

# **The Entrepreneurial Mind**

## **Lecture 13 – Entrepreneurial Goals, Aspirations and Success**

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## Lecture Learning Objectives

### At the end of the lecture, you will be able to:

- Know and understand the varying goals and understand goals and aspirations of entrepreneur;
- Explain the stylized facts about entrepreneurship pertaining to economic growth;
- Evaluate empirical findings pertaining entrepreneurial reasons for the creation of business enterprise;
- Explain how size/scale of business enterprise relates with entrepreneurial goals and aspirations.
- Demonstrate the difference between entrepreneurship at the individual and national level;
- Explain the importance of multi-level approach in the study of entrepreneurship;
- Identify the various factors or barriers of each determinant of entrepreneurial success and give concrete examples of each; and
- Critique entrepreneurship in the Philippines in terms of the barriers of entrepreneur's success and propose the remedial measures.

## Entrepreneurial Goals and Aspirations

### Overview

Most entrepreneurship researchers measure the success of firms by examining observable events in the firm's history, such as the **survival**, **exit**, and **growth** of the firm. Different entrepreneurs, however, have very different goals and aspirations when creating and operating their business, and this will impact many decisions made and results achieved. The research on these topics, however, is thin relative to the other aspects examined. One way of bridging the gap, if contentious, is the work to analyze non-pecuniary motivations ("be my boss") for starting businesses that have witnessed a surge of influential activity within the economics literature. We conclude this review with a few recent works on this subject that correspond to the literature on personality. It is rather probable that the personality traits of entrepreneurs differ significantly by the goals and aspirations that entrepreneurs bring to the business, and future research can gain by bringing tighter alignment of these two literature strands.

## Reasons for Deciding to Start a Business

One key source of longitudinal data on entrepreneurial motivations is the Panel Survey of Entrepreneurial Dynamics (PSED), which asks nascent entrepreneurs the open-ended question, "Why did you want to take up this business?" Hurst and Pugsley (2011) organized the original 44 motivations into five classes: non-monetary reasons, to

generate income, to realize a good business idea, lack of options, and others. The authors discovered that the huge majority of small commercial enterprises do not intend to innovate or expand their operations, but are instead content to stay at their current size and range. In addition, they found that non-monetary motives are the most frequent factor in the creation of a new business. Their classification is not standardized as there are many motivation typologies in studies. One example is Kuratko et al (1997) who employed a four-factor structure of goal statements identified based on replies from 234 entrepreneurs: extrinsic rewards, independence/autonomy, intrinsic rewards, and family security. However, the importance of non-monetary benefits are now well documented in the literature.

### **Entrepreneurial Goals**

**Entrepreneurs** are driven by pecuniary versus non-pecuniary benefits often have drastically different ends for their companies. Hurst and Pugsley (2011) found that most entrepreneurs, being ridden by non-pecuniary benefits, have little intention to innovate or expand their market share. They argued that those who receive large non-pecuniary benefits naturally gravitate toward industries where the natural scale of production is low (e.g. accounting and plumbing). Bhide (2000) described case studies of fast-growing, firms that connect the actions and behaviors of founders to their firm growth, including some shifts in motivation with time and experience. Ardagna and Lusardi (2010) measured from the GEM survey that the average entrepreneurship rate is a good deal higher in low- and middle-low income rural areas (14%) than high-income countries (6.7%); two-thirds of entrepreneurs in poor lands are requirement-driven entrepreneurs, compared to 22% in high income nations. In particular, opportunity-oriented entrepreneurs are key drivers of economic growth.

Another reason is found in the study of Hamilton (2000), entrepreneurs have **both lower initial earnings and lower earnings growth** than in paid employment, with a median earnings differential of 35% for individuals in business for 10 years. This differential persists across three alternative measures of self-employment earnings and across industries, irrespective of whether employees have low or high ability into self-employment. Thus, Hamilton concluded that there must be substantial non-pecuniary benefits to self-employment. Similarly, Moskowitz and Vissing-Jorgensen (2002) found that investment in private businesses is extremely concentrated and non-diversified, yet returns to private equity are no higher than the returns to public equity. The researchers concluded that households will invest substantial amounts in single privately held firms with a seemingly far worse risk-return trade-off for non-pecuniary benefits, a preference for skewness, or an overestimation of survival probability.

