***	-.04 ***	-.02 *	.03 **	.02 †
<b>Employees</b>	.06 ***	.08 ***	-.05 ***	.07 ***	.13 ***	.06 ***
<b>Intercept</b>	.16	.23 †	.08	.43 *	.20 †	-.08
<b>Country</b>	Yes	Yes	Yes	Yes	Yes	yes
N countries	5	5	5	5	5	5

Hierarchical linear modeling, with random effect of country.

For Sector, the reference is the consumer-oriented sector that each other sector is compared to.

Dependent variables are standardized.

Independent numerical variables are standardized and centered within country.

Dichotomous variables are 0 and 1 dummies.

† p<.10    \* p<.05    \*\* p<.01    \*\*\* p<.001