SPRINGER BRIEFS IN ENTREPRENEURSHIP AND INNOVATION

Farzana Chowdhury
Sameeksha Desai
David B. Audretsch

# Corruption, Entrepreneurship, and Social Welfare

## A Global Perspective

Springer

# SpringerBriefs in Entrepreneurship and Innovation



More information about this series at http://www.springer.com/series/11653

Farzana Chowdhury • Sameeksha Desai
David B. Audretsch

# Corruption, Entrepreneurship, and Social Welfare

## A Global Perspective

Springer

Farzana Chowdhury
College of Business and Entrepreneurship
University of Texas Rio Grande Valley
Brownsville, TX, USA

Sameeksha Desai
School of Public & Environmental Affairs
Indiana University
Bloomington, IN, USA

David B. Audretsch
School of Public & Environmental Affairs
Indiana University
Bloomington, IN, USA

ISSN 2195-5816 ISSN 2195-5824 (electronic)
SpringerBriefs in Entrepreneurship and Innovation
ISBN 978-3-319-64914-6 ISBN 978-3-319-64916-0 (eBook)
DOI 10.1007/978-3-319-64916-0

Library of Congress Control Number: 2017949391



Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Contents

# List of Figures

# List of Tables

# Chapter 1
# Introduction and Overview

A large proportion of the world population lives in poverty: Estimates of people living in the income range between less than a $1 a day and $4 range from 2 to 4 billion (Shah 2013; Webb et al. 2010). Globalization and the recent global recession have affected individuals in both developed and developing countries, with stronger effects in developing countries (ILO 2011).

Although individuals in developing countries may have limited venue to express their dissatisfaction, recent geopolitical activity in some developed countries brings to light dissatisfaction with globalization and the global recession (Boskin 2016). Proponents of globalization argue that globalization contributes to economic growth through technological development, entrepreneurship, innovative activity, increased efficiency, and productivity (Dollar and Kraay 2001). Evidence, too, suggests that increased trade has improved productive economic activity in a society. Gorodnichenko et al. (2015) found trade to positively affect technological innovation in a country, based on firm and industry data from 18 emerging countries. Interestingly, they find that the positive relationship is stronger at the firm level than the industry level. Bustos (2011) studied firms in Argentina and showed that firms modernize technology when faced with competition and opportunities presented by trade liberalization. Long et al. (2011) showed that trade openness increases firm-level innovation, using a set of heterogeneous firms and measures of innovation which include cost-saving research and development (R&D). In a study of Chilean firms, Fernandes and Paunov (2010) found that when faced with competition from imports, firms tend to either upgrade the quality of products or innovate new products. Several studies included specific cases, industry or country, such as valve makers in the United States in Bartel et al. (2007), footwear in Freeman and Kleiner (2005), and Italian manufacturing firms in Bugamelli et al. (2008). All of these studies found that innovation activity in firms increases when import competition increases. Aghion et al. (2005) investigated the relationship between product market competition and innovation, and found an inverted U-shaped relationship.



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_1

This relationship is influenced by competition in different sectors; industries with higher competition become more competitive in order to maintain their competitive advantage. However, the inverted U-shaped relationship does not hold in a study by Gorodnichenko et al. (2015), which included developing countries.

Despite the evidence of positive gains, the question of individual vs. collective benefit from globalization remains unanswered: As Joseph Stiglitz put it, "Globalization … only promises that the country as a whole will benefit" (2007, p. 63). Without a doubt, globalization has increased trade-related activity between countries. Yet not all countries have seen the positive aspect of the increased trading activity. While some countries have seen that their existing businesses have been able to increase capability (Humphrey and Schmitz 2002; Altenburg et al. 2008; Lorenzen and Mudambi 2012), productivity (De Loecker et al. 2016; Holmes and Schmitz 2010), innovation (Bloom et al. 2011; Bustos 2011), and wages (Auer et al. 2013) some countries have seen their jobs and small businesses suffer a loss (Autor et al. 2013; Bloom et al. 2016). Research by Basu and Bhattarai (2012) found that greater trade has resulted in more investment in education in some countries which want to attract investment: A skilled workforce is more attractive to investors. Trade openness has reduced liquidity constraints that allow individuals to invest in acquiring education and training (Cartiglia 1997), since everyone does not have equal access to public education everywhere.

Greater trade has also put pressure on nations to compete with each other, putting downward pressure on production costs. In the process, countries with low labor costs have been better able to benefit. For instance, China has been able to take advantage of low labor costs to grow its manufacturing base and export activity. Over the last two decades, China has become an important actor in the trade debate, since exports have risen more than 15% per year (Bloom et al. 2016). However, countries in other regions such as Latin America and Africa have not been able to compete (Africa Report 2012; Moreira 2007). This increased activity has also helped to developing economies take advantage of technological development in developed countries. Developing countries have been able to upgrade (Bloom et al. 2016) and adapt to new technologies through "technological leapfrogging" (Amiti 2001).

In spite of technological and economic growth, critics of globalization argue that its benefits have not been distributed equally. International organizations have strived to reduce poverty around the world, with some success in the recent years. According to the Millennium Development Goals (MDG) Report (United Nations 2015), people living in extreme poverty fell between 1990 and 2015. In 2015, 836 million people lived in extreme poverty, compared to 1.9 billion people in the 1990s. Extreme income poverty might have been reduced, but poverty has many faces and dimensions. In the majority of the developing countries, poverty entails not only incomes below a certain threshold, but can also mean limited or no access to services such as education, healthcare, sanitation, and information (Transparency International 2007, 2015). Unequal access to these basic services can continue through several generations, locking future generations in a vicious cycle. This vicious circle reduces opportunities for future generations by constraining access to basic

services, which enable individuals to develop the skills, structure, and mechanisms to both exploit and create opportunities.

Recently scholars have turned their focus on the inclusive growth. Contrary to the traditional growth model, an inclusive growth model can help reduce this perpetual lack of access to opportunity. The inclusive growth concept involves a combination of both macro- and microeconomic determinants of growth, access to equal opportunity and well-functioning markets and government, sustainable growth in the long-run along, and sustained poverty reduction (Commission on Growth and Development 2008). The Commission on Growth and Development (2008) views the intergenerational lack of access to opportunity as "toxic" since this deprivation can lead to conflict in a society, which can be carried out through political channels or even direct conflict. Therefore inclusive growth can be seen as a push for greater changes in society. Research works related to the inclusive growth have taken several structural changes in the society into consideration. Examples of structural changes include changes in the pattern of employment, migration from rural to urban areas, or changes in individuals' decision to migrate from traditional sector to modern sector (Greenstein 2015; Ranis and Fei 1961). Since individuals are directly involved in the decision-making process, scholars argue that individuals become directly involved in the growth process rather than taking part in the process dictated by the central government (Amsden 2010, 2012; Reddy 2013). Individuals' involvement leads to improved quality of employment and entrepreneurship. However, quality of opportunity is difficult to sustain if the other members of the society are not aware of the opportunities or not able to take advantage of these opportunities due to social barriers, skill barriers, or physical barriers (Greenstein 2015).

Both government and citizens can harness resources, of different types and in different ways, to improve quality of life. Acemoglu and Robinson (2013) argued that political and economic institutions play an important role in the economic performance of a country. The government can help improve quality of life by establishing institutions which create an environment for businesses to flourish, building infrastructure, and providing education and healthcare services to people. Citizens can participate in the process of improving quality of lifestyle by engaging in productive economic activity, assisting with creating good institutions, holding authorities accountable, and requiring transparency. Governments can play an important role in mitigating this vicious circle, as presented in economic history.

This book provides a deeper look at how the combination of transparency, institutions, and home country resources (such as quality of education, infrastructure, and taxes) can contribute to "inclusive growth" through entrepreneurship. The book also lays out some key challenges faced by entrepreneurs. A substantial amount of research has established the importance of entrepreneurship in generating economic growth (Acs et al. 1999; Audretsch and Thurik 2001a, b; Reynolds et al. 1999; Wennekers et al. 2005). Entrepreneurial activity contributes to the economy through job creation; it also offers a way for individuals to contribute to individual and social welfare, as well as to the global economy. The level of entrepreneurship in a country can vary based on many factors, including the level of economic development, diverging human dimensions, regional dynamics, and cultural and institutional

characteristics (Stenholm et al. 2013; Blanchflower 2000). As an economy transitions through various stages of development, demand and supply of resources such as accumulation of physical capital, human capital, changes in different sectors of the economy (agricultural, service, manufacturing), employment, and consumption (Syrquin 1988, p. 206) also change. Several conceptualizations propose a process in which a country moves through stages of economic development. Recently Porter et al. (2002) and Syrquin (1988) suggested three stages of development. Syrquin (1988) proposed three stages: primary production, industrialization, and the developed economy. Porter et al. (2002) argued that countries go through stages which are factor driven, investment driven, and innovation driven.[1] Porter's factor-driven and Syrquin's primary production stage rely on low-quality labor and rely on natural resources. In the second stage, countries try to attract more foreign investment by improving the quality of their workers by investing in the educational sector and healthcare sector. Investment in the technology sector also becomes an important area since workers need to adopt new technology from the foreign countries. As a country transitions through these stages, the cultural environment and institutional environment change the employment structure and productivity of the country. These changes in the society also change individuals' outlook that puts pressure on the government to make changes in the policy arenas. For instance, the promise of gains from entrepreneurship, and particularly given the need for jobs in developing countries, has policy makers and researchers looking for ways to increase entrepreneurial activity in their countries (Verheul et al. 2001). Therefore policy makers formulate policies favorable to self-employed individuals who are generally engaged in low-quality entrepreneurship but create job for themselves. The demand for high-quality entrepreneurship increases as the quality of the workers and demand for improved product increase in the society as economic development process continues.

In Chap. 2, The Grand Challenges of Social Welfare, we discuss how social welfare policies have changed through development, political environment, and challenges faced by welfare policies. Many developed countries provide welfare services to citizens, such as unemployment benefits, labor market protections, public pension systems, social protection services, and so on. These services influence how an individual engages in the labor market, such as the decision to undertake a particular occupation, risk tolerance, and long-term planning. Many developing and emerging countries have been interested in adopting some of these policies which can improve human welfare (Wood and Gough 2006), but they face challenges not generally present in developed countries. A key challenge is that developing countries have a smaller base of tax revenues, necessary for funding and sustaining social welfare programs.

In Chap. 3, Entrepreneurship: An Overview, we discuss challenges related to defining and measuring entrepreneurship. We begin with definitions of entrepreneurship currently used in the literature. Shane and Venkataraman's (2000) article in the Academy of Management Review provided an overview of the field of

[1] Rostow (1960) identified five stages of development.

entrepreneurship and defined entrepreneur "as a person who establishes a new organization" (p. 218). The process of creating a new organization needs an individual to recognize opportunity and be motivated to act, as well as a conducive institutional environment and access to various resources such as education and finances. Given that access to resources can vary across countries, the ability of individuals to engage in entrepreneurial activity also varies. In this chapter, we also examine differences in access to resources among male and female entrepreneurs. Differences in the quality and quantity of resources available to individuals shed light on long-standing questions about why some countries have more entrepreneurs than others.

Chapter 4 is titled Corruption: An Unsolved Puzzle. We start by discussing challenges presented by corruption which relate specifically to entrepreneurship. Corruption is not a recent or new phenomenon, but the level of corruption varies across countries. Additionally, when corruption is prevalent, it is present in almost all areas of public service. The presence of corruption in essential sectors of public services, such as education and health care, hurts recipients of services. Among these recipients, the adverse effects tend to be more severe on the poor than those who are relatively well off and who have financial resources necessary to extract benefits.

In Chap. 5, Corruption, Regulatory Regime, and Entrepreneurship, we discuss whether corruption always hinders entrepreneurship or if it can be used as a tool to sidestep burdensome regulatory environment. In many developing countries, corruption has become viewed as a social norm. Scholars have long studied the impact of corruption on development and investment, but this research has gained new breath as globalization introduced trade into the corruption question. Globalization puts pressure on countries to open borders in order to attract investment and gain competitive advantage, but institutions in a country do not change as fast as the economic activity across countries. In fact, institutions are extremely slow moving (Baumol 1990). Therefore, understanding the underlying framework and institutions that support different types of productive entrepreneurial activities (rather than unproductive activities) is important for policy makers who want to promote and channel economic development (Baumol 1993).

Chapter 6 is titled Interplay of Corruption, Entrepreneurship, and Social Welfare. In this chapter, we explore how corruption affects the distribution of income generated through entrepreneurial activities. As entrepreneurship levels vary across countries, income equality also varies. Entrepreneurial activity, be it through self-employment or creation of new organizations, contributes to the well-being of the local community. Human actions are the result of motivational and cognitive components, and an individuals' decision to engage in entrepreneurial activity is motivated either by necessity or by recognizing opportunity. Regardless of motivation, productive entrepreneurial activity has positive spillover effects by creating jobs, not only for the entrepreneur but also for other members of the society. These can create broader gains for the local and greater community.

In the Epilog, we highlight key insights from the book, and identify some of the main lessons and key "takeaways." Institutional quality undoubtedly is one of the

important drivers of the quantity and impact of productive entrepreneurship. Yet the persistence of poor-quality institutions is visible across a spectrum of countries. While policy makers search for ways to promote entrepreneurial activity and vitality, they can also become institutional entrepreneurs themselves and seek to change social institutions, build capacity, and promote a culture of entrepreneurial activity.

## References


Acemoglu, D., & Robinson, J. A. (2013). *Why nations fail: The origins of power, prosperity, and poverty*. New York: Crown Business.

Acs, Z. J., Carlsson, B., & Karlsson, C. (1999). *Entrepreneurship, small and medium-sized enterprises and the macroeconomy*. Cambridge: Cambridge University Press.

Aghion, P., Bloom, N., Blundell, R., Griffith, R., & Howitt, P. (2005). Competition and innovation: An inverted-U relationship. *The Quarterly Journal of Economics, 120*(2), 701–728.

Africa Report. (2012). *Outsourcing: The Indian connection and Africa*. Retrieved July 31, 2016, from http://www.theafricareport.com/North-Africa/outsourcing-the-indian-connection-and-africa.html

Altenburg, T., Schmitz, H., & Stamm, A. (2008). Breakthrough? China's and India's transition from production to innovation. *World Development, 36*(2), 325–344.

Amiti, M. (2001). Regional specialization and technical leapfrogging. *Journal of Regional Science, 41*(1), 149–172.

Amsden, A. H. (2010). Say's law, poverty persistence, and employment neglect. *Journal of Human Development and Capabilities, 11*(1), 57–66.

Amsden, A. H. (2012). Grass roots war on poverty. *World Economic Review, 1*, 114–131.

Audretsch, D. B., & Thurik, A. R. (2001a). What's new about the new economy? Sources of growth in the managed and entrepreneurial economies. *Industrial and Corporate Change, 10*(1), 267–315.

Audretsch, D. B., & Thurik, A. R. (2001b). Capitalism and democracy in the 21st century: From the managed to the entrepreneurial economy. In D. C. Mueller & U. Cantner (Eds.), *Capitalism and democracy in the 21st century* (pp. 23–40). Heidelberg: Physica-Verlag HD.

Auer, R. A., Degen, K., & Fischer, A. M. (2013). Low-wage import competition, inflationary pressure, and industry dynamics in Europe. *European Economic Review, 59*, 141–166.

Autor, D., Dorn, D., & Hanson, G. (2013). The China syndrome: Local labor market effects of import competition in the United States. *The American Economic Review, 103*(6), 2121–2168.

Bartel, A., Ichniowski, C., & Shaw, K. (2007). How does information technology affect productivity? Plant-level comparisons of product innovation, process improvement, and worker skills. *The quarterly journal of Economics, 122*(4), 1721–1758.

Basu, P., & Bhattarai, K. (2012). Cognitive skills, openness and growth. *Economic Record, 88*(280), 18–38.

Baumol, W. J. (1990). Entrepreneurship, productive, unproductive, and destructive. *Journal of Political Economy, 98*(5), 893–921.

Baumol, W. J. (1993). Formal entrepreneurship theory in economics: Existence and bounds. *Journal of Business Venturing, 8*(3), 197–210.

Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics, 7*(5), 471–505.

Bloom, N., Draca, M., & Van Reenen, J. (2011). *Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity*. National Bureau of Economic Research (No. w16717).

Bloom, N., Draca, M., & Van Reenen, J. (2016). Trade induced technical change? The impact of Chinese imports on innovation, IT and productivity. *The Review of Economic Studies, 83*(1), 87–117.

Boskin, M. J. (2016, October). Out of ammunition to Combat Recession? *Project Syndicate*.
Bugamelli, M., Schivardi, F., & Zizza, R. (2008). *The Euro and firm restructuring*. NBER Working Paper No. 14454.
Bustos, P. (2011). Trade liberalization, exports, and technology upgrading: Evidence on the impact of MERCOSUR on Argentinian firms. *The American Economic Review, 101*(1), 304–340.
Cartiglia, F. (1997). Credit constraints and human capital accumulation in the open economy. *Journal of International Economics, 43*, 221–236.
Commission on Growth and Development. (2008). *Growth report: Strategies for sustained growth and inclusive development*. Washington, DC: World Bank.
De Loecker, J., Goldberg, P. K., Khandelwal, A. K., & Pavcnik, N. (2016). Prices, markups, and trade reform. *Econometrica, 84*(2), 445–510.
Dollar, D., & Kraay, A. 2001. *Growth Is Good for the Poor*. World Bank Policy Research Working Paper No. 2587. Washington: World Bank.
Fernandes, A. M., & C. Paunov (2010). *Does trade stimulate innovation? Evidence from firm-product data*. OECD Development Centre Working Papers 286, OECD Publishing.
Freeman, R. B., & Kleiner, M. M. (2005). The last American shoe manufacturers: Decreasing productivity and increasing profits in the shift from piece rates to continuous flow production. *Industrial Relations: A Journal of Economy and Society, 44*(2), 307–330.
Gorodnichenko, Y., Kukharskyy, B., & Roland, G. (2015). Culture and global sourcing. National Bureau of Economic Research. Working Paper No. w21198.
Greenstein, J. (2015). New patterns of structural change and effects on inclusive development. WIDER Working Paper 2015/006.
Holmes, T. J., & Schmitz, J. A. (2010). Competition and productivity: A review of evidence. *Annual Review of Economics, 2*, 619–642.
Humphrey, J., & Schmitz, H. (2002). How does insertion in global value chains affect upgrading in industrial clusters? *Regional Studies, 36*(9), 1017–1027.
International Labour Organization. (2011). *Decent work decade resource kit: Competitiveness, productivity and jobs*. Retrieved from http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_098152.pdf.
Long, N.V., Raff, H., & Stähler, F. (2011). Innovation and trade with heterogeneous firms. *Journal of International Economics, 84*(2), 149–159.
Lorenzen, M., & Mudambi, R. (2012). Clusters, connectivity and catch-up: Bollywood and Bangalore in the global economy. *Journal of Economic Geography, 13*, 501–534.
Moreira, M. M. (2007). Fear of China: Is there a future for manufacturing in Latin America? *World Development, 35*(3), 355–376.
Porter, M. E., Sachs, J. D., & McArthur, J. W. (2002). Executive summary: Competitiveness and stages of economic development. In M. E. Porter, J. D. Sachs, P. K. Cornelius, J. W. McArthur, & K. Schwab (Eds.), *The global competitiveness report 2001–2002* (pp. 16–25). New York: Oxford University Press.
Ranis, G., & Fei, J. C. (1961). A theory of economic development. *The American Economic Review, 51*(4), 533–565.
Reddy, S. (2013). Economics beyond the economists. *Economic and Political Weekly, 48*(33), 1013.
Reynolds, P., Hay, M., & Camp, S. (1999). *GEM global entrepreneurship monitor: 1999 executive report*. Kauffman Center for Entrepreneurial Leadership.
Rostow, W. W. (1960). *The process of economic growth*.
Shah, A. (2013). *Poverty facts and stats*. Retrieved July 22, 2016, from http://www.global issues.org
Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217–226.
Stenholm, P., Acs, Z. J., & Wuebker, R. (2013). Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of Business Venturing, 28*(1), 176–193.
Stiglitz, J. E. (2007). *Making globalization work*. New York: s.