These influential studies underlie the conventional idea that entrepreneurs sacrifice their income to become entrepreneurs, showing that non-monetary incentives need to be present as well. A stream of work questions whether entrepreneurs actually earn less pose challenges on under-reporting of income by entrepreneurs (e.g., Hurst et al., 2014; Sarada, 2016), failure to capture the option value of entrepreneurship and the returns present in future wage employment (e.g., Manso, 2016; Dillon and Stanton, 2016; Galina and Hopenhayn, 2009; Kerr et al., 2014), and failing to separate entrepreneurship into types (e.g., Astebro et al., 2011; Levine and Rubenstein, 2017; Hegde and Tumlinson, 2016). In the same way, Kartashova (2014) revisited the puzzle of risk capital premiums and finds it sensitive to the periods used by Moskowitz and Vissing-Jorgensen (2002). As a result, the literature on entrepreneurial finance is now questioning whether entrepreneurs earn less than those paid in advance. This does not blot out the broader fact that **non-monetary reasons**, including the desire for autonomy and self-fulfillment, are now accepted to be an inbuilt component of many choices to create new jobs, and thus measures of venture return or growth may wrongly measure the true returns that these entrepreneurs experience. This will undoubtedly remain an important research subject for many years to come.

As a result, the literature is increasingly classifying two major types of entrepreneurs' growth-motivated entrepreneurs looking for opportunities and innovation, and necessity-driven entrepreneurs opening up new businesses when options are thin. Grudge (2010) further described this partition in a critique of the entrepreneurship and development literature. The realization of this heterogeneity is important progress, as these distinctions of entrepreneurial heterogeneity are paramount to understanding entrepreneurial goals and their function in regulating the economic system. On the other hand, researchers must be diligent in reminding themselves that entrepreneurial motivations are not of such a binary nature. But as the ordinary performance of an entrepreneur is trying to be a poor conceptual target in earning estimations, these two sub-groups are likely still too aggregated for the best long-term base, even if they allow good progress today.

Much research is being done in particular industries where non-monetary motivations define entrepreneurial goals. For example, Bergevoet (2005) found that the goals and attitudes of entrepreneurs are determinants of strategic and entrepreneurial behavior. Entrepreneurial competencies and instrumental goals (such as having a large and modern farm) correlate to self-scored success and larger farm size, and non-pecuniary goals explain much of the variation in job satisfaction. Santos-Requejo and González-Benito (2000) conducted 85 in depth interviews and learned that the objectives of subsistence businesses are highly influenced by socio-cultural attributions such as family values, goals, and motivation to stay in business. In a very different setting

Reijonen and Komppula (2007) showed in two microbusinesses in the craft and rural tourism industries how entrepreneurs measure their performance by non-pecuniary criteria and find success in job satisfaction and satisfied customers, Haber and Reichel (2005) identified similar performance measures of small ventures in the tourism industry of Israel. In their study, the most important subjective performance measures include the perceived customer satisfaction and the perceived profitability relative to competitors, while the key objective performance measures are related to firm growth (e.g., employment and revenue).

Some researches use gender in entrepreneurial goals. Justo et al. (2006) collected data from 1,236 contractors in the 2005 GEM survey to compare gender and parental status on intrinsic and independent measures of success. Intrinsic measures of success are generally more appreciated by adult females, while independence measures of success are evaluated equally by men and women. All the same, the survey finds that parental status alters women's notions of success, with independence measures of success overcoming intrinsic measures of success among adult females with dependent kids. This is not the case for men who have dependent children. In interviews with 129 successful women entrepreneurs, Buttner and Moore (1997) differentiated between corporate climbers, who emphasize gaining managerial experience, from intentional entrepreneurs who emphasize the importance of technological competence. While goals for entering entrepreneurship and starting a business are considered on a personal level, such as generating profit or retaining autonomy, there is little academic examination into self-determined standards of success for ventures. Large-scale surveys have not, to our knowledge, asked whether an entrepreneur's individual goal of the venture is to accomplish a public offering, grow the venture until acquisition by another firm, to remain on as a Founder-CEO for the long term. At the same time, these entrepreneurial decisions shape the entrepreneurial landscape, and the alignment of founding teams and their investors these goals are vital for venture success (e.g., Wasserman, 2011).