Syrquin, M. (1988). Patterns of structural change. *Handbook of Development Economics, 1*, 203–273.

Transparency International. (2007). *Corruption in the education sector*. Working Paper #04.

Transparency International. (2015). *Tax systems: A channel for corruption or a way to fight it?* Working Paper #03.

United Nations. (2015). *The millennium development goals report*. New York.

Verheul, I., Wennekers, S., Audretsch, D., & Thurik, R.. (2001). *An eclectic theory of entrepreneurship: Policies, institutions and culture*. Tinbergen Institute Discussion Paper No. 01-030/3.

Webb, J. W., Kistruck, G. M., Ireland, R. D., & Ketchen, D. J., Jr. (2010). The entrepreneurship process in base of the pyramid markets: The case of multinational enterprise/nongovernment organization alliances. *Entrepreneurship Theory and Practice, 34*(3), 555–581.

Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics, 24*(3), 293–309.

Wood, G., & Gough, I. (2006). A comparative welfare regime approach to global social policy. *World Development, 34*(10), 1696–1712.

William J. Baumol, (1990) Entrepreneurship: Productive, Unproductive, and Destructive. Journal of Political Economy 98 (5, Part 1):893–921.

# Chapter 2
# The Grand Challenges of Social Welfare

## 2.1 Rise of Welfare States

"Welfare state" is conceptualized as a state committed to modifying the play of social or market forces in order to achieve greater equality (Ruggie 1988, p. 11). Lindbeck (1988) defined a welfare state as having different types of public programs subsidized by public finance. Government can create social assistance programs and insurance to help those in need, and a majority of these programs provide healthcare-related services, childcare, education, social security, and services for elderly. The expansion of welfare programs mainly took place during the 1960s and 1970s in almost all industrialized countries (Cox 1998), but welfare programs still tend to be small in number and scope in many developing countries.

The development of the social welfare state has been examined through three main scholarly lenses: modernization theory, polity or state-centered theory, and power resource theory. Modernization theory focuses on development since it increases welfare state provisions (Wilensky 1975, 2002). Polity or state-centered theory focuses on the importance and role of the state (Orloff 1993; Skocpol 1992). Lastly, power resource theory focuses on the class structure in a society, and competition over access to available resources (Esping-Anderson 1990; Huber and Stephens 2001). Regardless of the lens, a primary purpose of the welfare states was to create social safety nets or protection for the members of the society by focusing to meet the basic need of the members of society. However, critics of the welfare state argue that the welfare state undermines family and community responsibility and also interferes with the market.

Following the path of developed countries, many developing and emerging economies have adopted welfare policies, but the effectiveness of the state as a service provider has increasingly come under scrutiny. Rodger (2000) suggests that in recent history, many developed countries have been moving from welfare state



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_2

toward *welfare society*. The difference between these is the role of government: Government plays a major role in a welfare state, while the private sector is involved in a welfare society. Notwithstanding who is providing the services, the goal of a welfare system is to provide social protection and help to reduce inequality in the society. However, spending in the social protection programs varies across countries as reported by the ILO (2014). Western European countries spend 2.2% of GDP on the child and family benefits whereas African countries spend about 0.2% of GDP and Asian countries spend 1.5% of GDP. When government spends in the education sector, members of the society who have limited access to education tend to benefit from this service. For instance, Davoodi et al. (2003) found that in the sub-Saharan African countries 12.8% to the primary education spending went to the lowest quantile of the population. Yet, the result was reversed for the secondary and tertiary levels. According to the study, only 7.4% and 5.2% of the spending for the secondary and tertiary levels, respectively, went to the lowest quantile of the population, contrary to 38.7% and 54.4% that went to the richest quintile. Recently the World Bank (2012) has recognized that the positive spillover effect of the social protection can help to create human capital in the society. If an individual is not constantly concerned about the basic need of the family, then they can exert their effort in the productive activity of the society. A study conducted by Higgins and Pereira (2014) explored the impact of government distribution on income inequality. The study included the United States and Brazil and determined that government spending in the health and education reduced income inequality in both countries. However, the study suggests that the result should be taken with a caveat because members of the middle and upper income group moved away from the public education and health services toward private services.

## 2.2 The Relationship Between Economic Development and Income Inequality

Economic inequality issue has become a central argument among both critics and proponents of globalization, and has become a mainstream topic in local and national political arenas around the world. In countries like the United Kingdom and the United States and across Europe, income inequality has been blamed on globalization, and is linked to economic nationalism and even populist movements in several countries. In developing countries, the problem of inequality has a long history but has taken a new face with globalization.

The relationship between income inequality and economic development has been debated for decades. Kuznets (1959) showed that a U-shaped relationship exists between economic development and income inequality, suggesting that at initial stages of development, income inequality can be good. Recent theoretical and empirical studies suggest that inequality deters economic development. Despite continued debate on the relationship between income inequality and economic

development, researchers have also examined reasons underlying continued inequality, and have found that political environment, resource endowment, and institutions all play a role in generating income inequality in a society.

## 2.3 Some Additional Causes Underlying Inequality

The debate between the relationship between income inequality and development is still not settled. At the same time, researchers have been trying to determine how other social structures and political institutions can influence the income inequality level in society. For instance, democratic political institutions are more likely to reduce inequality than authoritarian conditions or an oligarchic society (Zacher and Matthew 1995). Along with economic development, other macroeconomic factors such as inflation, education policies, and infrastructure can help reduce inequality in a society (Lopez 2004).

In recent years, researchers have sharpened their focus on the role of the financial sector. Globalization has placed greater on financial sector development as well as financial liberalization, and change has been significant especially in the many developing countries coming from central planning or protectionist economic traditions. Financial development may enable the poor to borrow for productive projects, which may in turn help reduce income inequality (Galor and Moav 2004). Improved access to financial resources would also allow people to make an investment in formal education or technical training which are necessary for reducing income inequality (Law et al. 2014). However, poor institutions and information asymmetry in developing countries can put the poor at a disadvantage. For example, the poor and particularly the unbanked poor face barriers acquiring collateral and credit histories, which are both required to borrow from formal financial institutions. For this reason, although financial liberalization creates institutional structures which in principle are available to everybody, it is more likely to benefit well-off individuals because it is more difficult for the poor to participate.

In many developing countries, economic wealth and political influence are concentrated, often in the hands of a small proportion of the population or even a small number of families in a country. This type of entrenchment can further prevent the poor from accessing opportunities related to globalization because they lack not only the financial or other resources (e.g., lending history) to participate in financial institutions, but also access to political know-how, connections, and information. A study by Rajan and Zingales (2003) demonstrates that political influence is a major determinant of access to finance in a weak institutional environment, where the poor have greater barriers to access. Scholars have also examined how access to opportunity (or lack thereof) (Roemer 1993; Dworkin 1981; Arneson 1989, 1990) and "access to advantage" (Cohen 1989) contribute to the inequality. An important area of focus has been the healthcare sector. In many of the developing countries, individuals who are well off in the society tend to receive a higher quality of health care. Government spending also tends to be higher in this area. Anselmi et al.'s (2015) study examined

health sector expenditure in the low- and middle-income countries. The study concluded that healthsector spending tends to favor the rich. However, the study distinguished between the primary care expenditure, hospital care, outpatient care, and inpatient care. O'Donnell et al.'s (2007) study included developing countries in Asia and concluded that individuals with higher income received more healthcare spending than the individuals in the low-income level. In countries like Bangladesh, India, and Indonesia, 30% of the healthcare spending went to richest quintile.

### *2.3.1 Land Tenure and Asset Holding*

In developing countries, the land is a major asset and represents a vehicle for investment, accumulation of wealth, intergenerational wealth transfer, and of course income. In fact, anywhere around 70–80% of the rural population in developing countries have agriculture as a major source of income, so growth in the agricultural sector can help reduce inequality in these countries (Johnston and Kilby 1975; Coxhead et al. 1991; Datt and Ravallion 1998a, b). However, the history of the land tenure system in many developing countries also reflects unequal distribution that originated or worsened with colonialism (Banerjee and Iyer 2005). This unequal distribution continues in some developing countries. Deininger and Squire (1998) show that high asset inequality, including land distribution as a proxy for the asset, has a significant negative impact on growth. On the other hand, Birdsall and Londono (1997) treated initial asset inequality as a control variable and did not find a significant impact on growth. While the impact of the asset inequality on economic growth is mixed, its role combined with the availability of a safety net can play an important role in entrepreneurship.

### *2.3.2 Wage Gap by Gender*

Over the past decades, international organizations and governments in different countries have promoted and implemented policies to encourage women in the labor market and in political arenas (Krook 2009). However, labor market participation remains at the level of 40–50% in some countries (World Economic Forum 2016). In many developing countries, women have limited access to the formal labor market, particularly compared to women in developed countries. On average, around the world, 54% of women participate in the formal workforce while 81% of men participate. In agrarian focused countries, women work in family firms or nonfamily firms at a lower wage (Singh et al. 1986). In the Middle East and North African (MENA) countries, the female participation in the labor force is even lower than the global average, at around 25% (Herzberg and Sisombat 2016). According to the recent Global Gender Gap Report (World Economic Forum 2016), women generally make up a larger portion of the labor force that is discouraged to seek jobs in the

male-dominated industries. Women tend to have a higher rate of unemployment compared to men. The World Bank estimates that if women were able to participate in countries where there is discrimination in at least some sectors or occupations, labor productivity would increase by approximately 25% (World Bank 2012).

The existence of a wage gap between men and women in the labor force is almost universal but more pronounced in some countries than others. The most recent global figures show that men on average earn approximately more than 7000 dollars over women (World Economic Forum 2016). Another study by the International Labor Organization (ILO), which included 83 countries, found that women earn around 10–30% less than men (Herzberg and Sisombat 2016). Additionally, women are more likely to work part-time and more likely than men to contribute to the family enterprise (World Economic Forum 2016).

The sociocultural environment also contributes to the wage gap in the society. In many societies, some jobs are traditionally associated with women and do not promise any long-term growth opportunity (Newman 2001; Kusago 2000; Katz 1995; Standing 1999). This lack of opportunity leads to a lack of experience over time, which can mean that a woman is employable at a low- rather than high-paying job. It also means that she may not be able to access opportunities, e.g., for education or skill acquisition, which could qualify her for employment in other sectors with better long-term growth opportunities. This is especially salient as the pace of globalization picks up speed in many developing countries, and growth opportunities expand significantly in some industries (like those which export, or those which are embedded in global value chains) but not others. Artecona and Cunningham (2001) concluded that a significant wage gap exists between industries participating in the international trade and industries that do not.

## 2.4 The Relationship Between Entrepreneurship and Welfare States

Motivation is a major driving force behind engaging in entrepreneurial activity. The motivation can grow out of necessity or recognition of an opportunity. Regardless of the motivation, income inequality can be a deterministic factor since it dictates access to necessary resources for the entrepreneurial activity, and welfare sources can mitigate some of the constraints posed by the income inequality.

The existing literature shows mixed results related to welfare, entrepreneurship, and economic activity. The intended goal of welfare programs has been to serve as a social safety net, which can in theory free people to invest their capital (and even take risks like starting a business) with the security that they would not need to pay for basic needs like education and health care, as they would be publicly provided. This did not pan out as originally intended in many places. For example, Henrekson (2005) examined Sweden—a country with expansive welfare programs—and found no positive relationship between welfare programs and entrepreneurship. Agell (1996) argues that public programs can actually reduce motivation for savings. Personal

savings are necessary for overall economic growth, as well as for entrepreneurial activity because savings are a venue for financial capital of entrepreneurs. Less personal savings also translates to less wealth accumulation in the long term. Several studies suggest that personal wealth has an important effect on the decision to engage in entrepreneurial activity (Blanchflower and Oswald 1998; Taylor 2001), and a positive relationship between wealth and entrepreneurship has been found in both Sweden (Lindh and Ohlsson 1996) and the United States (Holtz-Eakin et al. 1994).

In many developing countries, women have less access to education than male (Verheul et al. 2006). Even in developed countries, women often face more economic hardships than men (McLanahan et al. 1989). For instance, Mitchell (1993) found that women and/or families headed by women have the highest poverty level in the United States, followed by Canada and Australia. Proponents of welfare states argue that income transfer programs help to ameliorate or lessen the poverty burden (Garfinkel and McLanahan 1986; Piven 1985). Governments who provide better welfare services, like childcare subsidies, may encourage more female entrepreneurial activity. These services can be beneficial especially for female entrepreneurs, because it not only enables labor force participation, but can also enable investment in future participation, e.g., education (Oyitso and Olomukoro 2012), and empower them by giving them access to different realms of society such as social, political, and economic activities (Duflo 2012). Female empowerment benefits not only them but also immediate family and local community. For example, studies such as Kabeer (2005) and LeVine et al. (2001) concluded that education helps with improved cognitive skills, raised aspirations, and increased access to information. Educated women also tend to reduce violence against women in the society (Mocan and Cannonier 2012; Kabeer 2005; Sen 1999).

Historic evidence suggests that when women became increasingly involved in paid economic activity, welfare societies saw growth in demand for some welfare services, like childcare (Huber and Stephens 2000; Orloff 1993). This can put pressure on welfare state development. While welfare programs could help meet basic needs, they could also reduce incentives to generate income through entrepreneurship (Parker 2004; Henrekson 2005; Koellinger and Minniti 2009). For example, individuals who might be forced to become entrepreneurs, because they lack other opportunities in the wage labor market, might be able to receive similar returns from welfare programs and the intended business venture. This is an important consideration, especially in low-paying sectors. This is discussed more in the next section.

## 2.5 Social Protections and Challenges for the Government

The government can provide private goods such as education and healthcare services, which are important resources for both male and female entrepreneurs. A combination of these services with increased entrepreneurship activity can help to reduce income inequality. Verbist et al. (2012) examined a large sample of countries and found that government transfers related to education, health, housing, early

childhood education, childcare services, and long-term elderly care services help to reduce income inequality by 5.7 percentage points. Yet, in order to provide these services, the government needs sources of revenue that can pose a challenge for the government. Tax is an indicator of "states capacity, power, and political settlements" (Di John 2006, p. 1). Compared to developed countries, developing countries tend to have less revenue and less capacity in the tax and revenue collection system to effectively regulate and enforce tax policy.

In addition, developing countries have limited tax bases compared to developed countries, which can result from several related problems, such as low formal sector participation, poor filing and reporting compliance and enforcement, complicated tax policy, arbitrary tax collection procedures, and/or low tax morale. The composition of sources of tax revenue varies across countries. For instance, property tax revenues are low in many regions across the world such as the Middle East and North Africa (MENA), sub-Saharan Africa, and Asia, and the Pacific, and income taxes are a major source of tax revenue in developed countries (Bastagli 2015). Property taxes in many developing countries may be low because of ineffective statutory land titling systems and their enforcement, which bestow formal property rights and ownership to individuals, coupled with many of the problems already mentioned. Table 2.1 shows the average-level tax revenue in countries with different stages of development between 2001 and 2014. The average level of tax revenue in low-income countries was 10.33% of GDP during the period 2001–2005. In contrast, developed countries saw 18.80% tax revenues during the same period. Lower middle-income and upper middle-income countries had revenues between 13.90 and 17.44% in the same period. Between 2011 and 2014, low-income countries exceeded the revenues of lower middle-income countries by about 2 percentage points of GDP.

Welfare states also have their virtues and vices. They can play the role of "invisible hand" by restricting involvement in allocative decisions and can be a "helping hand" by promoting private economic activities. More welfare and public services mean a larger government sector, which can have two implications. First, as the size of government increases, it may be able to overtake decision-making power. By internalizing this power to the public sector and creating regulations to provide ser-

**Table 2.1** Levels of tax revenue 2001–2014 (average in percent of GDP)

| | 2001–2005 | 2006–2010 | 2011–2014 |
|---|---|---|---|
| High income | 18.80 | 19.01 | 18.73 |
| Low income | 10.33 | 11.40 | 14.44 |
| Lower middle income | 13.90 | 14.72 | 12.78 |
| Upper middle income | 17.44 | 19.52 | 18.64 |

Sources: International Monetary Fund, Government Finance Statistics Yearbook and data files, and World Bank and OECD GDP estimate. Income categories were based on World Bank 2015 classification—low-income countries have $1045 or less GNI per capita, lower middle-income countries have GNI per capita between $4036 and $1026; upper middle-income countries have GNI per capita between $4036 and $12,475; and high-income countries have GNI per capita of $12,476 or more

vices which were originally provided by the private sector, red tape can increase. Aidis et al. (2012) established that government size has a negative impact on entrepreneurship. Second, a larger government sector relies on a substantial tax base and has been associated with higher taxes overall. If taxes are very high, it could reduce entrepreneurial activity (Parker 2004) because individuals might have to give up more profits. Some conditions are especially relevant. This could discourage entrepreneurial activity especially in low-paying sectors or where industries are characterized by smaller profit margins if returns to the activity are close to returns from welfare programs. Also, high taxes could raise opportunity costs related to opportunity entrepreneurship by placing greater pressure on entrepreneurs to generate larger revenues quickly. In addition, both higher taxes and a larger government (if more bureaucratic) could reduce incentives for an entrepreneur to formally register a business (Estrin et al. 2013) because of higher taxes and higher compliance costs associated with bigger government (e.g., more product market regulation). Darin et al. (2011) examined tax rates and formal entry and entrepreneurial activity in 17 European countries between 1997 and 2004 and found a significant negative effect of taxation. Table 2.2 presents a summary of recent empirical studies related to the tax rate and entrepreneurship. Taxes tend to hurt small businesses more than larger businesses (Cullen and Gordon 2002) because most entrepreneurs start out small, and size itself could be a disadvantage. For example, Crane (2005) found that the

**Table 2.2** Summary of recent empirical studies related to tax policies

| Author | Effective tax policies on entrepreneurship |
|---|---|
| Belitski et al. (2016) | – |
| Baliamoune-Lutz and Garello (2014) | – |
| Da Rin et al. (2011) | – |
| Djankov et al. (2010) | – |
| Wennekers et al. (2005) | – |
| Van Stel et al. (2004) | – |
| Parker and Robson (2004) | + |
| Gurley-Calvez and Bruce (2013) | +, – (MTR[a] for wage, MTR for entrepreneurs) |
| Bruce and Deskins (2012) | + |
| Stenkula (2012) | – |
| Hansson (2012) | –, – (MTR[a], ATR[a]) |
| Bruce and Mohsin (2006) | – |
| Georgellis and Wall (2006) | –, + (U-shaped) |
| Stabile (2004) | –, + |
| Bruce (2000) | +, – (MTR, ATR) |
| Carroll et al. (2001) | – |
| Gentry and Hubbard (2000) | –, +(MTR, ATR) |
| Schuetze (2000) | + |

[a]MTR denotes marginal tax rate, ATR denotes average tax rate

cost of tax compliance for firms with less than 20 employees was estimated at $1304 per employee but $708 per employee for large firms.

Tax administration is a problem for many developing countries. In many, tax morale—defined as an individual's motivation to pay taxes—tends to be low (OECD 2014). Extensive regulations related to tax administration can raise the burden of compliance costs for entrepreneurs (Alon and Hageman 2013). Bacher and Brülhart (2010) found that more complicated tax systems reduce the rate of firm births. The effects of a burdensome tax policy and compliance could encourage entrepreneurs to decide not to start a business or to operate informally in order to avoid or evade taxes. Informal operations can be attractive especially for entrepreneurs "pushed" by necessity, more so than those who exploited an opportunity (van Stel et al. 2007).