In summary, much work continues to be executed in this largely explored area, and a lot of the initial research needs to concentrate on data collection via surveys and consultations. **Policymakers** have a great deal to gain by understanding the specific objectives of growth-oriented entrepreneurs that disrupt and develop the economy in general. At the same time, most entrepreneurs have multiple non-pecuniary goals, and policy makers need to interpret and sustain this important component of the economy as well. Attempts to bridge the literature on entrepreneurial personality and motivations may prove very fruitful in the age to come.

## Entrepreneurial Success

### Overview

This lecture covers the individual personal-psycho-social factors as well national determinants of entrepreneurial success. Despite many explanations to entrepreneurship at the personal or individual (micro) level, there are also explanations at the macro level. A multi-level approach to determine how much of the variance that can be explained by the different levels is necessary for a holistic understanding of entrepreneurial success.

At the individual level, the term "entrepreneurial mindset" initially came from behavioral sciences through research within the field of personality, cognitive and social psychology. There are multiple definitions of entrepreneurial mindset that exist requiring a combined or synthesized definition. There are also several themes that characterize the entrepreneurial mindset found in the literature Allan Gray Orbis Foundation tried to focus on the cultivation and development of an entrepreneurial mindset. However, there was a lack of rigorous theorization and empirical evidence of the term. In response to this, Orbis Foundation in collaboration with Global Entrepreneurship Research Network (GERN) in 2016 hopes to achieve the following:

- (1) development of a shared understanding of entrepreneurial mindset:
- (2) the development of a universal methodology for measuring entrepreneurial mindset;
- and
- (3) the development of an evidence-based approach for enhancing entrepreneurial mindset education theory and practice.

This state of mind or lens is influenced by **multiple factors** that include:

- 1) what people know or do not know (related to their knowledge),
- 2) what people have done or have not done (related to their experience),
- 3) what people can do or believe they can do (related to their level of competency and self-belief), and
- 4) who they are (related to their personality, values, attitudes and beliefs).

At this juncture, a rather simple model provides a meaningful relation between Big Five traits, knowledge, experience, competence, and entrepreneurial success. Each of these factors domain than Based on Orbis-GERN definitions, the equation below expresses entrepreneurial success as the sum of four broad dimensions in addition to the Big Five as shown below:

$$Es = K + E + S + P$$

Where:

ES = entrepreneurial success

K = knowledge

E = experience

S = self-efficacy

P = Big Five personality traits

Each factor is measured in ordinal scale and expressed as average percentage shown in the equation below.

$$1/(4n) \sum_{i=1}^n (K + E + S + P)$$

In log linear form:  $\log ES = w \log K + x \log E + y \log S + z \log P$  or, its multiplicative  $Es = a K^w E^x S^y P^z$

The additive feature of the equation assumes each factor changes at a constant rate over time, suggestive of a linear model. Several theories support the linear assumption of knowledge, experience, and self-beliefs. Although some studies hypothesized that personality factor is fairly stable during adulthood, other studies revealed that it changes with age. The theory of the learning curve is one example describing factor variation through time. Knowledge (K) represents a theory (knowledge) as the accumulation of information or ideas while experience (E) represents practice or application of knowledge over time. Knowledge increases with experience. According to experiential learning by Kolb (1984) along with constructivist theory of Dewey (1916) and Jean Piaget (1936), knowledge is more theoretical but its application is concrete. **Concrete experience** provides information that serves as a basis for reflection. These reflections then form knowledge. Hence, **teaching or instruction** provides the foundation for practice of experience. They are separate but mutually related. On the other hand, (S) or self-beliefs increases through vicarious experience of success (Bandura, 1977), though, small but nonetheless exert strong influence to motivation to continue learning and making progress (knowledge).

Moreover, the Big Five traits appear to be universal across culture (McCrae et al., 2005). While genetics plays a role in determining personality, research has not conclusively determined exactly how much of personality is genetically pre-determined, and how much is the result of environmental and parenting factors. It is unlikely that specific genes to have a specific influence of becoming entrepreneur except through mediating factor. This factor is personality. Empirical research shows that some of the variance in personality traits across people is accounted for by their genetic endowment

(Loehlin, 1992; Jang et al., 1996; Plomin et al., 2008). People with different variants of certain genes face different probabilities of developing certain personality traits (Comings et al, 2000; Ebstein et al, 2002). These genetically-influenced personality traits, in turn, affect the odds that a person will become an entrepreneur (Zhao and Seibert, 2006; Rauch and Frese, 2006). In addition, researchers believed that once established, personality generally remains stable throughout lifetime. However, newer research suggests that is not always the case. The findings suggest that personality is not fixed at age 30; instead it continues to change, with the exact pattern of change depending on the trait (Srivastava et al., 2003). These researchers found that conscientiousness and agreeableness increased throughout early and middle adulthood at varying rates; neuroticism declined among women but did not change among men. Moreover, research has suggested the Big Five traits evolve with age over the life span. In an analysis of 92 longitudinal studies it was found that people became more conscientious, less neurotic and increase in social dominance, a facet of extraversion, as they get older. People also became more agreeable in old age. Although adolescents were more open to experience and demonstrated greater social vitality, another facet of extraversion, especially during the college years, people decreased in these traits during old age. Moreover, conscientiousness, emotional stability, openness. and extraversion have consistently positive associations with all aspects of transition of success above and beyond the effects of other factors (Lechner et al., 2019; Brandt et al., 2020).

In addition, a macro perspective by the Organization of Economic Cooperation for Economic Development (OECD) proposes a realistic framework for entrepreneurial success:

1. Regulatory Framework;
2. Market Conditions;
3. Access to Finance;
4. Creation and Diffusion of Knowledge;
5. Entrepreneurial Capabilities;
6. Entrepreneurial Culture.

For each indicator, a short description and the source of data are provided. While knowledge covers many critical factors affecting entrepreneurship, they are not exhaustive. The selection of indicators reflects the current availability of data, hence, other important indicators may be missing for lack of international data available. This framework is domain-specific and applicable to existing business enterprise specifically engaging in international trade. Nevertheless, this is a useful guide for entrepreneurs to reduce barriers to entrepreneurship and innovate. This framework is also useful for students to know the barriers vital for academic discussion.

Category of Determinants	Definition	Data sources
<b>1. Regulatory Framework</b>		
Administrative burdens (entry and growth)		
Burden of government regulation	Survey responses to the question: For businesses, complying with administrative requirements, permits, regulations, reporting issued by the government in your country is (1 -burdensome, 7 - not burdensome).	World Economic Forum, Global Competitiveness Report
Costs required for starting a business	The official cost of each procedure in percentage of Gross National Income (GNI) per capita based on formal legislation and standard assumptions about business and procedure.	World Bank, Doing Business
Minimum capital required for starting a business	The paid-in minimum of capital requirement that the entrepreneur needs to deposit in a bank before registration of the business starts as percentage of income per capita.	World Bank, Doing Business
Number of days for starting a business	The average time (recorded in calendar days) spent during each enterprise start-up procedure.	World Bank, Doing Business
Number of procedures for starting a business	All generic procedures that are officially required to register a firm.	World Bank, Doing Business
Procedures, time and costs to build a warehouse	Corresponds to an average of three measurements:1) Average time spent during each procedure 2) Official cost of each procedure and 3) Number of procedures to build a warehouse	World Bank, Doing Business
Building quality control index	The indicator is based on six other indices-the quality of building regulations, quality control before construction, quality control during construction, quality control after construction, liability and insurance regimes and professional certifications indices.	World Bank, Doing Business
Registering property	Corresponds to an average of three measurements: 1) Number of procedures legally required to register property. 2)Time spent in completing the procedures and 3) Registering property costs.	World Bank, Doing Business
Index of the quality of the	The quality of land administration index is the sum of the scores on the reliability of infrastructure, transparency of information, geographic	World Bank, Doing Business

land administration system	coverage and land dispute resolution indices. The index ranges from 0 to 30, with higher values indicating better quality of the land administration system.	
Time for paying taxes	Time it takes to prepare, file and pay the corporate income tax, vat and social contributions. Time is measured in hours per year.	World Bank, Doing Business
<b>Bankruptcy regulations</b>		
Cost - Average cost of bankruptcy proceedings	The cost of the proceedings is recorded as a percentage of the estate's value.	World Bank, Doing Business
Time - Average duration of bankruptcy proceedings	Time is recorded in calendar years. It includes appeals and delays	World Bank, Doing Business
Recovery rate	The recovery rate calculates how many cents on the dollar secured creditors recover from an insolvent firm at the end of insolvency proceedings.	World Bank, Doing Business
<b>Court and legal framework</b>		
Enforcing contracts - Cost in % of claim	Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita or USD 5000, whichever is greater. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees.	World Bank, Doing Business
Enforcing contracts - Time	Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between.	World Bank, Doing Business
Enforcing contracts - Quality of judicial process	The quality of judicial processes index measures whether each economy has adopted a series of good practices in its court system in four areas court structure and proceedings, case management, court automation and alternative dispute resolution.	World Bank, Doing Business
<b>Product and labor market regulations</b>		