The informal sector itself presents another challenge for tax authorities. Given the hidden nature of this manner of economic activity, it is difficult for tax authorities to effectively locate, assess, and tax actual revenues generated from the activity. Some countries have tried to expand coverage of the tax base by incorporating personal taxes in the taxation system, but this has been met with resistance from the employers (Fjeldstad and Heggstad 2011). In many instances, informal employers have been unwilling to register employees in order to remit personal income taxes.

## References


Agell, J. (1996). Why Sweden's welfare state needed reform. *The Economic Journal, 106*(439), 1760–1771.

Aidis, R., Estrin, S., & Mickiewicz, T. (2012). Size matters: Entrepreneurial entry and government. *Small Business Economics, 39*, 119–139.

Alon, A., & Hageman, A. M. (2013). The impact of corruption on firm tax compliance in transition economies: Whom do you trust? *Journal of Business Ethics, 116*(3), 479–494.

Anderson, G. E. (1990). *The three worlds of welfare capitalism*. Cambridge: Polity Press.

Anselmi, L., Lagarde, M., & Hanson, K. (2015). Equity in the allocation of public sector financial resources in low- and middle-income countries: A systematic literature review. *Health Policy and Planning, 30*(4), 528–545.

Arneson, R. (1989). Equality of opportunity for welfare‖. *Philosophical Studies, 56*, 77–93.

Arneson, R. (1990). Liberalism, distributive subjectivism, and equal opportunity for welfare. *Philosophy & Public Affairs, 19*(2), 158–194.

Artecona, R., & Cunningham, W. (2001). *Effects of trade liberalisation on the gender wage gap in Mexico*. World Bank: Mimeo.

Bacher, H. U., & Brülhart, M. (2010). *Progressive taxes and firm births*. Working paper. CEPR Discussion Paper No. 7830. Retrieved from www.cepr.org/pubs/dps/DP7830.asp.

Banerjee, A., & Iyer, L. (2005). History, institutions, and economic performance: The legacy of colonial land tenure systems in India. *The American Economic Review, 95*(4), 1190–1213.

Bastagli, F. (2015). *Bringing taxation into social protection analysis and planning*. Overseas Development Institute. Retrieved from http://www.odi.org/sites/odi.org.uk/files/odi-assets/publicationsopinion-files/9717.pdf.

Belitski, M., Chowdhury, F., & Desai, S. (2016). Taxes, corruption, and entry. *Small Business Economics, 47*(1), 201–216.

Baliamoune-Lutz, M., & Garello, P. (2014). Tax structure and entrepreneurship. *Small Business Economics, 42*(1),165–190.

Birdsall, N., & Londono, J. (1997). Asset inequality matters: An assessment of the World Bank's approach to poverty reduction. *American Economic Review Papers and Proceeding, 87*(2), 32–37.

Blanchflower, D. G., & Oswald, J. (1998). What makes an entrepreneur. *Journal of Labor Economics, 16*, 26–60.

Bruce, D. (2000) Effects of the United States tax system on transitions into self-employment. *Labour Economics, 7*(5), 545–574.

Bruce, D., & Deskins, J. (2012). Can state tax policies be used to promote entrepreneurial activity? *Small Business Economics, 38*(4), 375–397.

Bruce, D., & Mohsin, M. (2006). Tax Policy and Entrepreneurship: New Time Series Evidence. *Small Business Economics, 26*(5), 409–425.

Carroll, R., Holtz-Eakin, D., Rider, M., & Rosen, H. S. (2001). Personal income taxes and the growth of small firms. *Tax Policy and the Economy, 15*, 121–147.

Cohen, J. (1989). Democratic Equality. *Ethics, 99*(4), 727–751.

Cox, R. H. (1998). The consequences of welfare reform: How conceptions of social rights are changing. *Journal of Social Policy, 27*(01), 1–16.

Coxhead, I. A., Warr, P. G., & Crawford, J. (1991). Technical change, land quality, and income distribution: A general equilibrium analysis. *American Journal of Agricultural Economics, 73*(2), 345–360.

Crane, C. (2005). Liabilities and the need to keep the income tax base closed. *Virginia Tax Review, 25*, 31.

Cullen, J. B., & Gordon, R. H. (2002). *Taxes and entrepreneurial activity: Theory and evidence for the US*. NBER Working Paper No. 9015.

Da Rin, M., Di Giacomo, M., & Sembenelli, A. (2011). Entrepreneurship, firm entry, and the taxation of corporate income: Evidence from Europe. *Journal of Public Economics, 95*(9), 1048–1066.

Datt, G., & Ravallion, M. (1998a). Why have some Indian states done better than others at reducing rural poverty? *Economica, 65*(257), 17–38.

Datt, G., & Ravallion, M. (1998b). Farm productivity and rural poverty in India. *The Journal of Development Studies, 34*(4), 62–85.

Davoodi, H., Tiongson, E., & Asawanuchit, S. (2003). *How useful are benefit incidence analyses of public education and health spending?* IMF working paper WP/03/227.

Deininger, K., & Squire, L. (1998). New ways of looking at old issues: Inequality and growth. *Journal of development economics, 57*(2), 259–287.

Di John, J. (2006). *The political economy of taxation and tax reform in developing countries* (No. 2006/74). Research Paper, UNU-WIDER, United Nations University (UNU).

Djankov, S., Ganser, T., McLiesh, C., Ramalho, R., & Shleifer, A. (2010). The effect of corporate taxes on investment and entrepreneurship. *American Economic Journal: Macroeconomics, 2*(3), 31–64.

Duflo, E. (2012). Women's empowerment and economic development. *Journal of Economic Literature, 50*(4), 1051–1079.

Dworkin, R. (1981). What is equality? Part I: Equality of welfare; Part 2: Equality of resources. *Philosophy and Public Affairs, 10*, 185–246; 283–345.

Estrin, S., Korosteleva, J., & Mickiewicz, T. (2013). Which institutions encourage entrepreneurial growth aspirations? *Journal of Business Venturing, 28*(4), 564–580.

Fjeldstad, O. H., & Heggstad, K. (2011). The tax systems in Mozambique, Tanzania and Zambia: Capacity and constraints. *CMI Report*, 3.

Galor, O., & Moav, O. (2004). From physical to human capital accumulation: Inequality and the process of development. *Review of Economic Studies, 71*, 1001–1026.

Garfinkel, I., & McLanahan, S. S. (1986). *Single mothers and their children: A new American dilemma*. Washington, DC: The Urban Institute.

Georgellis, Y., & Wall, H. J. (2006). Entrepreneurship and the policy environment. *Federal Reserve Bank of St Louis Review, 88*(2), 95–111.

Gentry, W. M., & Hubbard, R. G. (2000). Tax policy and entrepreneurial entry. *The American economic review, 90*(2), 283–287.

Gurley-Calvez, T., & Bruce, D. (2013). Do tax rate cuts encourage entrepreneurial entry? *Journal of Entrepreneurship and Public Policy, 2*(2), 178–202.

Hansson, Å. (2012). Tax policy and entrepreneurship: Empirical evidence from Sweden. *Small Business Economics, 38*(4), 495–513.

Henrekson, M. (2005). Entrepreneurship: A weak link in the welfare state? *Industrial and Corporate Change, 14*(3), 437–467.

Herzberg, B. and Sisombat, L., 2016. Gender-informed public-private dialogue.

Higgins, S., & Pereira, C. (2014). The effects of Brazil's taxation and social spending on the distribution of household income. In N. Lustig, C. Pessino & J. Scot (Eds.), *The redistributive impact of taxes and social spending in Latin America*. Special Issue. Public Finance Review, May, Volume 42, Issue 3 and CEQ Masterworkbook: Brazil, November 4.

Higgins, S., Lustig, N., Ramirez, J., & Swanson, B. (2013). Social Spending, taxes and income redistribution in Paraguay. Commitment to Equity Working Paper, (13).

Holtz-Eakin, D., Joulfaian, D., & Rosen, H. S. (1994). Sticking it out: Entrepreneurial survival and liquidity constraints. *Journal of Political Economy, 102*, 53–75.

Huber, E., & Stephens, J. D. (2000). Partisan governance, Women's employment, and the social democratic service state. *American Sociological Review, 65*, 323–342.

Huber, E., & Stephens, J. D. (2001). *Development and crisis of the welfare state: Parties and policies in global markets*. Chicago: University of Chicago Press.

ILO. (2014). *World social protection report 2014: Building economic recovery, inclusive development and social justice*. Geneva: ILO.

Johnston, B. F., & Kilby, P. (1975). *Agriculture and structural transformation; economic strategies in late-developing countries*. New York: Oxford University Press.

Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. *Gender and Development, 13*(1), 13–24.

Katz, E. (1995). Gender and trade within the household: Observations from rural Guatemala. *World Development, 23*(2), 327–342.

Koellinger, P., & Minniti, M. (2009). Unemployment benefits crowd out nascent entrepreneurial activity. *Economic Letters, 103*, 96–98.

Krook, M. L. (2009). *Quotas for women in politics: Gender and candidate selection reform worldwide*. New York: Oxford University Press.

Kusago, T. (2000). Why did rural households permit their daughters to be urban factory workers? A case from rural Malay villages. *Labour and Management in Development Journal, 1*(2), 1–24.

Kuznets, S. (1959). Quantitative aspects of the economic growth of nations: IV. Distribution of national income by factor shares. *Economic Development and Cultural Change, 7*(3, Part 2), 1–100.

Law, S. H., Tan, H. B., & Azman-Saini, W. N. W. (2014). Financial development and income inequality at different levels of institutional quality. *Emerging Markets Finance & Trade, 50*, 21–33.

LeVine, R. A., LeVine, S. E., & Schnell, B. (2001). "Improve the women": Mass schooling, female literacy, and worldwide social change. *Harvard Educational Review, 71*(1), 1–51.

Lindbeck, A. (1988). Individual freedom and welfare state policy. *European Economic Review, 32*(2–3), 295–318.

Lindh, T., & Ohlsson, H. (1996). Self-employment and wealth inequality. *Review of Income and Wealth, 44*, 25–42.

Lopez, R. (2004). Income inequality and self-rated health in US metropolitan areas: A multi-level analysis. *Social Science & Medicine, 59*(12), 2409–2419.

McLanahan, S. S., Sørensen, A., & Watson, D. (1989). Sex differences in poverty, 1950–1980. *Signs, 15*, 102–122.

Mitchell, B. R. (1993). *International historical statistics: The Americas 1750–1988*. New York: Stockton Press.
Mocan, Naci H., & Colin Cannonier. (2012). *Empowering women through education: Evidence from Sierra Leone*. National Bureau of Economic Research.
Newman, C. (2001). *Gender, time use, and change: Impacts of agricultural export employment in Ecuador*. Washington, DC: World Bank, Development Research Group/Poverty Reduction and Economic Management Network.
O'Donnell, O., van Doorslaer, E., et al. (2007). The incidence of public spending on healthcare: Comparative evidence from Asia. *The World Bank Economic Review, 21*(1), 93–123.
OECD. (2014). *Domestic revenue mobilisation in fragile states*. Paris: Organisation for Economic Cooperation and Development.
Orloff, A. S. (1993). Gender and the social rights of citizenship: The comparative analysis of gender relations and welfare states. *American Sociological Review, 58*, 303–328.
Oyitso, M., & Olomukoro, C. O. (2012). Enhancing women's development through literacy education in Nigeria. *Review of European Studies, 4*(4), 66.
Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*. Cambridge: Cambridge University Press.
Parker, S. C., & Robson, M. T. (2004). Explaining international variations in self-employment: evidence from a panel of OECD countries. *Southern Economic Journal*, 287–301.
Piven, F. F. (1985). Women and the state: Ideology, power, and the welfare state. In *Gender and the life course* (pp. 265–287). New York: Aldine.
Rajan, R. G., & Zingales, L. (2003). The great reversals: The politics of financial development in the twentieth century. *Journal of Financial Economics, 69*, 5–50.
Rodger, J. J. (2000). *From a welfare state to a welfare society: The changing context of social policy in a postmodern era*. Basingstoke: McMillan Press.
Roemer, J. (1993). A pragmatic theory of responsibility for the egalitarian planner. *Philosophy & Public Affairs, 22*(2), 146–166.
Ruggie, M. (1988). Gender, work, and social progress: Some consequences of interest aggregation in Sweden. In *Feminization of the labour force* (pp. 172–188). New York: Oxford University Press.
Sen, P. (1999). Enhancing women's choices in responding to domestic violence in Calcutta: A comparison of employment and education. *The European Journal of Development Research, 11*(2), 65–86.
Schuetze, H. J. (2000). Taxes, economic conditions and recent trends in male self-employment: a Canada–US comparison. *Labour Economics, 7*(5), 507–544.
Singh, I., Squire, L., & Strauss, J. (1986). A survey of agricultural household models: Recent findings and policy implications. *The World Bank Economic Review, 1*(1), 149–179.
Skocpol, T. (1992). State formation and social policy in the United States. *The American Behavioral Scientist, 35*(4), 559.
Standing, G. (1999). Globalization through flexible labor: A theme revisited. *World Development, 27*(3), 583–602.
Stabile, M. (2004). Payroll taxes and the decision to be self-employed. *International Tax and Public Finance, 11*(1), 31–53.
Stenkula, M. (2012). Taxation and entrepreneurship in a welfare state. *Small Business Economics, 39*(1), 77–97.
van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics, 28*(2–3), 171–186.
Taylor, M. P. (2001). Self-employment and windfall gains in Britain: Evidence from panel data. *Economics, 68*, 539–565.
van Stel, A., Wennekers, S., Thurik, R., & Reynolds, P. (2004). Explaining variation in nascent entrepreneurship. In *Research Report H200401, SCALES SCientific AnaLysis of Entrepreneurship and SMEs*. Zoetermeer, Netherlands: EIM Business and Policy Research.

Verbist, G., Forster, M. F., & Vaalavuo, M. (2012). *The impact of publicly provided services on the distribution of resources—Review of new results and methods*. OECD Social, Employment and Migration Working Papers No. 130, OECD Publishing.

Verheul, I., Stel, A. V., & Thurik, R. (2006). Explaining female and male entrepreneurship at the country level. *Entrepreneurship and Regional Development, 18*(2), 151–183.

Wennekers, S., van Stel, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics, 24*, 293–309.

Wilensky, H. (1975). *The welfare state and equality: Structural and ideological roots of public expenditures*. Berkeley, CA: University of California Press.

Wilensky, H. L. (2002). *Rich democracies: Political economy, public policy, and performance*. Berkeley, CA: University of California Press.

World Bank. (2012). *Resilience, equity and opportunity. The World Bank's social protection and labor strategy 2012–2022*. Washington, DC: World Bank. Retrieved from http://siteresources.worldbank.org/SOCIALPROTECTION/ Resources /280558-1274453001167/7089867127922374545 4/7253917-1291314603217/SPL_ Strategy_2012-22_FINAL.pdf.

World Economic Forum. (2016). *The global gender gap report*. Geneva: World Economic Forum.

Zacher, M. W., & Matthew, R. A. (1995). Liberal international theory: Common threads, divergence strands. In C. W. Kegley Jr. (Ed.), *Controversies in international relation theory: Realism and the neoliberal challenge* (pp. 107–150). New York: St. Martin's.

# Chapter 3
# Entrepreneurship: An Overview

## 3.1 Entrepreneurship and the External Environment

Entrepreneurial activity is considered to contribute positively to the local community through job creation and other benefits (Audretsch and Thurik 2001; Reynolds et al. 1999; Wennekers and Thurik 1999), yet not all countries experience a similar level of entrepreneurial activity. Rather, it varies in different regions and in countries with different income levels. Country economic development has a significant impact on entrepreneurial activity, and more developed countries tend to generate more entrepreneurial activity. Audretsch and Thurik (2001) suggest that this can be attributed to policies: "Entrepreneurship generates growth because it serves as a vehicle for innovation and change, and therefore as a conduit for knowledge spillovers. Thus, in a regime of increased globalisation, where the comparative advantage of OECD countries is shifting towards knowledge-based activity, not only does entrepreneurship play a more important role, but the impact of that entrepreneurship is to generate growth" (Audretsch and Thurik, 2001, p. 32). Figure 3.1 shows that high-income countries have more than four times the entrepreneurial activity than low- and middle-income countries. Low-income countries tend to have the lowest level of entrepreneurial activity.

Entrepreneurship activity also varies by regions. Figure 3.2 presents average entrepreneurship activity level in different regions around the world. Of all the regions, the Middle East and North African (MENA) regions have the lowest level of entrepreneurial activity, next to South Asia. East Asian and sub-Saharan African countries have little more than one new firm with limited liability corporation status (LLC) registered annually per 1000 working-age people. European, Central Asian, and Latin American countries have slightly more than two new entries, and high-income countries have more than four new entries. The MENA (2017) Business



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_3

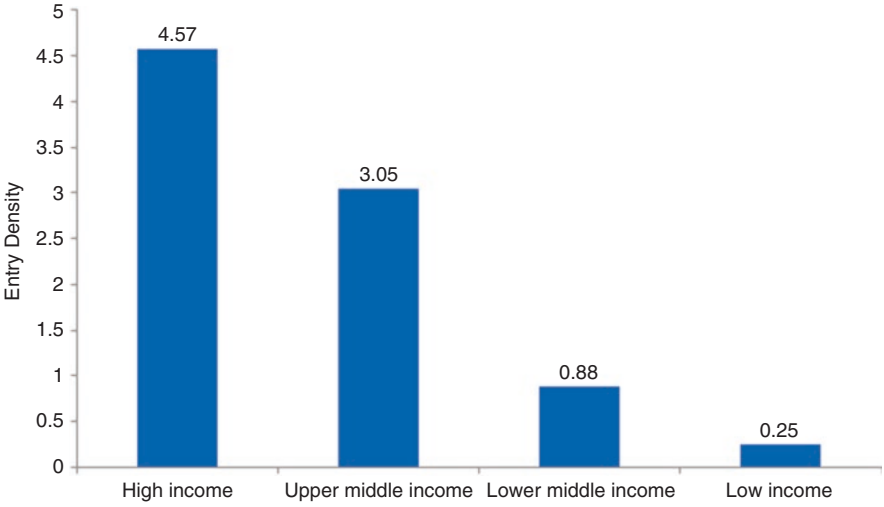



**Fig. 3.1** Average entry density by income group (2004–2012). Source: World Bank Enterprise Survey

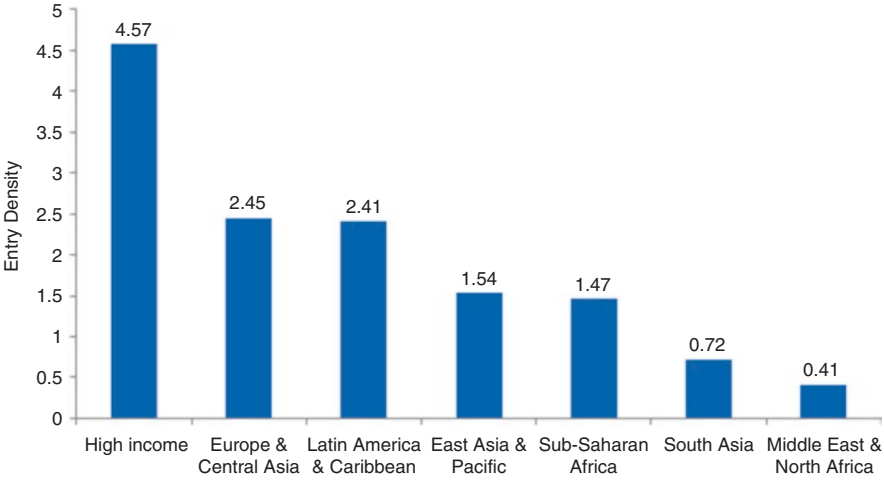



**Fig. 3.2** Average entrepreneurial activity by region (2004–2012). Source: World Bank

Climate report finds that large firms are a major source of employment in the region, while new firms face many obstacles that hinder their potential. Latin American and Caribbean countries and European and Central Asian countries have a similar level of entrepreneurial activity, at little more than two LLCs registered per 1000 people. East Asian and Pacific countries have more new entries than South Asian countries.