Difficulty of hiring	It measures whether laws or other regulations have implications for the difficulties of hiring a standard worker in a standard company. It covers components such as whether fixed-term contracts are prohibited for permanent tasks, the maximum cumulative duration of fixed-term contracts, the ratio of the minimum wage to the average value added per worker or the availability of incentives for employers to hire employees under the age of 25.	World Bank, Doing Business
Difficulty of hiring	It measures whether laws or other regulations have implications for the difficulties of hiring a standard worker in a standard company. Components of the indicator include elements such as the length in months of the maximum probational period or whether the employer needs to notify a third party (such as a government agency) to terminate a redundant worker.	World Bank, Doing Business
Ease of hiring foreign labor	Survey responses to a question related to labor market efficiency in your country, how restrictive are regulations related to the hiring of foreign labor? [1- highly restrictive 7- not restrictive at all]	World Economic Forum, Executive Opinion Survey
Rigidity of hours index	The Indicator is an index with seven components, the most important being: I) the maximum number of days allowed in the work week; II) the premium for night work; (III) whether there are restrictions on night work, IV) whether there are restrictions on weekly holiday work; V) the average paid annual leave for workers.	World Bank, Doing Business
Job quality	The indicator covers 12 questions (1) whether the law mandates equal remuneration for work of equal value (II) whether the law mandates non-discrimination based on gender in hiring: (III) whether the law mandates paid or unpaid maternity leave: (IV) the minimum length of paid maternity leave (in calendar days): (V) whether employees on maternity leave receive 100% of wages; (VI) the availability of five fully paid days of sick leave a year, (VII) the availability of on-the-job training at no cost to the employee; (VIII) whether a worker is eligible for an unemployment protection scheme after one year of service; (IX) the minimum duration of the contribution period (in months) required for unemployment protection; (X) whether an employee can create or join a union; (XI) the availability of administrative or judicial relief in case of infringement of employee's rights, and (XII) the availability of a labor inspection system.	World Bank, Doing Business

<b>Income taxes, wealth/ bequest taxes</b>		
Average income tax plus social contributions	The average rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single without children) with high income.	OECD Revenue Statistics
Highest marginal income tax plus social contributions	The highest rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income.	OECD Revenue Statistics
Revenue from bequest tax	The revenue from bequest tax as a per cent of GOP. <a href="http://dx.doi.org/10.1787/ctpa-rev-data-en">http://dx.doi.org/10.1787/ctpa-rev-data-en</a>	OECD Revenue Statistics
Revenue from net wealth tax	The revenue from net wealth tax as per cent of GOP. <a href="http://dx.doi.org/10.1787/ctpa-rev-data-en">http://dx.doi.org/10.1787/ctpa-rev-data-en</a>	OECD Revenue Statistics
<b>Business and capital taxes</b>		
SME tax rates	<a href="http://stats.oecd.org//index.aspx?DataSetCode=TABLE_NZ">http://stats.oecd.org//index.aspx?DataSetCode=TABLE_NZ</a>	OECD Revenue Statistics
Taxation of corporate income revenue	The revenue from corporate income tax as percentage of GDP <a href="http://dx.doi.org/10.1787/ctpa-rev data-en">http://dx.doi.org/10.1787/ctpa-rev data-en</a>	OECD Revenue Statistics
Taxation of stock options	The average tax wedge for purchased and newly listed stocks. Average incomes are used. <a href="http://dx.doi.org/10.01787/9789264012493-en">http://dx.doi.org/10.01787/9789264012493-en</a>	OECD, The Taxation of Employee Stock Options Tax Policy Study No.11
<b>Patent System: Standards</b>		

Intellectual property protection	Survey responses to the question: in your country, how strong is the protection of intellectual property, including anti-counterfeiting measures? (1 = extremely weak, 7 = extremely strong).	World Economic Forum, Global Competitiveness Report
Property rights	Survey responses to the questions: property rights, including over financial assets (1 = are poorly defined and not protected by law, 7 are clearly defined and well protected by law).	World Economic Forum, Global Competitiveness Report