## 3.2 Debates Related to Entrepreneurship

There is no settled definition of entrepreneurship. Rather, it is defined in different ways by different disciplines. Hébert and Link (1989) defined entrepreneurship from an economist's perspective, viewing entrepreneurs as performers of social and economic functions. Others view entrepreneurship as an occupational or a behavioral option (Wennekers et al. 2005). The term has also been used in the business context for a long time. Knight (1942) defines an entrepreneur as an owner of a company/organization who takes a risk and receives profit. Entrepreneurs are viewed as risk takers, taking on various types of risks such as social, psychological, and financial (Hisrich and Peters 1992). Schumpeter's (1949) concept of an entrepreneur is someone who combines resources, acts as a "gap filler" who creates new goods, develops new production methods, opens new markets, finds new sources of supply, or creates new organizations and generates profit. Entrepreneurs are engaged in "creative destruction" by continuously making a change to existing products and processes by introducing new ideas/innovations. Hayek (1945) and Kirzner (1997) both conceptualize an entrepreneur as someone who is alert and recognize opportunities. Wennekers and Thurik (1999, p. 46–47) define entrepreneurship as:

> … the ability and willingness of individuals, both on their own, in teams, within and outside existing organizations, to 1) perceive and create new economic opportunities (new products, new production methods, new organizational schemes and new product-market combinations, and to 2) introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions.

More recently, Shane and Venkataraman (2000) defined entrepreneurship as "why, when, and how opportunities for the creation of goods and services come into existence; why, when, and how some people and not others discover and exploit these opportunities, and why, when, and how different modes of action are used to exploit entrepreneurial opportunities" (p. 218). Estrin et al. (2006) define entrepreneurship as individuals who act as leaders and combine resources and employ those resources to the enterprises that were previously owned by government/state.

## 3.3 Measures of Entrepreneurship

Similar to numerous conceptualizations of entrepreneurship, there is still disagreement regarding how it is operationalized and measured. The existing literature operationalizes entrepreneurship in several ways, including as self-employment, new formal firms, nascent entrepreneurship, and new firms. OECD defines self-employment as an individual take on personal liability to conduct business. Profit generated from this activity is used to cover these personal expenses and acts as an insurance provider for the stakeholders. The use of self-employment as a measure of entrepreneurship is well established (Blanchflower 2004; Audretsch 2002; Parker 2004; OECD 2002; Parker and Robson 2004) and predated many newer datasets and options for measuring entrepreneurship as new or expanded business activity.

New formal firms represent new economic enterprises, established as formal, legally registered businesses. The World Bank Global Enterprise Survey (WBGES) measures new formal firms across countries by identifying the number of newly registered limited-liability firms in the corresponding year as a percentage of the country's working-age population (ages 15–64), normalized by 1000 (Klapper et al. 2006). Along the same line, Carree et al. (2002, 2007) measure entrepreneurship as the rate of business ownership. This measure includes ownership rates in all the sectors except in the agricultural sector.

Global Entrepreneurship Monitor (GEM) has several measures that reflect different stages and types of entrepreneurial activity in a country. GEM started conducting surveys in different countries in 1999. The survey interviews at least 2000 individuals in each country. Stevenson and Lundström (2001) similar to Reynolds et al. (2002) define entrepreneurship as "mainly people in the pre-startup, startup and early phases of business" (Stevenson and Lundström 2001, p. 19). The total entrepreneurial activity (TEA) measure of GEM combines two measures of a country to reflect this number—the percentage of the labor force actively involved in starting a new venture and the percentage of individuals in the labor force who are either an owner or a manager of a business that is less than 42 months old. GEM also measures motivation behind taking on entrepreneurial activity by asking entrepreneurs reason behind taking on entrepreneurial activity. These measures are called necessity entrepreneurship and opportunity entrepreneurship. Necessity entrepreneurial activity is undertaken by individuals who have limited options for other work. Opportunity entrepreneurs search for new opportunities and exploit the opportunity (Reynolds et al. 2002).

## 3.4 Trends in Male and Female Entrepreneurship and Evidence of Venture Performance

Entrepreneurial activity varies across countries as well as by gender. In developing countries, female entrepreneurs face many cultural barriers, and families invest relatively fewer resources in young women. In many developing countries, male children are given preferential access to education. This gap in access to resources continues as individuals transition through various stages of life. Female members of society can contribute to productive economic activity if they have been able to take advantage of opportunities to invest, such as in their own human capital through education. This kind of investment can have multiplier effects in the long term. For example, women are more likely than men to invest a higher proportion of their incomes in their families and communities (Siba 2016).

Female participation in entrepreneurial activity has increased significantly over the years. In 2012, the Global Entrepreneurship Monitor (GEM) report found 126 million female entrepreneurs self-identified across 67 countries. De Bruin et al. (2006) found that in the United States, 6.7 million start-ups are owned and operated

by female entrepreneurs and more than 40% of women now own privately held firms—worldwide, this number is 25–33% (Minniti et al. 2005). Devine (1994) found that female engagement in self-employment and related activity nearly doubled from 1975 to 1990. Despite the increase, the number remains low compared to male entrepreneurs (Devine 1994; Fairlie and Woodruff 2007).

Figure 3.3 presents male and female self-employment and total entrepreneurial activity across countries. In a majority of the countries percentage of female entrepreneurs engaged in either self-employment or total entrepreneurial activity is less than male entrepreneurs. Few countries such as Surinam, Thailand, and Romania have similar level of male and female self-employment. With regard to total entrepreneurial activity, almost in all the countries more male entrepreneurs are engaged in either early stage or an owner/manager of a firm than female entrepreneurs.

Female and male entrepreneurs also differ in the performance of the venture but debate continues regarding the reason behind this difference. Female-led ventures tend to underperform compared to their male counterpart in sales, profits, and firm closing rate (Fairlie and Robb 2009; Bosma et al. 2004; Robb 2002; Fasci and Valdez 1998; Loscocco et al. 1991). Klapper and Parker (2011) concluded that "women entrepreneurs tend to underperform relative to their male counterparts" (p. 243). Bardasi et al. (2011) identified that the performance gap between the male and female entrepreneurs can be explained by "constrain-driven gaps" and "preference-driven gaps" (p. 419; Klapper and Parker 2010).

## 3.5 Gender Differences in Preference for Entrepreneurship

Male and female entrepreneurs do not reflect any significant difference related to age and education but motivation is different. While male and female entrepreneurs engage in entrepreneurship for independence and flexible work schedule, for women balancing female and work responsibility effectively is a major motivation. Studies have illustrated that female entrepreneurs with young children prefer flexible working schedule (Lombard 2001; Boden 1999). In developing countries, cultural norms also play a role. In many of the countries, women are also responsible for taking care of the family. Therefore, in order to meet the expectation of the family, they are being pushed into taking on entrepreneurial activity out of "necessity" (Aidis et al. 2007). On the other hand, the male individuals are more likely to be "pulled" into entrepreneurship because they want to pursue career advancement (Rosti and Chelli 2005).

## 3.6 Challenges for Male and Female Entrepreneurs

Access and availability of resources are important for both male and female entrepreneurs (Davidsson and Honig 2003; Honig 1998) but they face significant hurdles related to resources and the sector they chose to enter. For instance, women are

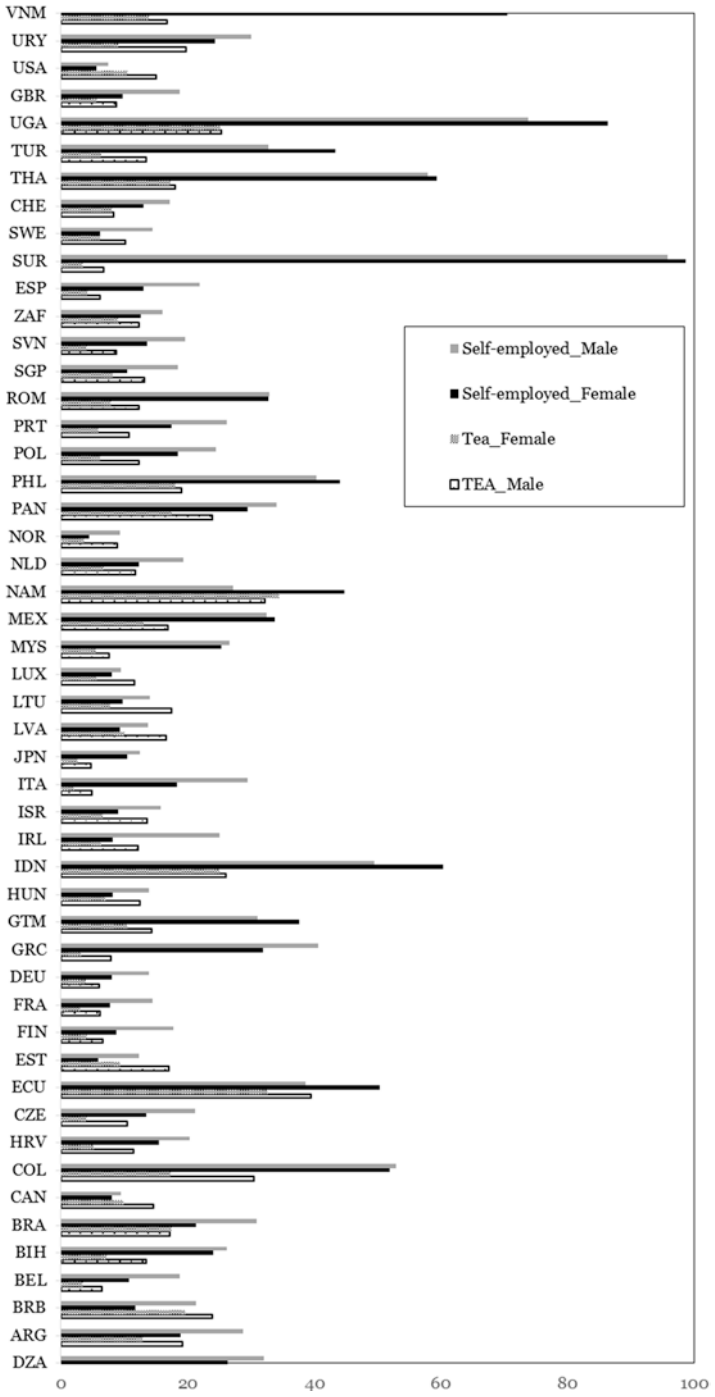



**Fig. 3.3** Male and female entrepreneurship across countries in 2013. Country name and abbreviations: DZA—Algeria, ARG—Argentina, BRB—Barbados, BEL—Belgium, BIH—Bosnia and Herzegovina, BRA—Brazil, CAN—Canada, COL—Colombia, HRV—Croatia, CZE—the Czech

more likely to enter service and retail (Hisrich and Brush 1984). Women also face challenges obtaining financial resources from formal financial institutions as well as protection from government authority. In many countries around the world, women are not able to own property which limits their ability to acquire financial resources. They are also limited with regard to participating in the political activity, labor force activity, and business activity.

### *3.6.1 Human Capital*

Human capital attributes—education, experience, knowledge, and skills—are critical resources for the starting, survival, and growth of start-up firms (Bosma et al. 2004; Cassar 2006). Scholars have distinguished between general human capital and specific human capital (Davidsson and Honig 2003; Schultz 1959; Becker 1964; Mincer 1974). The first is a generic knowledge or skill that can be accumulated through education and experience and can be transferable to different industries/economic settings. The second is associated with the individuals' professional and training experience that is not easily transferable.

A number of studies have considered the role of general and specific human capital of entrepreneurs (Bosma et al. 2004; Brüderl et al. 1992; Gimeno et al. 1997; Wiklund and Shepherd 2003) and found that entrepreneurs with higher level of human capital are more likely to strive for higher growth and profit (Cassar 2006). Bates (1990) found that entrepreneurs with a college education were less likely to fail than entrepreneurs who did not have it. Kangasharju and Pekkala (2002) studied Finnish entrepreneurs and found that education was a significant predictor of firm survival and growth during economic volatility. The study also found that highly educated individuals were also less likely to exit. Pena (2002) studied Spanish firms and found that firms that experienced growth were likely to be managed by college-educated entrepreneurs. Loscocco et al. (1991) found that industry experience was a major determinant of the success of small businesses. Carter and Allen (1997) found that experience in an industry, businesses, and partnership reduced the likelihood of exiting or discontinuing the business. Brush and Chaganti (1998) found that formal education and industry experience had an impact on firm performance. The study measured firm performance by net cash flow and employment. Bosma et al. (2004) studied more than 1000 firms in the Netherlands and found that experience in industry substantially improves small firm performance related to survival, profitability, and growth.

**Fig. 3.3** (continued) Republic, ECU—the Czech Republic, EST—Estonia, FIN—Finland, FRA—France, DEU—Germany, GRC—Greece, GTM—Guatemala, HUN—Hungary, IDN—Indonesia, IRL—Ireland, ISR—Israel, ITA—Italy, JPN—Japan, LVA—Latvia, LTU—Lithuania, LUX—Luxembourg, MYS—Malaysia, MEX—Mexico, NAM—Namibia, NLD—the Netherlands, NOR—Norway, PAN—Panama, PHL—Philippines, POL—Poland, PRT—Portugal, ROM—Romania, SGP—Singapore, SVN—Slovenia, ZAF—South Africa, ESP—Spain, SUR—Suriname, SWE—Sweden, CHE—Switzerland, THA—Thailand, TUR—Turkey, UGA—Uganda, GBR—United Kingdom, USA—United States, URY—Uruguay, VNM—Vietnam

Female entrepreneurs are more likely than men to lack an adequate level of human capital either be in terms of formal education or managerial skills necessary for the start-up or beyond. Women spend relatively more time in child-rearing and family responsibility than men (Parker 2009). Therefore they often have poor access to the labor force and have less entrepreneurial experience, industry experience, and paid employment (Lee and Rendall 2001; Loscocco et al. 1991). Several empirical studies showed that female entrepreneurs have less managerial experience than male entrepreneurs (Boden and Nucci 2000; Carter and Allen 1997; Lerner et al. 1997; Loscocco et al. 1991). Human capital can not only assist with the performance of start-up firms, but also help with acquiring financial resources (Chandler and Hanks 1998).

## 3.7 Financial Sector and Challenges of Acquiring Financial Capital

The contribution of financial development to the entrepreneurship, innovation, and growth has shown to be positive (King and Levine 1993; Levine and Zervos 1998; Atje and Jovanovic 1993). However, the level of development of the financial sector and access to finance by individuals, entrepreneurs, and firms varies across countries. The level of financial development increases firms' ability to access external financial resources and competition among financial institutions. Rajan and Zingales' (1998) study showed that the cost to acquire financial resources from financial institutions is less in countries with the well-established financial sector because the cost of acquiring and processing information is less in countries with the well-established financial sector (Boyd and Prescott 1986).

The development of the financial sector is more important for the new ventures than the established firms. Established firms have more resources that can be used as collaterals, social networks, and political capital to get access to formal financial institutions, and options to raise funds from external sources such as venture capitals. The established firms in the developing countries can use their political connection to get access to financial resources (Khwaja and Mian 2005) or corporate bond market or securities market (e.g., Beck et al. 2008). Availability of these sources for smaller/new venture firms is limited to none. For the new ventures access to financial resources from the local area reduces the cost to borrow as these new firms suffer from liabilities of newness, credibility, and legitimacy (Guiso et al. 2009). These also translates to riskiness for the financial institutions. Due to the limited availability of information regarding the new ventures for the financial institutions, financial institutions will be more likely to choose less risky firms than new ventures. Information asymmetry can be alleviated by the well-developed competitive market as suggested by the literature such as Petersen and Rajan (1995). This study shows that banks will be willing to establish a long-term relationship with the new ventures if they have more market-related power. Dinc (2000) shows that the rela-

tionship between competition and access to credit is not linear, rather the relationship is an inverted U-shaped. A similar result was found by Beck et al. (2003) and Cetorelli and Peretto (2000).

## 3.8 Finance: Bigger Challenge for Female than Male Entrepreneurs

Financial capital is an important resource for new start-up firms to survive and succeed in the long run (Parker 2009), but entrepreneurs face challenges in acquiring it. Financial capital allows individuals to put their ideas into practice by covering the initial fixed costs and subsequent capital investments, initial size (Brüderl et al. 1992), growth (Cooper et al. 1994; Colombo and Grilli 2005), and survival.[1] In order to overcome this challenge, entrepreneurs acquire resources from different sources such as banks, venture capital funds, friends, and family.

From the start of the business ownership, female entrepreneurs face greater challenges acquiring financial capital than men. Several cross-country studies have shown that female entrepreneurs are more likely to pay higher interest rate than male entrepreneurs (Muravyev et al. 2009). Orser et al. (2000) studied 1000 Canadian firms and found that female entrepreneurs were more concerned about access to capital than any other business-related problem. Empirical studies found that female-owned start-ups have a lower level of start-up capital (Apilado and Millington 1992; Verheul and Thurik 2001) and are financed differently than male-owned businesses (Brush et al. 2002). Since female entrepreneurs tend to run smaller businesses, they prefer to use less formal and informal equity finance than male entrepreneurs (Parker 2009). They also have access to less debt financing (Haines et al. 1999), private equity, or venture capital (Brush et al. 2002; Greene et al. 2001). Coleman (2002) found that women were more reluctant than men to apply for loans even though the likelihood of them being denied was similar to men. However, women are often required to show more collateral than men (Riding and Swift 1990). In instances where male and female entrepreneurs use the same sources for finance such as formal financial institutions (banks), angel investor, and venture capital, women tend to receive smaller credit than men (Fabowale et al. 1995; Coleman 2000). Women often are dissatisfied with their relationship with financial institutions and feel that they are often discriminated against (Walker and Joyner 1999; Fabowale et al. 1995; Buttner and Rosen 1989); female entrepreneurs also pay a higher cost for the capital (Carter and Cannon 1992; Carter 2000). Muravyev et al.'s (2009) study included countries from Europe and Central Asia and concluded that female were less likely, about 5.4% lower probability, to secure bank loan than men. The study also concluded that females also pay relatively higher interest rate, about 0.6%, than their counterpart.

[1] See Bates (1990), Brüderl et al. (1992), Cooper et al. (1994), Åstebro and Bernhardt (2003), Headd (2003), and Hvide and Moen (2010).

Women in developing countries also face cultural and systematic discrimination such as limited rights to own property. Lack of rights to own property and ability to participate in the labor market influence the income availability and expenditure freedom of women. This limitation to engage in economic activity also leads to less demand for the financial services (Johnson 2004).

## 3.9 Importance of Financial Literacy for Financial Inclusion

Financial development in the country does not translate to financial access for everyone especially for individuals in the developing countries. According to the World Development Indicator (World Bank 2014) while nearly one-third of men in the developing countries have an account only a quarter of women have such account. There are several reasons that have been identified as barriers to financial access—lack of money, transaction costs associated with bank fees, distance, necessary documents, lack of trust in formal financial institutions, regulatory barriers, low financial literacy, and social constraints (Demirgüc-Kunt and Klapper 2012; Karlan et al. 2014). Lack of financial literacy can be more problematic for the individuals in the developed countries than developing countries but many of the emerging countries are focusing on providing education. Financial literacy is the ability to manage financial resources effectively for financial well-being (Hung et al. 2009; Montagnoli et al. 2016). Deficiency affects an individual's day-to-day money management decision as well as long-term goals. Lack of financial literacy can also explain the poor demand for the bank's financial services such as bank accounts.