## 2. MARKET CONDITIONS

### Access to Foreign Markets

Trading across borders	The indicator is an index composed of two components 1) Time, in days, to comply with all procedures required to import/export goods. 2) The cost associated with all procedures required to import/export goods.	World Bank, Doing Business
Barriers to trade and Investment	This indicator measures explicit barriers and other barriers to trade and investment. It is based on qualitative information on laws and regulations collected periodically and turned into quantitative indicators.	OECD, Product Market Regulation Indicators
Services Trade Restrictiveness	The indicator is calculated on the basis of a regulatory database of comparable standardized information on trade and investment relevant policies in force in each country.	OECD, Services Trade Restrictiveness Index Regulatory Database

### Degree of Public involvement

Government enterprises and investment	Data reflect the number, composition and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment.	IMF, World Bank, UN National Accounts and World Economic Forum
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Licensing restrictions	Zero-to-10 ratings are constructed for 1) the time cost (measured in number of calendar days required to obtain a license) and 2) the monetary cost of obtaining the license (measured as a share of per-capita income). These two ratings are then averaged to arrive at the final rating.	World Bank
<b>Private Demand</b>		
Buyer sophistication	Survey responses to purchasing decisions are (1 based solely on the lowest price, 7 based on a sophisticated analysis of performance).	World Economic Forum, Global Competitiveness Report
<b>3. ACCESS TO FINANCE</b>		
<b>Access to debt financing</b>		
Country credit rating	The indicator is based on an assessment by the institutional Investor Magazine Ranking.	IMD World Competitiveness Yearbook
Domestic credit to private sector	The indicator refers to financial resources provided to the private sector—such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable that establish a claim for repayment. Data are from IMF's International Financial Statistics.	Published in World Indicators, World Bank Development
Ease of access to loans	Survey responses to: how easy it is to obtain a bank loan in your country with only a good business plan and no collateral (1 extremely difficult, 7 extremely easy).	World Economic Forum, Global Competitiveness Report
Interest rate spread	The lending rate minus deposit rate based on an average of annual rates for each country.	World Bank Open Data
Legal rights Index	The degree to which collateral and bankruptcy laws facilitate lending. Higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit.	World Bank, Doing Business

Share of SME loans in total business loans.	Specific definitions are implemented by the countries covered in the Scoreboard. <a href="http://www.oecd.org/cfo/smes/financing-smes-and-Entrepreneurs-entrepreneurs-23065265.htm">http://www.oecd.org/cfo/smes/financing-smes-and-Entrepreneurs-entrepreneurs-23065265.htm</a>	OECD Financing SMEs and An OECD Scoreboard
Interest rate spread between average SME and large firm rate	Specific definitions are implemented by the countries covered in the Scoreboard. <a href="http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm">http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm</a>	OECD Financing SMEs and Entrepreneurs An OECD Scoreboard
<b>Access to venture capital</b>		
Venture capital availability	Survey responses to how easy it is for entrepreneurs with Innovative but risky projects to find venture capital in your country (1 extremely difficult 7 extremely easy)	World Economic Forum, Global Competitiveness Airport
Venture capital	Private equity investments	DECD Entrepreneurship Finance Database
<b>Stock markets</b>		
Capitalization of primary stock market	The capitalization of the primary stock market (the value of the issue shares on the market) relative to GDP <a href="http://www.worldexchanges.org/home/index.php/statistics/ipo-database">http://www.worldexchanges.org/home/index.php/statistics/ipo-database</a>	World Federation of Exchanges
Capitalization of secondary stock	An assessment of the efficiency of stock markets providing finance to companies. Ranking market goes from 1 (worst) to 10 (best) <a href="http://www.imd.org/wcr">http://www.imd.org/wcr</a>	IMD, World Competitiveness Yearbook
Investor protection	The main indicators include transparency of transactions (Extent of Disclosure Index), liability for self-dealing (Extent of Director Liability Index), shareholders ability to sue officers and directors for misconduct (Ease of Shareholder Suits Index) strength of investor Protection Index the average of the three index)	World Bank, Doing Business