## 3.10 Role of Technology in Financial Access

Division in the availability and access to financial services and financial product in the developed and developing is tremendous. According to a report by McKinsey Global Institute (MGI 2016), around two billion people in the developing countries do not have access to any type of bank account. Same can be said for the access to technology; developing countries face problems with the diffusion of technology or "digital divide" since not everyone has equal access to all the technologies available. According to the *International Telecommunication Union*, only 31% of the households in the developing countries compared to the 78.4% of the households in the developed countries have Internet access at home. Until recently, many of the financial services were largely available to the individuals in the developed countries. One such example is the usage of a credit card; it is more prominent in developed countries compared to developing countries. Even within developed countries, more people in North America use a credit card than in Europe. According to the World Payments Report, 65% transactions in North America are conducted through credit card, 41% in Europe, and only about 7% in the developing countries (Capgemini 2013).

Increased use of mobile phone over the years has allowed individuals in the developing countries access financial services. International Telecommunication Union (2014) reported that there are about 90 mobile phones per 100 people in developing countries. The access to financial services through mobile phones has also increased. The combination of rapid growth in technologies and financial industries' use of these technologies has helped to reduce the gap in financial resources and helped to gain access to the financial resources. Technological development has allowed population living in the rural areas to access financial services through mobile banking and other financial instruments such as credit cards and pre-paid cards where transportation infrastructure is poor and cost to build traditional brick and mortar infrastructure is substantial. Individuals in the developing countries can use mobile phones to conduct traditional banking transactions such as send and receive money as remittances from developed countries. This venue to banking also allows women to access financial services and products that were not available to them. Additionally, mobile banking reduces costs associated with the traditional banking and increases productivity in a country. MGI suggests that the increased use of technology reduces inefficient method of paper recordkeeping of transactions. The financial service providers, businesses, and organizations would be able to conduct transactions more efficiently and not have to rely on cash on hand. MGI estimates that electronic transactions would cost them about $10 per year, which is significantly less than the traditional method of conducting business.

## References

Aidis, R., Welter, F., Smallbone, D., & Isakova, N. (2007). Female entrepreneurship in transition economies: The case of Lithuania and Ukraine. *Feminist Economics, 75*(2), 157–183.

Apilado, V. P., & Millington, J. K. (1992). Restrictive loan covenants and risk adjustment in small business lending. *Journal of Small Business Management, 30*(1), 38.

Åstebro, T., & Bernhardt, I. (2003). Start-up financing, owner characteristics, and survival. *Journal of Economics and Business, 55*(4), 303–319.

Atje, R., & Jovanovic, B. (1993). Stock markets and development. *European Economic Review, 37*(2–3), 632–640.

Audretsch, D. B. (Ed.). (2002). *Entrepreneurship: Determinants and policy in a European-US comparison* (Vol. 27). Dodrecht: Springer Science & Business Media.

Audretsch, D., and Thurik, R. (2001). *Linking entrepreneurship and growth*. STI Working Papers 2001, Directorate for Science, Technology and Industry, OECD, May.

Bardasi, E., Sabarwal, S., & Terrell, K. (2011). How do female entrepreneurs perform? Evidence from three developing regions. *Small Business Economics, 37*(4), 417.

Bates, T. (1990). Entrepreneur human capital inputs and small business longevity. *The Review of Economics and Statistics, 72*, 551–559.

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2003). Law and finance: Why does legal origin matter? *Journal of Comparative Economics, 31*(4), 653–675.

Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different? *Journal of Financial Economics, 89*(3), 467–487.

Becker, G. S. (1964). *Human capital*. Chicago: University of Chicago Press.

Blanchflower, D. G. (2004). *Self-employment: More may not be better*, NBER Working Paper No. 10286.

Boden, R. J., Jr. (1999). Flexible working hours, family responsibilities and female self-employment: Gender differences in self-employment selection. *American Journal of Economics and Sociology, 55*(1), 71–84.

Boden, R. J., & Nucci, A. R. (2000). On the survival prospects of men's and women's new business ventures. *Journal of Business Venturing, 15*(4), 347–362.

Bosma, N., Van Praag, M., Thurik, R., & De Wit, G. (2004). The value of human and social capital investments for the business performance of startups. *Small Business Economics, 23*(3), 227–236.

Boyd, J. H., & Prescott, E. C. (1986). Financial intermediary-coalitions. *Journal of Economic Theory, 38*(2), 211–232.

Brüderl, J., Preisendörfer, P., & Ziegler, R. (1992). Survival chances of newly founded business organizations. *American Sociological Review, 57*, 227–242.

Brush, C. G., & Chaganti, R. (1998). Business without glamour? An analysis of resources of performance by size and age in small service and retail firms. *Journal of Business Venturing, 14*, 233–257.

Brush, C. G., Carter, N. M., Greene, P. G., Hart, M. M., & Gatewood, E. (2002). The role of social capital and gender in linking financial suppliers and entrepreneurial firms: A framework for future research. *Venture Capital: An International Journal of Entrepreneurial Finance, 4*(4), 305–323.

Buttner, E. H., & Rosen, B. (1989). Funding new business ventures: Are decision makers biased against women entrepreneurs? *Journal of Business Venturing, 4*(4), 249–261.

Buttner, E. H., & Rosen, B. (1992). Rejection in the loan application process: Male and female entrepreneurs' perceptions and subsequent intentions. *Journal of Small Business Management, 30*(1), 58.

Capgemini. (2013). *World payment report*. Retrieved July 2014, from http://www.capgemini.com/resource-file-access/resource/pdf/wpr_2013.pdf.

Carree, M., Van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. *Small Business Economics, 19*(3), 271–290.

Carree, M., Van Stel, A., Thurik, R., & Wennekers, S. (2007). The relationship between economic development and business ownership revisited. *Entrepreneurship & Regional Development, 19*(3), 281–291.

Carter, S. (2000). Improving the numbers and performance of women-owned businesses: Some implications for training and advisory services. *Education+ Training, 42*(4/5), 326–334.

Carter, N. M., & Allen, K. R. (1997). Size determinants of women-owned businesses: Choice or barriers to resources? *Entrepreneurship & Regional Development, 9*(3), 211–220.

Carter, S., & Cannon, T. (1992). *Women as entrepreneurs: A study of female business owners, their motivations, experiences and strategies for success*. New York: Academic Press.

Cassar, G. (2006). Entrepreneur opportunity costs and intended venture growth. *Journal of Business Venturing, 21*(5), 610–632.

Cetorelli, N., and P.F. Peretto. (2000). *Oligopoly banking and capital accumulation*. Working paper No. 2000-12, Federal Reserve Bank of Chicago.

Chandler, G. N., & Hanks, S. H. (1998). An investigation of new venture teams in emerging businesses. *Frontiers of Entrepreneurship Research, 10*, 318–330.

Coleman, S. (2000). Access to capital and terms of credit: A comparison of men-and women-owned small businesses. *Journal of Small Business Management, 38*(3), 37.

Coleman, S. (2002). Constraints faced by women small business owners: Evidence from the data. *Journal of Developmental Entrepreneurship, 7*(2), 151.

Colombo, M. G., & Grilli, L. (2005). Start-up size: The role of external financing. *Economics Letters, 88*(2), 243–250.

Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing, 9*(5), 371–395.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*(3), 301–331.

De Bruin, A., Brush, C. G., & Welter, F. (2006). Introduction to the special issue: Towards building cumulative knowledge on women's entrepreneurship. *Entrepreneurship Theory and Practice, 30*(5), 585–593.

Demirgüç-Kunt, A., and Klapper, L.F. (2012). Measuring financial inclusion: The global findex database. World Bank Policy Research Working Paper No. 6025. [https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2043012].

Devine, T. J. (1994). Changes in wage-and-salary returns to skill and the recent rise in female self-employment. *The American Economic Review, 84*(2), 108–113.

Dinc, I. S. (2000). Bank reputation, bank commitment, and the effects of competition in credit markets. *Review of Financial Studies, 13*(3), 781–812.

Estrin, S., Meyer, K. E., & Bytchkova, M. (2006). Entrepreneurship in transition economies. In *Oxford Handbook of Entrepreneurship* (pp. 693–725). New York.

Fabowale, L., Orser, B., & Riding, A. (1995). Gender, structural factors, and credit terms between Canadian small businesses and financial institutions. *Entrepreneurship: Theory and Practice, 19*(4), 41–66.

Fairlie, R. W., & Robb, A. M. (2009). Gender differences in business performance: Evidence from the characteristics of business owners survey. *Small Business Economics, 33*(4), 375–395.

Fairlie, R. W., & Woodruff, C. (2007, May). Mexican entrepreneurship: A comparison of self-employment in Mexico and the United States. In *Mexican immigration to the United States* (pp. 123–158). Chicago: University of Chicago Press.

Fasci, M. A., & Valdez, J. (1998). A performance contrast of male-and female-owned small accounting practices. *Journal of Small Business Management, 36*(3), 1.

Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly, 42*, 750–783.

Greene, P. G., Brush, C. G., Hart, M. M., & Saparito, P. (2001). Patterns of venture capital funding: Is gender a factor? *Venture Capital: An International Journal of Entrepreneurial Finance, 3*(1), 63–83.

Guiso, L., Sapienza, P., & Zingales, L. (2009). Does local financial development matter? In *The banks and the Italian economy* (pp. 31–66). Heidelberg: Physica-Verlag.

Haines, G. H., Orser, B. J., & Riding, A. L. (1999). Myths and realities: An empirical study of banks and the gender of small business clients. *Canadian Journal of Administrative Sciences/ Revue Canadienne des Sciences de l'Administration, 16*(4), 291–307.

Hayek, F. A. (1945). The use of knowledge in society. *The American Economic Review, 35*, 519–530.

Hébert, R. F., & Link, A. N. (1989). In search of the meaning of entrepreneurship. *Small business economics, 1*(1), 39–49.

Headd, B. (2003). Redefining business success: Distinguishing between closure and failure. *Small business economics, 21*(1), 51–61.

Hisrich, R., & Brush, C. (1984). The women entrepreneur: Management skills and business problems. *Journal of Small Business Management, 22*(1), 30–37.

Hisrich, R. D., & Peters, M. P. (1992). *Entrepreneurship: Starting, developing, and managing a new enterprise*. New York: McGraw-Hill/Irwin.

Honig, B. (1998). What determines success? Examining the human, financial, and social capital of Jamaican microentrepreneurs. *Journal of Business Venturing, 13*(5), 371–394.

Hvide, H. K., & Møen, J. (2010). Lean and hungry or fat and content? Entrepreneurs' wealth and start-up performance. *Management Science, 56*(8), 1242–1258.

Hung, A., Parker, A. M., and J. Yoong (2009). *Defining and measuring financial literacy*. RAND Working Paper Series WR-708.

International Telecommunication Union. (2014). Retrieved July 2014, from http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Johnson, S. (2004). Gender norms in financial markets: Evidence from Kenya. *World Development, 32*(8), 1355–1374.
Kangasharju, A., & Pekkala, S. (2002). The role of education in self–employment success in Finland. *Growth and Change, 33*(2), 216–237.
Karlan, D., Osei, R., Osei-Akoto, I., & Udry, C. (2014). Agricultural decisions after relaxing credit and risk constraints. *The Quarterly Journal of Economics, 129*(2), 597–652.
Khwaja, A. I., & Mian, A. (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market. *The Quarterly Journal of Economics, 120*(4), 1371–1411.
King, R. G., & Levine, R. (1993). Finance, entrepreneurship and growth. *Journal of Monetary Economics, 32*(3), 513–542.
Kirzner, I. M. (1997). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature, 35*(1), 60–85.
Klapper, L., Laeven, L., & Rajan, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics, 82*(3), 591–629.
Klapper, L. F., & Parker, S. C. (2010). Gender and the business environment for new firm creation. *The World Bank Research Observer, 26*, 237–257.
Klapper, L. F., & Parker, S. C. (2011). Gender and the business environment for new firm creation. *The World Bank Research Observer, 26*(2), 237–257.
Knight, F. (1942). *Profit and entrepreneurial functions*. Journal of Economic History (Vol. 2, pp. 126–132).
Lee, M., & Rendall, M. (2001). Self-employment disadvantage in the working lives of blacks and females. *Population Research and Policy Review, 20*, 291–320.
Lerner, M., Brush, C., & Hisrich, R. (1997). Israeli women entrepreneurs: An examination of factors affecting performance. *Journal of Business Venturing, 12*(4), 315–339.
Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *American Economic Review, 88*(3), 537–558.
Lombard, K. V. (2001). Female self-employment and demand for flexible, nonstandard work schedules. *Economic Inquiry, 39*(2), 14–237.
Loscocco, K. A., Robinson, J., Hall, R. H., & Allen, J. K. (1991). Gender and small business success: An inquiry into women's relative disadvantage. *Social Forces, 70*, 65–85.
McKinsey Global Institute. (2016). *How digital finance could boost growth in emerging economies*. Retrieved from [http://www.mckinsey.com/global-themes/employment-and-growth/how-digital-finance-could-boost-growthin-emerging-economies].
Mincer, J. (1974). *Schooling, experience and earnings*. New York: Columbia University Press.
Minniti, M., Bygrave, W. D. & Autio, E. (2005). *Global entrepreneurship monitor: 2004 Report on women and entrepreneurship*. Babson Park, MA: Babson College/London Business School.
Alberto Montagnoli, Mirko Moro, Georgios A Panos, Robert Wright. (2016). *Financial literacy and political orientation in Great Britain*. IZA Discussion Paper No. 10285. Retrieved from SSRN: https://ssrn.com/abstract=2861070
Muravyev, A., Talavera, O., & Schäfer, D. (2009). Entrepreneurs' gender and financial constraints: Evidence from international data. *Journal of Comparative Economics, 37*(2), 270–286.
MENA. (2017). *Doing business: Equal opportunity for all*. Retrived from http://www.doingbusiness.org/reports/~/media/WBG/DoingBusiness/Documents/Profiles/Regional/DB2017/MENA.pdf.
OECD. (2002). *Regulatory policies in OECD countries: From interventionism to regulatory governance*. Paris: OECD.
Orser, B. J., Hogarth-Scott, S., & Riding, A. L. (2000). Performance, firm size, and management problem solving. *Journal of Small Business Management, 38*(4), 42.
Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*. Cambridge: Cambridge University Press.
Parker, S. C. (2009). *The economics of entrepreneurship*. Cambridge: Cambridge University Press.
Parker, S. C., & Robson, M. T. (2004). Explaining international variations in self-employment: Evidence from a panel of OECD countries. *Southern Economic Journal*, 287–301.

Pena, I. (2002). Intellectual capital and business start-up success. *Journal of Intellectual Capital, 3*(2), 180–198.

Petersen, M. A., & Rajan, R. G. (1995). The effect of credit market competition on lending relationships. *The Quarterly Journal of Economics, 110*(2), 407–443.

Rajan, R. G., & Zingales, L. (1998). Power in a theory of the firm. *The Quarterly Journal of Economics, 113*(2), 387–432.

Reynolds Paul R., Michael Hay & S.M. Camp. (1999). *Global entrepreneurship monitor, 1999 executive report*. Babson College, Kauffman Foundation and London Business School.

Reynolds, P.D., Bygrave, W.D., Autio, E., Cox, L.W., & Hay, M. (2002). *Global entrepreneurship monitor, 2002 executive report*. Wellesley, MA: Babson College.

Riding, A. L., & Swift, C. S. (1990). Women business owners and terms of credit: Some empirical findings of the Canadian experience. *Journal of Business Venturing, 5*(5), 327–340.

Robb, A. M. (2002). Entrepreneurial performance by women and minorities: The case of new firms. *Journal of Developmental Entrepreneurship, 7*(4), 383.

Rosti, L., & Chelli, F. (2005). Gender discrimination, entrepreneurial talent and self-employment in Italy. *Small Business Economics, 24*(2), 131–142.

Schultz, T. (1959). Investment in man: An economist's view. *The Social Service Review, 33*(2), 69–75.

Schumpeter, J. (1949). *The theory of economic development*. Cambridge, MA: Harvard University Press.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217–226.

Siba, E. (2016). *Enabling female entrepreneurs and beyond*. Washington, DC: Brookings Institution.

Stevenson, L., & Lundström, A. (2001). *Patterns and trends in entrepreneurship/SME policy and practice in ten economies* (Vol. 3). Vällingby: Elanders Gotab.

Verheul, I., & Thurik, R. (2001). Start-up capital: "does gender matter?". *Small Business Economics, 16*(4), 329–346.

Walker, D., & Joyner, B. E. (1999). Female entrepreneurship and the market process: Gender-based public policy considerations. *Journal of Developmental Entrepreneurship, 4*(2), 95.

Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics, 13*, 27–55.

Wennekers, S., van Stel, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics, 24*, 293–309.

Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal, 24*(13), 1307–1314.

World Bank. (2014). *World development indicator*. Washington, DC: World Bank.

# Chapter 4
# Corruption: An Unsolved Puzzle

## 4.1 Institutions' Influence on Entrepreneurship

The institutional condition of a country is an important component for fostering entrepreneurial activity in a country. North's (1990, 1991) definition of the institution includes both formal and informal "rules of game" for interactions in the society. Helmke and Levitsky (2004) build on the Douglas North's (1990, 1991) notion of the institution and defines informal institutions as the rules that are followed in the society. Contrary to the formal institutions, informal institutions are not codified. Helmke and Levitsky (2004) defined informal institutions as "socially shared rules, usually unwritten, that are created, communicated and enforced outside of officially sanctioned channels" (p. 727). Scott (2014, p. 56) presents the sociological perspectives that include cultural aspects as well and defined as "regulative, normative and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life." Williamson (2000) views institutions as different layers where each layer interacts with each other and acts as a determinant factor for allocating resources in the society. In this hierarchy model, informal institutions are at the highest level since these become embedded and habitual in a society. It takes a long time for this type of institution to change since it creates a sense of stability and predictability in the society. Peng et al.'s (2008) "tripod model" includes institution in their second "leg." This model pulls together both the economic and sociological perspectives of the institution. The quality of the institutional environment is very important as it can shape how potential entrepreneurs perceive opportunity costs associated with undertaking entrepreneurial activity (Bowen and De Clercq 2008; McMullen et al. 2008; Autio 2007).

In developing countries, corruption can be considered to be an informal institution; given that corruption is embedded in every aspect of the transaction in many of



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_4

the developing countries, it takes a long time to change. Corruption is not a new problem. Even though it is considered a social ill it is present in many of the developing countries.

Existing research, both theoretical and empirical, has identified a detrimental effect of corruption on economic development (Mauro 1995, 1997; Mo 2001; Podobnik et al. 2008), yet some countries have seen a different outcome (Aidt 2009). Figure 4.1 presents the corruption level across countries; countries with red shades present highly corrupt and yellow presents low corruption level in those countries. International organizations such as World Bank and IMF began to emphasize governance issues during the 1970s, 1980s, and 1990s. In the World Bank's 2015 World Development Report, it emphasized that it seeks to "enhance the understanding of how collective behaviors—such as a widespread trust or widespread corruption—develop and become entrenched in a society" (World Bank 2015, p. 2). Yet in many of the developing countries, it is almost a social norm; both the payee and the payer of bribe expect it and comply with it without any question. In the report's recommendation, World Bank suggests that in order to reduce corruption in the society, there is a greater need to tackle public expectations that may translate into more exposure and reduced willingness to pay bribes. Additional methods may include public campaigns, non-material incentives, etc. (World Bank 2015, p. 6). While the word corruption is used universally, a distinction needs to be made regarding corruption to better understand why and when corruption can be beneficial for greater society.

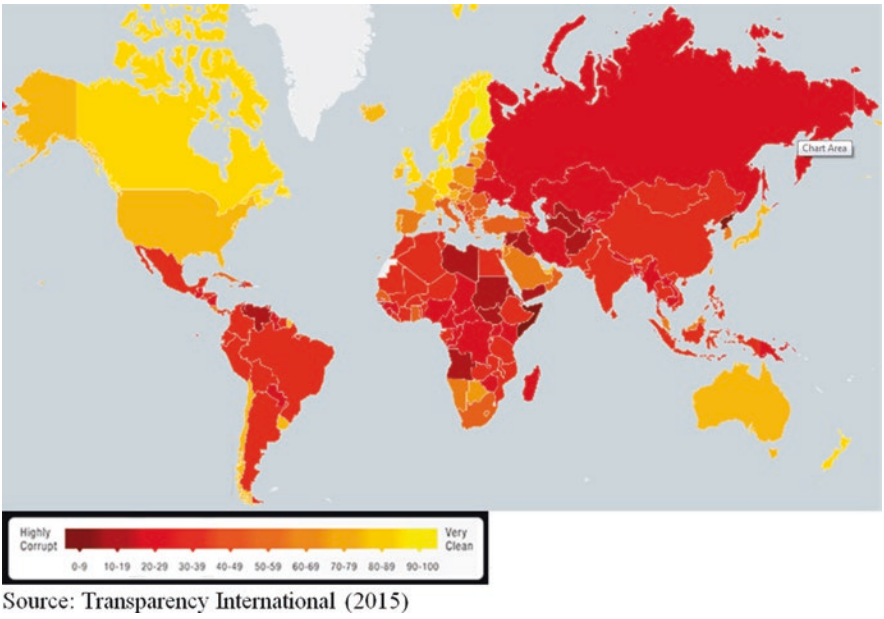



**Fig. 4.1** Corruption level across countries. Source: Transparency International (2015)

## 4.2 Types of Corruptions

Corruption is generally defined as the use of public office for personal gain (Rose-Ackerman 2007; Rodriguez et al. 2006; Svensson 2005), or in other words, "an individual or a firm makes a payment for a benefit" (Rose-Ackerman 2007, p. xvii). Rose-Ackerman (2007) and Jain (2001) identified three types of corruption—grand corruption, bureaucratic corruption, and legislative corruption. Rose-Ackerman (2007) identified that grand corruption includes petty payment to lower level bureaucrats to corruption in a higher level of government structure. Jain (2001) defines grand corruption as "the acts of the political elite by which they exploit their power to make economic policies" (p. 73). World Bank's definition of "crony capitalism" or "state capture" is aligned with this definition. Bureaucratic corruption is engagement in corrupt behavior by both low-level bureaucrats and their superiors. Rose-Ackerman's (2007) examples of tax collection agencies and the police department can fall in this category. This type of corruption can also happen in the judiciary, where bribery can lower penalty, what Rose-Ackerman (1998) termed "bribes to buy judicial decisions." World Bank identifies this types of corruption as "administrative corruption." Legislative corruption is when monetary resources are used to influence the voting behavior of the legislators, also called political corruption (Groenendijk 1997; Ugur and Dasgupta 2011). This type of corruption is more visible in developed countries where interest groups and labor unions contribute to political campaigns to advance their interest to enact a specific legislation or re-elect an official who would vote for their cause "vote-burying" (Rose-Ackerman 2007). All of the above-mentioned types are visible in the public sector; there is also corruption in the private sector. Private sector corruption occurs between private parties, for example, firms paying labor unions to protect their interest. Glaeser and Goldin (2006) identified three types of corruption—public officials directly stealing public funds through embezzlement, public officials taking bribes in return for favors either for transferring government funds through contracts or by providing breaks when rules are not followed, and public officials manipulating rules for benefit of their own financial interest. Wedeman (2002) identified corruption as either "degenerative" or "developmental." Degenerative corruption is when public officials use their positions to build personal fortunes by extorting private property. Developmental corruption is when public officials provide resources or protection to private industry. Regardless of types of corruption, this payment to government officials increases the wealth of the public official but does not create any benefit for the greater society.

## 4.3 Measuring Corruption

Existing literature measures corruption in various ways. Given this variation, measuring corruption is another problem as suggested by Johnston. Jain (2000) discussed the challenges in measuring corruption. A majority of the sources measure

perception of corruption in different countries; Transparency International (TI) is starting to conduct a household-level survey to determine where and how much individuals pay in bribes. Despite the difficulties in measuring corruption, several international organizations have developed methods to measure corruption. Following sources are widely used as a measure of corruption.

### *4.3.1 ICRG*

Political Risk Services Inc. publishes International Country Risk Guide (ICRG) annually which includes a measure of corruption index. The index measures corruption within the political system. The index ranges from 0 (most corrupt) to 6 (least corrupt). The ICRG index defines corruption as "demand for special payments and bribes connected with import and export licenses, exchange controls, tax, assessments, police protection, or loans" (ICRG methodology, Tanzi and Davoodi 1997). Lamsdorff (in Rose-Ackerman 2007) presents limitations of this data by citing that "ICRG's editor-in-chief discouraged the use of this dataset as an indicator of levels of corruption. Even if levels of corruption remain unchanged, the indicator might give a country a worse score simply because the public becomes intolerant towards the corruption of the incumbent government, leading to political instability" (p. 4).

### *4.3.2 Transparency International (TI)*

TI measures perception of corruption around the world. TI scores countries each year on "how corrupt their public sectors are" in 183 countries (http://www.transparency.org/research/cpi/) (Lambsdorff 1998). TI created another index in 1999 called "Bribe Payer's Index." The index was developed from a survey of 3000 business executives of 28 leading companies. "The score for each country is based on the views of the business executives who had come into contact with companies from that country" (Hardoon and Heinrich, 2011, p. 4).

### *4.3.3 Heritage Foundation*

Index of Economic freedom measures the "freedom from corruption" score based on TI scores. The index multiplies the CPI score which is based on 10-point scale. For the countries not covered in CPI, the index collected measures from other sources—U.S. Department of Commerce, Country Commercial Guide, 2009–2012; Economist Intelligence Unit, Country Commerce, 2009–2012; Office of the U.S. Trade Representative; 2012 National Trade Estimate Report on Foreign Trade

Barriers; and official government publications of each country (http://www.heritage.org/index/freedom-from-corruption, McMullen et al. 2008). The score ranges from 0 to 100 with 100 being least corrupt.

### *4.3.4 World Governance Indicator*

World Governance Indicator (WGI) data reports six broad dimensions of governance which include control of corruption. Control of corruption measures "perception of the extent to which public power is exercised for private gain." WGI compiles data from 32 existing data sources and score ranges from −2.5 to +2.5.

## 4.4 Reasons Behind Corruption

Scholars have tried to determine the reason for corruption. Recent literature on this issue has suggested several micro and macro factors behind the corruption. Literature related to macro factors suggests that economic development level and political environment are responsible for corruption. Méndez and Sepúlveda (2006) argued that as a country transitions through various stages of development corruption level also changes suggesting a U-shaped relationship. Aidt et al. (2008) suggested that political institutions are an important determinant of corruption. The study showed that corruption has a negative impact on growth in low-quality political institutions. Political institutions also influence the corruption level in a country; the democratic political system is less prone to corruption because politicians are more likely to risk exposure (Montinola and Jackman 2002; Treisman 2000). Studies also suggest that democratic societies are also more likely to have more freedom of the press, association, and more access to information due to advanced information technology infrastructure. This access to information allows transparency and accountability (Adsera et al. 2003). Brunetti and Weder (2003) argued that freedom of the press is important for exposing corrupt officials who are misusing their office. Similarly, other studies also suggested that the increased competition among politicians also contributes to less corruption in the democratic societies. Competition among politicians also serves as incentives for incumbents not to engage in corrupt behavior. Incumbents do not want to risk exposure because of the social stigma associated with corruption in the societies with well-functioning political institutions (Myrdal 1970, p. 237; Ekpo 1979). Cultural environment/value of a country has also been identified as a cause of corrupt behavior to succeed since values influence "the selection from available modes, means, and ends of action" (Kluckhohn et al. 1951, p. 395). Tsalikis and Nwachukwu's (1991) study showed that culture influences someone's perception of corruption. The study included US and Nigerian business students and found that these groups of students had a different perception of corruption.

In addition, punishment structure in a society is also a tool for curbing corruption. In order for the punishment to be a tool for corruption deterrent, the legal system and legal culture of a country would have to be effective (Treisman 2000). If there is little to no possibility of prosecution or enforcement of the existing laws is limited, then the corrupt bureaucrats and public officials are less likely to be concerned about corruption. Others suggest that severity of punishment would depend on the benefit provided by the office (Becker and Stigler 1974; Ul Haque and Sahay 1996; Van Rijckeghem and Weder 1997; World Bank 1997; Rauch and Evans 2000). If the benefit is higher then there is little incentive to not engage in corruption and vice versa. For instance, as suggested by Rauch and Evans (2000), if there is little possibility of promotion or salaries to increase then there is little incentive for individuals not to engage in corrupt behavior.

## 4.5 Fiscal Decentralization and Corruption

Fiscal decentralization has been a trend in both developed and developing countries (Akai and Sakata 2002; Davoodi and Zou 1998). Fiscal decentralization pertains to transfer of power from national to local governments (Bahl and Linn 1992; Bird and Wallich 1993). Dillinger's (1994) study found that 12 of the 75 developing countries have adopted some form of power transfer to local governments. The theoretical argument has been successful in arguing that decentralization is better for growth, community, and citizens. These arguments have been made based on the industrialized countries that pose the institutional quality necessary to carry out the decentralized activity (Melo 2002; Davoodi and Zou 1998). The theoretical argument stemmed from the Oates' decentralization argument that local level government has access to local information, and therefore they are better able to provide services to the local community and efficiently; as pointed out by Peter de Valk (1990) "resurgence of interest in decentralization" has focused on "effectiveness and efficiency" (p. 5). Decentralization also gives power to the local citizens; if residents are not satisfied with the services then they can move from jurisdictions, which Tiebout calls "voting with feet" (Tiebout 1956). This expressed preferences for the services will lead to changes in the services and improved services to the local level promote economic development. However, many of the developing countries have a frail democratic system and the voting with feet model may not hold (Melo 2002). Critics also argue that mobility in the countries is also rather limited and influenced by the infrastructure stability, availability of resources such as capital, land, labor market, and legal frameworks (Melo 2002; Litvack et al. 1999; Prud'Homme 1995).

While the decentralization process was adopted by the developing countries based on the theoretical argument, the empirical evidence regarding the relationship remains unclear (Melo 2002). Davoodi and Zou (1998) in their empirical investigation of the relationship between fiscal decentralization and economic development found a significant negative relationship in developing countries and no relationship in developed countries. The study included cross-country data from 1970 to 1989.

The similar negative relationship is also visible in the regional studies. Xie et al.'s (1999) study included data for the United States from 1948 to 1994 and found a negative relationship. Zhang and Zou (1998) studied 28 provinces of China from 1986 to 1992 and found a negative relationship between regional growth and fiscal decentralization. On the other side, Iimi's (2004) study found a positive relationship between economic development and fiscal decentralization; the study included both developed and developing countries over the years of 1997–2001. Akai and Sakata's (2002) study included state-level data in the United States and found a positive relationship between economic development and decentralization. These differences in the outcome of the decentralization could be explained by the flypaper effect. The literature related to flypaper effect (Gramlich 1977; Fisher 1982; Gamkhar and Oates 1996; Melo 2002) indicates that money sticks where it hits: "money in the private sector from private income tends to remain in the private sector rather than being taxed away, while money in the public sector from intergovernmental transfers tends to be spent by the public sector rather than being rebated to citizens" (Végh and Vuletin 2016, p. 2). Inman's (2008) study included 3500 research papers and found that intergovernmental transfer increases spending compared to the personal income increment. Yet, government funding allocated to the subnational level may not always have the same effect because not all local governments have the same objective as suggested by Prud'Homme (1995): "in many countries, the visible hand of the central government is dictating, controlling, influencing, or restricting the freedom of local governments in their expenditure behavior … [Similarly], in some countries where local governments are free to set certain taxes, they all chose the same rate because either they follow the ministry of finance 'guidelines' or they all hit a low ceiling imposed by the ministry" (Prud'Homme 1995, pp. 4–5).

Fiscal decentralization can be positive or negative depending on the services. Decentralization puts power in the hands of the local authority for generating and spending local revenue, but it also opens the opportunity for corruption since bureaucrats/authorities at the local level are responsible for implementing enacted policies. Geographical location is also another factor that influences the decentralization and corruption relationship. The rural areas tend to receive less of the funding compared to the urban areas, to begin with, and people in rural areas tend to pay more bribe since they rely more on government services. TI Global Corruption Barometer (2016) found that 39% of the people who live in the rural areas pay bribes compared to the 25% in the MENA region.

## 4.6 Corruption in Different Sectors

Corruption is prevalent in almost all sectors of the economy in many of the developing countries. The education sector in the developing countries can be a great example of how corruption impacts services in a decentralized system. The government has a significant influence on the education sector through payroll sector and budgeting since educational services are provided and managed by the local authorities.

Much-needed resources are channeled to the privileged schools located in the urban areas rather than the schools in the rural areas (Transparency International 2007) and schools rely on the government funds for the school supplies such as textbooks and chalkboards. Since schools never receive the necessary funding students suffer from the low quality of education. Hallak and Poisson (2007) found that 10–87% of the earmarked funds and non-wage funds do not reach the educational institutions. Reinikka and Svensson (2004) found that "local capture" (p. 681) is common for getting access to the school finances. Local capture occurs when local government authorities control the resources coming in the area and the distribution of the resources to their loyal patrons (Reinikka and Svensson 2004). Schools located in the better socioeconomic communities received more funding in Uganda because local elites are better connected to the local authorities.

Corruption also hinders students' ability to access education. Transparency International (TI) Global Corruption Barometer (2016) conducted a survey in the Middle East and North African area to determine the extent of bribery in the region. The study found that a majority of the people paid a bribe in order to get access to public services such as education, health services, and utility services. TI (2007) reported that 36.5% of students' families make bribe payments in order to attend school even though primary and secondary education is free. Similar incidence has been presented with regard to female students. The same study found that 32.6% of the extremely poor female students and over 54% of overall female students had to pay a bribe in order to get their stipend. The International Institute for Educational Planning (IIEP) contributes several factors that contribute to the corruption in the education sector—(1) the high rate of return of the education sector; (2) the complexity and lack of accessibility of rules combined with poor governance and supervision; (3) the low salaries of public officials and of teachers; and (4) the weakening of ethical norms (Hallak and Poisson 2007, pp. 40–41).

Corruption is also visible in the land governance area. TI reported that both the bureaucratic and political corruption exists in the land service sector. Bureaucratic corruption results from poor institutional quality, low levels of transparency, lack of accountability and rule of law, and extensive regulations. For instance, people have to pay the government agencies or lower level bureaucrats bribe to register property, change land titles, or acquire land information. Based on a survey conducted by the TI it found that next to police and judiciary government agencies that oversaw land sector are the most corrupt (Transparency International 2009). The survey was conducted in 69 countries around the world. The survey also found that one out of every ten people who had dealings with the land-related government authority had to pay a bribe (Transparency International 2009). Studies based on the household survey also show similar results. Household participants in a Mexican survey reflected that land administrative agencies rank among the top ten agencies that have the highest level of corruption (TI 2011). Similarly in Bangladesh land administrative agency has 71.2% rate of bribery, making it among the top three most corrupt agencies in the country (TI 2010).

Tax administration is another area where corruption is prevalent. TI (2015) identified that corruption in taxation can occur through reporting of taxes, collusion, and

patronage. The taxpayer can hide or underreport accurate income information. Tax collectors can use their power to either ignore the underreported income or penalize the taxpayer. Both of these actions can be influenced by the payment of bribery. Tax collector can also unfairly enforce tax laws based on his/her ties to the community.

Developing countries not only have a low level of taxes, but they also tend to have a complex administrative system which makes complying with the tax policy harder and creates opportunities for the tax authorities to take advantage of the taxpayers. Administration of the tax collection process should be efficient and effective. An efficient system is designed to be of low cost for both the collector and taxpayer, or in other words, "administrative costs in collecting different types of taxes, enforcing tax laws, and the costs of taxpayers in complying with those laws" (Lledo et al. 2004, p. 6). Effectiveness if the "extent to which taxes are predictable, transparent, and enforced by a fair judicial system" (Di John 2006, p. 5). However, tax administration system of the developing countries is complex and in many instances not transparent which affects the behavior of the bureaucrats involved in the process and moral of the taxpayer. In addition to being a complex administrative system such as submitting paper works several times during the year, extended time is required for filing taxes. These administrative systems increase possibilities of interactions with bureaucrats that also increases possibilities of these bureaucrats to take advantage of the taxpayers. In addition to this administrative system, these countries also lack the capacity to deal with these complex systems. Lack of capacity includes insufficient staff, staffs with adequate and inappropriate skills, low wages in the sector, and lack of facilities (Di John 2006; Bird 1989). This lack of capacity also spills over to the area of enforcement. Low wages motivate bureaucrats to engage in the corrupt behavior. Corrupt behavior of the bureaucrats does little to help to establish the legitimacy and effectiveness of the state; rather it helps to lose trust in the government. The complex administrative system and corrupt behavior of the bureaucrats make enforcement of the tax laws difficult, affecting tax morale that increases tax evasion. Tax authorities are responsible for generating the revenue required for providing public services and for funding social programs as well as for an orderly and well-functioning society. Corruption in the tax administration process hinders government ability to be effective.

## 4.7 Decentralization and Size of Government as a Venue for Corruption

Providing social services to the government leads to increase in government size and government size is also linked with the tax policy. The implementation of tax policies in countries with strong institutions and multiple sources of tax revenue tend to and better able to spend more on the social services. According to the ILO (2014) report Western European countries spend 2.2% of GDP while African, Asian, and the Pacific countries spend 0.2% of GDP on child and family benefits.

Large government sector may also require being decentralized which can create opportunities for interaction between bureaucrats and individuals. This increased interaction can create opportunities for bureaucrats to exploit entrepreneurs since these bureaucrats have the power to implement policies, especially social policies. Developing countries spend significantly less on the social spending compared to the developed countries.

With regard to male and female entrepreneurs, welfare services provided by government can be helpful for entrepreneurs, especially for female entrepreneurs. Female workers are more likely to stay unemployed for longer periods of time than male workers because they are often tasked with the responsibility of caring for children. OECD (2002) finds that children influence male and female differently; having children pushes male workers toward employment while pushes female workers toward unemployment. During this employment, the government-provided services may help female workers meet basic needs and at the same time motivate them to search for entrepreneurial opportunity. For female entrepreneurs in a weak institutional environment increased interaction with government officials can leave them vulnerable to be exploited.

Unemployment during women's childbearing years leaves female workers with less access to financial resources that have long-term consequences. In a corrupt environment, female workers may not have the financial resources necessary to extract resources from the government. TI study found that women generally pay a higher percentage of their income that could be used for the family. Given that they have fewer resources the burden affects them more than men (Chetwynd et al. 2003).

## References

Adsera, A., Boix, C., & Payne, M. (2003). Are you being served? Political accountability and the quality of government. *Journal of Law, Economics, and Organization, 19*(2), 445–490.

Aidt, T. S. (2009). Corruption, institutions, and economic development. *Oxford Review of Economic Policy, 25*(2), 271–291.