Market capitalization of newly listed companies	The market capitalization (total number of new shares Issued multiplied by their value on the first day of quotation) of newly listed domestic shares relative to GDP	World Federation of Exchanges
<b>4. CREATION AND DIFFUSION OF KNOWLEDGE</b>		
<b>R&amp;D activity</b>		
Business expenditure on R&D BERD	Business enterprise expenditure on R&D (BERD) at current prices and PPPs <a href="http://dx.doi.org/10.1787/mmn-2015-table23-en">http://dx.doi.org/10.1787/mmn-2015-table23-en</a>	OECD, Main Science and Technology Indicators
Gross domestic expenditure on R&D GERD	Gross domestic expenditures on R&D covers total intramural expenditure performed on the national territory during a given period. <a href="http://dx.doi.org/10.1787/mst-2015-2-table12-en">http://dx.doi.org/10.1787/mst-2015-2-table12-en</a>	OECD, Main Science and Technology Indicators
Higher education expenditure on R&D HERD	Higher education expenditure on R&D (HERD) at 2010 prices and PPPs <a href="http://dx.doi.org/10.1787/mat-2015-2-table-45-en">http://dx.doi.org/10.1787/mat-2015-2-table-45-en</a>	OECD, M Science and Technology Indicators
International co-operation between patent applications at PCT	The indicator measures international cooperation between patent applications under the Patent Cooperation Treaty (PCT). The measure is calculated as a percentage of total patents (by application date) <a href="http://dx.doi.org/10.1787/duto-00507-en">http://dx.doi.org/10.1787/duto-00507-en</a>	OECD Patent Statistics
Patents awarded	Number of patents awarded to inventors based on their residence. The indicator is a sum of patents awarded by the European Patent Office (EPO) and US Patent and Trademark Office (USPTO) <a href="http://dx.doi.org/10.1787/data-00507-en">http://dx.doi.org/10.1787/data-00507-en</a>	OECD Patent Statistics
<b>Transfer of non-commercial knowledge</b>		
Research in higher education	R&D expenditure performed at higher education and funded by business, measured in 2010 US dollars, constant prices and PPPs <a href="http://dx.doi.org/10.1787/data-00189-en">http://dx.doi.org/10.1787/data-00189-en</a>	OECD Science and Technology Statistics

sector financed by business		
Patents filled by universities and public labs	Patents filled by universities and public labs per GDP. Only countries having filled at least 250 patents over the period are included. <a href="http://dx.doi.org/10.1787/139x90c6-en">http://dx.doi.org/10.1787/139x90c6-en</a>	OECD Science, Technology and Industry Outlook
Universities or other Public Research Organizations as source of Information	The share of Innovative enterprises that states universities or other PROs as an important source of information for product and process innovation	(National) Innovation Surveys
University / Industry collaboration on R&D	Survey responses to the level of collaboration between business and universities in R&D, (1 for non-existent collaboration to 7 for extensive collaboration). <a href="http://reports.weforum.org/global-competitiveness-report-2015/competitiveness-rankings/">http://reports.weforum.org/global-competitiveness-report-2015/competitiveness-rankings/</a>	World Economic Forum, Global Competitiveness Report
<b>Co-operation among firms</b>		
SMEs co-operating with other firms for innovation	Share of innovative SMEs stating any type co-operation as the source of innovation.	(National) Innovation Surveys
<b>Technology availability and take-up</b>		
Turnover from e-Commerce	Total internet sales over the last calendar year, excluding VAT, as a percentage of total turnover. <a href="http://oc.europa.eurastat/tgm/table.do?table&amp;int1&amp;language en&amp;pcode-tin00110&amp;plugin-1">http://oc.europa.eurastat/tgm/table.do?table&amp;int1&amp;language en&amp;pcode-tin00110&amp;plugin-1</a>	Eurostat, Information Society Statistics
Enterprises Using e-Government	The share of enterprises using any eGovernment services. The measure is based on all firms with 10 employees or more, excluding the financial sector. <a href="http://oc-europa.eu/eurostat/tgm/table.do?table&amp;int&amp;longuage-enpcode-in00107&amp;plugin-1">http://oc-europa.eu/eurostat/tgm/table.do?table&amp;int&amp;longuage-enpcode-in00107&amp;plugin-1</a>	Information Society Statistics