Aidt, T., Dutta, J., & Sena, V. (2008). Governance regimes, corruption and growth: Theory and evidence. *Journal of Comparative Economics, 36*(2), 195–220.

Akai, N., & Sakata, M. (2002). Fiscal decentralization contributes to economic growth: Evidence from state-level cross-section data for the United States. *Journal of Urban Economics, 52*(1), 93–108.

Autio, E. (2007). *Global entrepreneurship monitor: 2007 global report on high-growth entrepreneurship*. Wellesley, MA: Babson College.

Bahl, R., & Linn, J. F. (1992). *Urban public finance in developing countries*. New York: Oxford University Press.

Becker, G. S., & Stigler, G. J. (1974). Law enforcement, malfeasance, and compensation of enforcers. *The Journal of Legal Studies, 3*(1), 1–18.

Bird, R. (1989). The administrative dimension of tax reform in developing countries. In M. Gillis (Ed.), *Tax reform in developing countries*. Durham: Duke University Press.

Bird, R. and Wallich, C. (1993). *Fiscal decentralization and intergovernmental relations in transition economies: Towards a systematic framework of analysis*. Country Economics Department Working Paper. Washington, DC: World Bank.

Bowen, H. P., & De Clercq, D. (2008). Institutional context and the allocation of entrepreneurial effort. *Journal of International Business Studies, 39*(4), 747–767.

Brunetti, A., & Weder, B. (2003). A free press is bad news for corruption. *Journal of Public Economics, 87*(7), 1801–1824.

Chetwynd, E., Chetwynd, F., & Spector, B. (2003). Corruption and poverty: A review of recent literature. *Management Systems International, 600*, 5–16.

Davoodi, H., & Zou, H. F. (1998). Fiscal decentralization and economic growth: A cross-country study. *Journal of Urban Economics, 43*(2), 244–257.

De Valk, P. (1990). State, decentralization and participation. In P. de Valk & K. Wekwete (Eds.), *Decentralizing for participatory planning: Comparing the experiences of Zimbabwe and other Anglophone countries in Eastern and Southern Africa* (pp. 62–84). Aldershot: Avebury Press.

Jonathan Di John. (2006). *The political economy of taxation and tax reform in developing countries*. Research Paper, UNU-WIDER, United Nations University (UNU), No. 2006/74, ISBN 9291908525.

Dillinger, W. (1994). *Decentralization and its implications for urban service delivery*. Urban Management and Municipal Finance Discussion Paper No. 16. Washington, DC: The World Bank.

Ekpo, M. U. (1979). Gift-giving and bureaucratic corruption in Nigeria. In M. U. Ekpo (Ed.), *Bureaucratic corruption in sub-Saharan Africa: Toward a search for causes and consequences*. Washington, DC: University Press of America.

Fisher, R. C. (1982). Income and grant effects on local expenditure: The flypaper effect and other difficulties. *Journal of Urban Economics, 12*(3), 324–345.

Gamkhar, S., & Oates, W. (1996). Asymmetries in the response to increases and decreases in intergovernmental grants: Some empirical findings. *National Tax Journal, 49*, 501–511.

Glaeser, E., & Goldin, C. (2006). Corruption and reform: An introduction. In *Corruption and reform* (pp. 3–22). Chicago: University of Chicago Press.

Gramlich, E. M. (1977). Intergovernmental grants: A review of the empirical literature. In W. E. Oates (Ed.), *The political economy of fiscal federalism* (pp. 219–239). Lexington: Lexington Books.

Groenendijk, N. (1997). A principal-agent model of corruption. *Crime, Law and Social Change, 27*(3/4), 203–227.

Hallak, J., & Poisson, M. (2007). *Corrupt schools, corrupt universities: What can be done?* Paris: International Institute for Education Planning.

Hardoon, D., & Heinrich, F. (2011). *Bribe payers index 2011*. Berlin: Transparency International.

Helmke, G., & Levitsky, S. (2004). Informal institutions and comparative politics: A research agenda. *Perspectives on Politics, 2*(04), 725–740.

Iimi, A. (2004). Banking sector reforms in Pakistan: economies of scale and scope, and cost complementarities. *Journal of Asian Economics, 15*(3), 507–528.

ILO. (2014). *World social protection report 2014: Building economic recovery, inclusive development and social justice*. Geneva: ILO.

Jain, A. K. (2001). Corruption: A review. *Journal of Economic Surveys, 15*(1), 71–121.

Kluckhohn, C., et al. (1951). Values and value-orientations in the theory of action. In T. Parsons & E. A. Shils (Eds.), *Toward a general theory of action*. New York, NY: Harper & Row.

Lambsdorff, J. G. (1998). Corruption in comparative perception. In *Economics of corruption* (pp. 81–109). Boston, MA: Springer US.

Litvack, J.I., Ahmad, J. and Bird, R.M., (1999). Rethinking decentralization in developing countries. *Sector studies series*. Washington, DC: The World Bank.

Lledo, V., Schneider, A., and Moore, M. (2004). *Governance, taxes, and tax reform in Latin America*. IDS Working Paper 221, March.

Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics, 110*(3), 681–712.

Mauro, P. (1997). The effects of corruption on growth, investment and government expenditure: A cross-country analysis. In K. A. Elliott (Ed.), *Corruption and the global economy* (pp. 83–107). Washington, DC: Institute for International Economics.

McMullen, J. S., Bagby, D. R., & Palich, L. E. (2008). Economic freedom and the motivation to engage in entrepreneurial action. *Entrepreneurship Theory and Practice, 32*, 875–895.
Melo, L. (2002). The flypaper effect under different institutional contexts: The Colombian case. *Public Choice, 111*(3–4), 317–345.
Méndez, F., & Sepúlveda, F. (2006). Corruption, growth and political regimes: Cross country evidence. *European Journal of Political Economy, 22*(1), 82–98.
Mo, H. P. (2001). Corruption and economic growth. *Journal of Comparative Economics, 29*, 66–79.
Montinola, G., & Jackman, R. (2002). Sources of corruption: a cross-country study? *British Journal of Political Science, 32*, 147–170.
Myrdal, G. (1970). *The challenge of world poverty: A world anti-poverty program in outline*. New York: Pantheon.
North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.
North, D. C. (1991, Winter). Institutions. *Journal of Economic Perspectives, 5*(1), 97–112.
OECD. (2002). Women at work. In *Employment outlook* (p. 61125). Paris: OECD.
Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of international business strategy: A focus on emerging economies. *Journal of International Business Studies, 39*(5), 920–936.
Podobnik, B., Shao, J., Njavro, D., Ivanov, P. C., & Stanley, H. E. (2008). Influence of corruption on economic growth rate and foreign investment. *European Physical Journal B: Condensed Matter and Complex Systems, 63*(4), 547–550.
Prud'Homme, R. (1995). The dangers of decentralization. *The World Bank Research Observer, 10*(2), 201–220.
Rauch, J. E., & Evans, P. B. (2000). Bureaucratic structure and bureaucratic performance in less developed countries. *Journal of public economics, 75*(1), 49–71.
Reinikka, R., & Svensson, J. (2004). Local capture: Evidence from a central government transfer program in Uganda. *The Quarterly Journal of Economics, 119*, 679–705.
Rodriguez, P., Siegel, D. S., Hillman, A., & Eden, L. (2006). Three lenses on the multinational enterprise: Politics, corruption, and corporate social responsibility. *Journal of International Business Studies, 37*(6), 733–746.
Rose-Ackerman, S. (1998). Corruption and development. In *Annual World Bank Conference on Development Economics 1997* (pp. 35-57). Washington, DC: World Bank.
Rose-Ackerman, S. (Ed.). (2007). *International handbook on the economics of corruption*. Cheltenham: Edward Elgar Publishing.
Scott, W. R. (2014). *Institutions and organizations* (4th ed.). Thousand Oaks, CA: Sage.
Svensson, J. (2005). Eight questions about corruption. *The Journal of Economic Perspectives, 19*(3), 19–42.
Tanzi, V., and Davoodi, H. (1997). *Corruption, public investment, and growth*. IMF Working Paper 139. Washington, DC: International Monetary Fund.
Tiebout, C. (1956). A pure theory of local expenditures. *Journal of Political Economy, 64*, 416–424.
Transparency International. (2007). *Corruption in the education sector*. Working Paper #04.
Transparency International. (2009). *Global corruption barometer*. Berlin: TI.
Transparency International. (2011). *Corruption in the land sector*. Working Paper 04/2011.
Transparency International. (2015). *Tax systems: A channel for corruption or a way to fight it?* Working Paper #03.
Transparency International (2016). *Transparency International Corruption Perceptions Index (CPI) 2016*. A short methodological note [online]. Retrieved from: https://www.transparency.org/news/feature/corruption_perceptions_index_2016.
Transparency International Bangladesh. (2010). *National household survey 2010 on corruption in Bangladesh*. Dhaka: TI Bangladesh.
Treisman, D. (2000). The causes of corruption: A cross-national study. *Journal of Public Economics, 76*(3), 399–457.

Tsalikis, J., & Nwachukwu, O. (1991). A comparison of Nigerian to American views of bribery and extortion in international commerce. *Journal of Business Ethics, 10*, 85–98.

Ugur, M., & Dasgupta, N. (2011). *Evidence on the economic growth impacts of corruption in low-income countries and beyond* (p. 2). London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Ul Haque, N., & Sahay, R. (1996). Do government wage cuts close budget deficits? Costs of corruption. *IMF Staff Papers, 43*(4), 754–778.

Van Rijckeghem, C., & Weder, B. (1997). *Corruption and the rate of temptation: Do low wages in the civil service cause corruption? International Monetary Fund working paper*. Washington, DC: IMF.

Végh, C.A. and Vuletin, G. (2016). *Unsticking the flypaper effect using distortionary taxation* (no. w22304). National Bureau of Economic Research.

Wedeman, A. (2002). Development and corruption: The EastAsian paradox. In E. T. Gomez (Ed.), *Political business in East Asia*. New York: Routledge.

Williamson, O. (2000). New institutional economics. *Journal of Economic Literature, 38*, 595–613.

World Bank. (1997). *World development report: The state in a changing world. New York*: Oxford University Press.

World Bank. (2015). *World development report*. Washington, DC: World Bank.

Xie, D., Zou, H. F., & Davoodi, H. (1999). Fiscal decentralization and economic growth in the United States. *Journal of Urban Economics, 45*(2), 228–239.

Zhang, T., & Zou, H. (1998). Fiscal decentralization, public spending, and economic growth in China. *Journal of Public Economics, 67*, 221–240.

# Chapter 5
# Corruption, Regulatory Regime, and Entrepreneurship

## 5.1 Regulations as a Culprit

Starting a business requires licenses and permits as well as dealing with other regulations. These regulations vary vastly across country. These regulations affect an entrepreneurs' decision either to incorporate or to remain in the informal sector. Prior research indicates that regulatory procedures and administrative burden deter entrepreneurial activity (Grilo and Irigoyen 2006). Klapper et al. (2006) show that cumbersome regulations and extended length of time to obtain necessary permits and licenses delay the start-up process and reduce entrepreneurial activity. Van der Horst et al. (2000) found that regulatory policies negatively influence entrepreneurial activity. Klapper and Love (2010) using a sample of 92 countries found that countries that made regulatory changes accounting for less than 40% did not experience a significant impact on new firm registration.

## 5.2 Corruption as "Sand" or "Grease" in Regulatory Environment

The regulatory environment is commonly viewed as an important factor for economic activity by creating a stable environment for social behavior (Scott 1995). A country's "rule of law" and implementation of the established law are equally important along with the legal system of the country. Combination of burdensome regulations, weak rule of law, and unfair and unequal implementation create an environment for corruption to flourish. The negative effect of regulations is well established in the literature (Klapper et al. 2006; Djankov et al. 2002) since regulations can impede economic activity by creating barriers between entrepreneurs and political leaders or bureaucrats since not everyone is equally able to access government officials to



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_5

lobby for their interest. Shleifer and Vishny (1993) differentiated between organized and efficient corruption and argued that corruption is desirable since it is embedded in the social norm. Given that the expectation is well established, both sides are well aware of the expectation and can induce a more efficient process by bypassing burdensome regulations (Méon and Sekkat 2005; Acemoglu and Verdier 2000). Political capital can also act as a way of corruption and act as a "grease" in the extensive regulatory environment. Political capital can be defined as a type of social capital that an individual or firm creates through political affiliations and informal ties. Entrepreneurs with well-established political capital can have access to policy information and access to critical resources (Faccio 2006; Li and Zhang 2007; Zhou 2013).

## 5.3 Corruption and Female Entrepreneurs

Corruption can be burdensome on any entrepreneurs but it can be specially taxing on female entrepreneurs since in many of the developing/emerging economies women face more challenges than man in many aspects, such as women have limited access to property, limited access to labor market and networks, and limited access to credit compared to male entrepreneurs (Estrin and Mickiewicz 2011; Coleman 1988). Access to capital is a constraint for entrepreneur everywhere.[1] In the high-corrupt environment, transaction cost can be higher that can put an extra burden on entrepreneurs (Williamson 1989).

Higher costs, lack of access to financial resources, and less developed financial institution can be hindrances for female entrepreneurs. Financial institutions are less developed in many of the developing countries and in many instances formal institutions are less likely to lend to entrepreneurs and even if they choose to lend men would be given preference over women (Beck et al. 2005; Gompers and Lerner 1999). Several factors can contribute to this; female entrepreneurs are at a disadvantage given that they have limited access to personal assets and credit record (Riding and Swift 1990). Horrell and Krishnan (2007) reported that households headed by a female have less opportunity to engage in the diverse economic activity; therefore, they are less likely to have appropriate income and assets to pursue the entrepreneurial opportunity. For women in developing countries, access to finance from formal financial institutions is an even greater problem than women in developed countries. In this case, women might rely on informal funding which can be more expensive[2] (Besley and Levenson 1996; Demirgüç-Kunt et al. 2008). Kuada (2009) examined women's accessibility to finance in Ghana and found that female entrepreneurs tend to have more difficulties in accessing financing from formal financial institutions than male. The combination of limited access to assets and lack of liquid

[1] Lian et al. (2011) presented how firms' investment and cash-holding decisions are influenced during financial crisis and financial constraints.

[2] Carpenter and Petersen (2002) found that internal financing is a cheaper source for financing than external financing.

financial resource puts women at a disadvantage because they don't have access to adequate resources to pay bribes.

In many of the developing countries, women have a less prominent role in the public sphere. Swamy et al.'s (2001) cross-country study found that countries where a large share of women are present in the political positions and labor force, less corruption is perceived in those countries. A similar result was presented by Dollar et al.'s (2001) study. Other studies suggest that this relationship is influenced by the political environment. Swamy et al.'s (2001) study included political freedom as a measure of the political environment. Dollar et al.'s (2001) study included civil liberties as a proxy for liberal democracy. Despite the evidence that female participation in the political arena reduces corruption, they face challenges within parties. Bjarnegard (2013) suggested that favoritism within political parties that is built based on social networks acts as a barrier for women. Men tend to have an advantage over female since they have more opportunity to create social networks through their participation in the labor market.

Women also tend to be more ethical than men. Empirical studies show that women are less inclined to corruption and less likely to pay bribery than men (Swamy et al. 2001; Dollar et al. 2001). Since women are less likely to pay bribery, they are also most likely to face the burdensome regulations that can hinder entry by female entrepreneurs.

### *5.3.1 Empirical Evidence*

In this section of the chapter, we explore how regulations affect female entrepreneurs in corrupt countries. We gathered data from various sources: Global Entrepreneurship Monitor (GEM) (2001–2013), Doing Business dataset (2001–2013), World Development Indicator (WDI) (2001–2013), and Economic Freedom Index (2001–2013). The sample size includes 66 countries. Table 5.1 reports the list of countries included in this study.

## 5.4 Dependent Variables

In this chapter, the percentage of female working-age population who are involved in the Total Early-Stage Entrepreneurial Activity (TEA) is used as a measure of female entrepreneurship. The percentage of male working-age population who are involved in the Total Early-Stage Entrepreneurial Activity (TEA) is used as a measure of male entrepreneurship. Total Early-Stage Entrepreneurial Activity (TEA) is defined as the percentage of the 18–64 population who are either a nascent entrepreneur or owner-manager of a new business. Female and male entrepreneurship measures sub-measures of TEA.

**Table 5.1** List of countries examined

| | | |
|---|---|---|
| Argentina | Hungary | Panama |
| Australia | Iceland | Peru |
| Austria | India | Philippines |
| Bolivia | Indonesia | Poland |
| Bosnia and Herzegovina | Iran, Islamic Rep. | Portugal |
| Botswana | Ireland | Romania |
| Chile | Israel | Russian Federation |
| Colombia | Italy | Saudi Arabia |
| Croatia | Japan | Serbia |
| The Czech Republic | Kazakhstan | Slovak Republic |
| Denmark | Korea, Rep. | Slovenia |
| Dominican Republic | Lithuania | Spain |
| Ecuador | Macedonia, FYR | Sweden |
| Egypt, Arab Rep. | Malaysia | Switzerland |
| El Salvador | Mexico | Thailand |
| Estonia | Morocco | Trinidad and Tobago |
| Finland | Namibia | Turkey |
| Germany | The Netherlands | Uganda |
| Ghana | New Zealand | United Kingdom |
| Greece | Nigeria | United States |
| Guatemala | Norway | Uruguay |
| Hong Kong SAR, China | Pakistan | Venezuela, RB |

## 5.5 Independent Variables

Three measures are used to capture the formal institutional structure. *The time required to start a business* is measured by the number of calendar days needed to complete required procedures to operate a business legally (see Klapper et al. 2006; Acs et al. 2008). This was taken from the Doing Business database. *Procedures required to start a business* is measured by a number of procedures required to start a business, including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start operations. *The cost to start a business* is measured by the cost to register a business. It is normalized by presenting it as a percentage of gross national income (GNI) per capita. All of these measures reflect countries' business environment and attitude to businesses. Government size is measured by government expenditures as a percentage of GDP. Expenditures include both consumption and transfers. Data is taken from the Index of Economic Freedom (IEF), as with Aidis et al. (2012) and McMullen et al. (2008). Corruption measured was taken from IEF which collects data from Transparency International (TI). It measures perceived level of corruption in different countries.

## 5.6 Control Variables

To account for the impact of economic development on entrepreneurship over time (Carree et al. 2002), the *economic development* is controlled by using GDP per capita, taken from World Development Indicators (see Estrin et al. 2013; Aidis et al. 2012). As a country goes through various stages of development, entrepreneurial activity in a country by men and women increases. Male and female human capital is measured by the percentage of male and female enrolled in a tertiary level of education. The data was collected from UNESCO. Human capital is an important factor for entrepreneurial activity (Davidsson and Honig 2003). Labor regulations measure regulations regarding labor such as minimum wage, hiring, and firing and the measure was taken from IEF. The labor force participation rate is measured by the percent of a female who participates in the labor force. Female labor participation rate is an important predictor of female entrepreneurship because female workers have less time to invest in the labor force since they have the responsibility of providing childcare and household responsibility (Bloom et al. 2009). The data was collected from World Development Indicator (Verheul et al. 2006). We use *private registration bureau coverage* to measure the effectiveness of the credit and broader financial system, taken from the Doing Business database. *Private registration bureau coverage* is defined as a percentage of the adult population and firms listed by a private credit bureau with information on their borrowing history from the past 5 years. A private credit bureau is defined as a private firm or nonprofit organization that maintains a database on the creditworthiness of borrowers (individuals or firms) in the financial system and facilitates the exchange of credit information among creditors (Djankov et al. 2007).

Variables included in this study, description, and sources are shown in Table 5.2. The means, standard deviations, and Pearson correlations are presented in Table 5.3.