ICT expenditure	Expenditure for ICT equipment software and services as a percentage of GDP. <a href="http://ec.europa.eu/eurostat/product?code=Isoc_tc_language-en&amp;mode-view">http://ec.europa.eu/eurostat/product?code=Isoc_tc_language-en&amp;mode-view</a>	European Information Technology Observatory (EITO)
ICT expenditure in Communications	Expenditure for telecommunications equipment and carrier services as a percentage of GDP	European Information Technology Observatory (EITO)

## 5. ENTREPRENEURIAL CAPABILITIES

### Entrepreneurship education

Population with tertiary education	The share of persons between 25-34 of age with tertiary education including doctoral education or equivalent. <a href="http://dx.doi.org/10.1787/eng-2015-table8-en">http://dx.doi.org/10.1787/eng-2015-table8-en</a>	DECD Education at a Glance
Quality of Management Schools	Survey responses to the quality of business schools across countries is (1 extremely poor among the worst in the world: 7 excellent-among the best in the world). <a href="http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings">http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings</a>	World Economic Forum, Global Competitiveness Report
Training in starting a business	The percentage of the population aged 18-64 that received training in starting a business during school or after school. A global perspective on Entrepreneurship Education and Training (2008). <a href="http://www.gemconsortium.org/report">http://www.gemconsortium.org/report</a>	Global Entrepreneurship Monitor (GEM)

### Immigration

Migrants with tertiary education	The share of highly skilled migrants as a percentage of total migrants. <a href="http://www.oecd.org/dotabaseonimmigrantscountries.htm">http://www.oecd.org/dotabaseonimmigrantscountries.htm</a>	Database on Immigrants in OECD countries (DIOC)
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## 6. ENTREPRENEURSHIP CULTURE

High status successful entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status <a href="http://www.gemconsortium.org/">http://www.gemconsortium.org/</a>	Global Entrepreneurship Monitor (GEM)
Entrepreneurial Intention	The percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years. <a href="http://www.gemconsortium.org/">http://www.gemconsortium.org/</a>	Global Entrepreneurship Monitor (GEM)
Desirability of becoming self employed	Survey responses to: desire to become self-employed within the next 5 years. This question is asked only to non-self-employed individuals. <a href="http://ec.europa.eu/public_opinion/flash/fl_354-en.pdf">http://ec.europa.eu/public_opinion/flash/fl_354-en.pdf</a>	European Commission Flash Eurobarometer
Opinion about entrepreneurs	Survey responses to: overall opinion about entrepreneurs (self-employed, business owners). They are ranked against managers in large companies and professions. <a href="http://ec.europa.eu/public_opinion/flash/fl_354.en.pdf">http://ec.europa.eu/public_opinion/flash/fl_354.en.pdf</a>	European Commission Flash Eurobarometer
Fear of failure	Percentage of 18-64 population who perceives good opportunities but who indicates that fear of failure would prevent them from setting up a business <a href="http://www.gemconsortum.org/">http://www.gemconsortum.org/</a>	Global Entrepreneurship Monitor (GEM) 133
Risk for business failure	Survey responses for being willing to start a business if a risk exists that it might fail. <a href="http://ec.europa.eu/public_opinion/flash/fl-354_en.pdf">http://ec.europa.eu/public_opinion/flash/fl-354_en.pdf</a>	European Commission Flash Eurobarometer
Second chance of entrepreneurs	Survey responses for people who have started their own business and have failed should be given a second chance. <a href="http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf">http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf</a>	European Commission Flash Eurobarometer

**Table 1-A Entrepreneurial Determinants**

Source: OECD (2017), "List of Indicators of Entrepreneurial Determinants", in Entrepreneurship at a Glance 2017, OECD Publishing, Paris. DOI: [https://doi.org/10.1787/entrepreneur\\_aag-2017-29-en](https://doi.org/10.1787/entrepreneur_aag-2017-29-en)

Under each determinant are various conditions entrepreneurs must consider improving to increase probability of success. For example, under regulatory framework several factors need consideration: administrative burden for entry, administrative burden for growth, bankruptcy regulations, safety, health and environmental regulations, product regulation, labor market regulation, court and legal framework, social and health security, income taxes; wealth/ bequest taxes, and business and capital taxes. **Administrative burden of entry** involves the compliance with the administrative requirements, permits, regulations, and reporting issued by the government of the country and so on.

#### **Reference:**

**Entrepreneurial Mind, Ferdinand C. Paurom and  
Frederick U. Ibanez, Mindshapers Co., Inc. 2021**