### *5.6.1 Statistical Procedures*

The following equation to test our hypotheses is used:

Female and male entrepreneurs $= (\beta x_i, \theta z_i, \alpha, \mu_i)$

where $x_{it}$ is a vector of independent explanatory variables and $z_{it}$ is a vector of strictly exogenous control variables. Error term $\epsilon_{it}$ consists of unobserved country-specific effects and observation-specific errors. All independent and control variables are lagged by 1 year. All the independent variables are in natural log form except the cost to start business and government size.

A seemingly unrelated regression method is applied by using the (sureg) command in Stata. Correlation matrix option was specified which performs correlation of the residuals. Variance inflation factors (VIF) are run to detect possible issues related to multicollinearity. None of the variables included in the models have VIF scores above 10 (Kutner et al. 2004), so it is concluded that multicollinearity is not a significant problem and unlikely to have biased results.

**Table 5.2** Variables names and sources

| Variables | Variable name | Variable description | Source |
|---|---|---|---|
| Dependent variable | Female TEA | Percentage of female, aged 18–64, a population who are either a nascent entrepreneur or owner-manager of a new business | Global Entrepreneurship Monitor |
| Dependent variable | Male TEA | Percentage of male, aged 18–64, a population who are either a nascent entrepreneur or owner-manager of a new business | Global Entrepreneurship Monitor |
| Control | Economic Growth | GDP per capita (constant LCU) in logarithm | World Development Indicator |
| Control | Male Human Capital | Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level (school enrollment, tertiary, male (% gross)) | United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics |
| Control | Female Human Capital | Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level (school enrollment, tertiary, female (% gross)) | United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics |
| Control | Labor Regulations | Labor regulations measure considers various aspects of the legal and regulatory framework of a country's labor market including regulations concerning minimum wages, laws inhibiting layoffs, severance requirements, and measurable regulatory restraints on hiring and hours worked. The index score ranges from 0 (more regulations) to 100 (fewer regulations) | Economic Freedom Index. http://www.heritage.org |

| | | | |
|---|---|---|---|
| Control | Female Labor Participation Rate | The labor force participation rate, female (% of female population aged 15+). The labor force participation rate is the proportion of the population aged 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period | International Labour Organization |
| Control | Private registration bureau | Individuals and firms listed by a private credit bureau with information on their borrowing history from the past 5 years (% of the population) | World Bank, Doing Business project (http://www.doingbusiness.org/) |
| Independent variable | Time required starting a business | The time required to start a business is the number of calendar days needed to complete the procedures to legally operate a business (days) | World Bank, Doing Business project (http://www.doingbusiness.org/) |
| Independent variable | Start-up procedures to register a business | Start-up procedures are those required to start a business, including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start operations. Data are for businesses with specific characteristics of ownership, size, and type of production (number) | World Bank, Doing Business project (http://www.doingbusiness.org/) |
| Independent variable | Cost of business start-up procedures | The cost to register a business is normalized by presenting it as a percentage of gross national income (GNI) per capita (% of GNI per capita) | World Bank, Doing Business project (http://www.doingbusiness.org/) |
| Independent variable | Government size | The level of government expenditures including consumption and transfers (a percentage of GDP) | Economic Freedom Index. http://www.heritage.org |

**Table 5.3** Descriptive statistics and correlations of corruption, regulatory environment, and entrepreneurship

| | Obs. | Mean | Std. dev. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Female entrepreneurship | 465 | 9.66 | 7.92 | 1 | | | | | | | | | | | |
| 2. Male entrepreneurship | 465 | 14.29 | 7.51 | 0.91* | 1 | | | | | | | | | | |
| 3. Economic development | 465 | −5.10 | 2.16 | −0.16* | −0.10* | 1 | | | | | | | | | |
| 4. Female human capital | 465 | 3.84 | 0.77 | −0.52* | −0.51* | 0.14* | 1 | | | | | | | | |
| 5. Male human capital | 465 | 3.67 | 0.65 | −0.50* | −0.51* | 0.18* | 0.95* | 1 | | | | | | | |
| 6. Female labor participation | 465 | 3.89 | 0.29 | 0.31* | 0.16* | 0.11* | 0.24* | 0.18* | 1 | | | | | | |
| 7. Labor regulations | 465 | 4.12 | 0.27 | −0.06 | −0.12* | 0.34* | −0.02 | −0.06 | 0.20* | 1 | | | | | |
| 8. Private credit bureau | 465 | 3.54 | 1.14 | −0.18* | −0.19* | 0.02 | 0.43* | 0.37* | 0.29* | 0.14* | 1 | | | | |
| 9. Corruption | 465 | 3.63 | 0.79 | 0.34* | 0.38* | −0.22* | −0.46* | −0.44* | −0.39* | −0.29* | −0.27* | 1 | | | |
| 10. Time to start business | 465 | 2.85 | 0.94 | 0.41* | 0.35* | −0.13* | −0.41* | −0.43* | −0.02 | −0.16* | −0.28* | −0.48* | 1 | | |
| 11.Procedures to start business | 465 | 1.96 | 0.50 | 0.36 | 0.35* | −0.13* | −0.44* | −0.40* | −0.21* | −0.25* | −0.29* | 0.65* | 0.77* | 1 | |
| 12. Cost to start business | 465 | 16.05 | 22.49 | 0.52* | 0.49* | −0.20* | −0.43* | −0.34* | −0.11* | −0.20* | −0.31* | 0.41* | 0.41* | 0.52 | 1 |
| 13. Government size | 465 | 59.77 | 23.44 | 0.43* | 0.47* | −0.06 | −0.48* | −0.44* | −0.16* | 0.001 | −0.23* | 0.53* | 0.26* | 0.35* | 0.33* |

*Indicates 5% significance level

## 5.7 Results

Table 5.4 presents the results of interactions. Economic development consistently has a positive relationship in both male and female entrepreneurship. Both male and female human capital has a consistently negative relationship with entrepreneurship. Established literature suggests that human capital is an important resource for entrepreneurship, but this result also reflects the opportunity cost of taking on entrepreneurial activity. If the cost is high, entrepreneurs would prefer to take regular wage job that provides stability and less risk. Female entrepreneurs' ability to participate in the labor has a positive relationship with female entrepreneurship. Labor regulations do not have any significant relationship with any entrepreneurship. Credit information has positive but not always significant relationship with both types of entrepreneurship. Corruption consistently has a negative relationship with both male and female entrepreneurship. The result is consistent with the existing literature (Anokhin and Schultz 2009). The time required to start a business has a negative and significant relationship with both male and female entrepreneurship. The result demonstrates the negative impact of burdensome regulations (Klapper et al. 2006). When I include the interaction of corruption the result becomes positive. The result suggests that corruption may not always be burdensome; rather it can be used to reduce the inefficiency associated with burdensome regulations. Specifications (2, 3, 6, and 7) demonstrate similar effects of regulations and corruption. Specifications (4 and 8) present results for government size and interactions of corruption and government size. I find different results for female and male entrepreneurs.

## 5.8 Implications for Greater Society

Female entrepreneurs can be a critical source for an innovative and productive economic activity but their potential is not fully used in the society. Our results show that corruption itself can be a hindrance for female entrepreneurs. Additionally, they face many challenges in society from regulatory burden to cultural burden. Regulations that create an environment for the corrupt behavior of the government officials to thrive should be minimized. Limiting the power of bureaucrats will also limit their ability to exploit the female entrepreneurs. The World Bank Report titled "Women Business and the Law 2016" found that out of 173 countries, women in the 100 economies around the world face some form of restrictions and legal discrimination. These restrictions and legal discrimination do not pertain only to the private sector; it is also visible in the public sector (World Bank 2016). The legal discrimination includes the prohibition of women working in certain industries and 41 countries around the world have such policies. Removing the regulatory barrier, cultural barriers, and bridging the gender gap can produce payoffs that benefit not only individual women but also the future generations.

**Table 5.4** Regression results

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| | Female entrepreneurship | Female entrepreneurship | Female entrepreneurship | Female entrepreneurship | Male entrepreneurship | Male entrepreneurship | Male entrepreneurship | Male entrepreneurship |
| Economic development (ln) | 1.90*** (0.33) | 1.90*** (0.32) | 1.25*** (0.33) | 1.56*** (0.34) | 2.87*** (0.39) | 2.93*** (0.39) | 2.26*** (0.40) | 2.47*** (0.41) |
| Economic development (ln) (sq) | 0.26*** (0.04) | 0.25*** (0.04) | 0.17*** (0.04) | 0.23*** (0.04) | 0.33*** (0.05) | 0.33*** (0.05) | 0.24*** (0.05) | 0.29*** (0.05) |
| Female human capital (ln) | −4.34*** (0.34) | −4.49*** (0.33) | −4.22*** (0.34) | −4.47*** (0.36) | | | | |
| Male human capital (ln) | | | | | −4.95*** (0.46) | −5.10*** (0.47) | −4.79*** (0.46) | −4.99*** (0.49) |
| Female labor participation (ln) | 8.18*** (0.55) | 9.39*** (0.55) | 8.79*** (0.55) | 9.10*** (0.56) | | | | |
| Labor regulations (ln) | 0.04 (0.98) | 0.99 (0.96) | 0.90 (0.97) | 0.09 (1.05) | −1.58 (1.14) | −0.40 (1.16) | −0.46 (1.15) | −1.83 (1.24) |
| Private credit bureau (ln) | 0.23 (0.22) | 0.26 (0.22) | 0.50* (0.23) | 0.12 (0.23) | 0.52* (0.25) | 0.62* (0.26) | 0.88*** (0.26) | 0.41 (0.27) |
| Corruption (ln) | −5.02*** (0.78) | −5.96*** (0.88) | 0.95** (0.35) | −0.54 (0.70) | −6.35*** (0.89) | −7.16*** (1.05) | 0.08 (0.41) | −0.96 (0.82) |
| Time to start business (ln) | −7.63*** (1.04) | | | | −9.11*** (1.22) | | | |
| Time to start business (ln)*corruption | 2.58*** (0.29) | | | | 2.90*** (0.34) | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Procedures to start business (ln) | | −14.41*** (1.84) | | | | −15.81*** (2.21) | | |
| Procedures to start business (ln)*corruption | | 4.66*** (0.51) | | | | 4.95*** (0.61) | | |
| Cost to start business | | | −0.92*** (0.20) | | | | −1.05*** (0.24) | |
| Cost to start business*corruption | | | 0.24*** (0.05) | | | | 0.27*** (0.06) | |
| Government size | | | | −0.06 (0.05) | | | | 0.02 (0.06) |
| Government size*corruption | | | | 0.03* (0.01) | | | | 0.02 (0.02) |
| Constant | 7.569 (6.06) | 2.805 (5.85) | −17.18** (5.30) | −10.63+ (5.61) | 59.79*** (6.68) | 57.91*** (6.76) | 33.46*** (6.05) | 40.81*** (6.30) |
| *N* | 465 | 465 | 465 | 465 | 465 | 465 | 465 | 465 |
| $r^2$ | 0.61 | 0.61 | 0.61 | 0.57 | 0.61 | 0.61 | 0.61 | 0.57 |
| RMSE | 4.94 | 4.91 | 4.92 | 5.19 | 4.94 | 4.91 | 4.92 | 5.19 |
| Chi-squared | 816.53 | 829.26 | 829.08 | 702.36 | 816.53 | 829.26 | 829.08 | 702.36 |
| Log likelihood | −2536.38 | −2551.20 | −2545.10 | −2568.72 | −2536.38 | −2551.2 | −2545.1 | −2568.721 |

*0.10%, **0.05%, and ***0.01% significance level

Standard errors are in parenthesis—they are robust for heteroskedasticity and clustered by country

Investment in female entrepreneurs can have several benefits not only for the present-day but also for the future generations. Women tend to invest more in their families and communities than men. Investing in the family means children are healthier and better educated, both of which leads to contribution to a developing economy. A Sheffield University study found that full female participation in the society will likely to increase gross domestic production (GDP) by approximately 27% in the Middle East and North Africa, 23% in South Asia, and 15% in all other regions combined (Cuberes and Teignier 2012). Empowering women by creating opportunities to influence public policies is also important and can help to solve or alleviate legal discriminations and increase women involvement in the private sector to help with gaining experience, access to networks, and political capital.

## References

Acemoglu, D., & Verdier, T. (2000). The choice between market failures and corruption. *American Economic Review, 90*, 194–211.

Acs, Z. J., Desai, S., & Hessels, J. (2008). Entrepreneurship, economic development and institutions. *Small Business Economics, 31*(3), 219–234.

Aidis, R., Estrin, S., & Mickiewicz, T. M. (2012). Size matters: entrepreneurial entry and government. *Small Business Economics, 39*(1), 119–139.

Anokhin, S., & Schulze, W. S. (2009). Entrepreneurship, innovation, and corruption. *Journal of Business Venturing, 24*(5), 465–476.

Beck, T., Demirgüç-Kunt, A. S. L. I., & Maksimovic, V. (2005). Financial and legal constraints to growth: Does firm size matter? *The Journal of Finance, 60*(1), 137–177.

Besley, T., & Levenson, A. R. (1996). The role of informal finance in household capital accumulation: Evidence from Taiwan. *The Economic Journal, 106*(434), 39–59.

Bjarnegard, E. (2013). *Gender, informal institutions and political recruitment: Examining male dominance in parliamentary representation*. New York: Palgrave McMillan.

Bloom, D. E., Canning, D., Fink, G., & Finlay, J. E. (2009). Fertility, female labor force participation, and the demographic dividend. *Journal of Economic Growth, 14*(2), 79–101.

Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance?. *The Review of economics and Statistics, 84*(2), 298–309.

Carree, M., Van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. *Small Business Economics, 19*(3), 271–290.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, S95–S120.

Cuberes, D., & Teignier M. (2012). *Gender gaps in the labor market and aggregate productivity*. Sheffield economic research paper SERP 2012017.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*(3), 301–331.

Demirgüç-Kunt, A., Levine, R. and Detragiache, E. (2008). *Finance and economic development: The role of government*. Policy Working Paper, 3955.

Djankov, S., Rafael, L. P., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *Quarterly Journal of Economics, 117*(1), 1–37.

Djankov, S., McLiesh, C., & Shleifer, A. (2007). Private credit in 129 countries. *Journal of Financial Economics, 84*(2), 299–329.

Dollar, D., Fisman, R., & Gatti, R. (2001). Are women really the fairer sex? Corruption and women in government. *Journal of Economic Behavior & Organization, 46*(4), 423–429.
Estrin, S., & Mickiewicz, T. (2011). Institutions and female entrepreneurship. *Small Business Economics, 37*(4), 397.
Estrin, S., Mickiewicz, T., & Stephan, U. (2013). Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. *Entrepreneurship Theory and Practice, 37*(3), 479–504.
Faccio, M. (2006). Politically connected firms. *The American Economic Review, 96*(1), 369–386.
Gompers, P.A. and Lerner, J. (1999). *What drives venture capital fundraising?* (No. w6906). National Bureau of Economic Research.
Grilo, I., & Irigoyen, J. M. (2006). Entrepreneurship in the EU: To wish and not to be. *Small Business Economics, 26*(4), 305–318.
Horrell, S., & Krishnan, P. (2007). Poverty and productivity in female-headed households in Zimbabwe. *The Journal of Development Studies, 43*(8), 1351–1380.
Klapper, L., Love, I. (2010). *The impact of business environment reforms on new firm registration*. World Bank Policy Research Working Paper 5493.
Klapper, L., Laeven, L., & Raghuram, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics, 82*(3), 591–629.
Kuada, J. (2009). Gender, social networks, and entrepreneurship in Ghana. *Journal of African Business, 10*(1), 85–103.
Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). *Applied linear regression models*. Boston: McGraw-Hill/Irwin.
Li, H., & Zhang, Y. (2007). The role of managers' political networking and functional experience in new venture performance: Evidence from China's transition economy. *Strategic Management Journal, 28*(8), 791–804.
Lian, Y., Sepehri, M., & Foley, M. (2011). Corporate cash holdings and financial crisis: an empirical study of Chinese companies. *Eurasian Business Review, 1*(2), 112–124.
McMullen, J. S., Bagby, D., & Palich, L. E. (2008). Economic freedom and the motivation to engage in entrepreneurial action. *Entrepreneurship Theory and Practice, 32*(5), 875–895.
Méon, P. G., & Sekkat, K. (2005). Does corruption grease or sand the wheels of growth? *Public Choice, 122*(1–2), 69–97.
Riding, A. L., & Swift, C. S. (1990). Women business owners and terms of credit: Some empirical findings of the Canadian experience. *Journal of Business Venturing, 5*(5), 327–340.
Scott, W. R. (1995). *Institutions and organizations*. Thousand Oaks, CA: Sage.
Shleifer, A., & Vishny, R. (1993). Corruption. *Quarterly Journal of Economics, 108*(3), 599–617.
Swamy, A., Knack, S., Lee, Y., & Azfar, O. (2001). Gender and corruption. *Journal of Development Economics, 64*(1), 25–55.
Van der Horst, R., Nijsen, A., & Gulhan, S. (2000). Regulatory policies and their impact on SMEs in Europe: The case of administrative burdens. In D. Sexton & H. Landstrom (Eds.), *Blackwell handbook of entrepreneurship* (pp. 128–149). Malden, MA: Blackwell Publishing.
Verheul, I., Stel, A. V., & Thurik, R. (2006). Explaining female and male entrepreneurship at the country level. *Entrepreneurship and Regional Development, 18*(2), 151–183.
Williamson, O. E. (1989). Transaction cost economics. *Handbook of Industrial Organization, 1*, 135–182.
World Bank. (2016). *Women, business and the law*. Retrieved from http://wbl.worldbank.org/
Zhou, W. (2013). Political connections and entrepreneurial investment: Evidence from China's transition economy. *Journal of Business Venturing, 28*(2), 299–315.

# Chapter 6
# Corruption, Entrepreneurship, and Social Welfare

## 6.1 Income Inequality: Old Debate, New Concerns

Income inequality is not a recent phenomenon. However, there is a renewed interest among scholars to determine the trend and cause behind this unequal distribution of wealth. Footprints of colonialism on income inequality are visible in many of the developing countries and remnants of the institutions and legal systems set up by the colonizers remain influential. Yet their impact on the economic activity is still debatable. La Porta et al. (1998, 1999, 2000) in a series of articles argue that countries that were colonized by the British have strong legal system compared to the other countries. Engerman and Sokoloff (2002) suggested that colonizers distributed labors based on the local endowment. For instance, colonizers saw Brazil as a better sugar producer than the United States. Therefore Brazil had a higher share of slave laborer that eventually led to hierarchical society than the United States. Banerjee and Iyer (2005) studies the land ownership structure in India. India was colonized by British over a long period of time. Some of the property rights institutions created by the British colonizers were changed while others remained intact. Areas with higher land ownership rate by the cultivator also had higher investment rate in health and education than areas with land ownership held by the landlords.

Many of the Latin American countries adopted import substituting industrialization policies during the 1950s–1980s. Cornia (2015) noted that many of these countries experienced a reduction in income inequality during that time period. In recent history, increased trade activity due to globalization has also contributed to the income inequality by shifting employment pattern in the labor market and labor mobility since labor market is the most reactive (Grossman and



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_6

Shapiro 1982; Elliott and Lindley 2006). The changes in the pattern have favored one group of workers over others since firms were forced to adopt new technologies in order to remain competitive. This demand for workers who possess sophisticated skills to perform the jobs has seen an increase in their wages while others were either left completely out of labor market or forced to seek self-employment/necessity entrepreneurship or take on low-paying jobs in order to meet their basic needs. These venues may help someone to meet their basic needs but fail to create wealth (Schoar 2010). The self-employed/necessity entrepreneur creates a job for himself/herself but less likely to grow or create an additional job.

## 6.2 Corruption and Social Welfare

Corruption can affect the social welfare of society by acting as a regressive tax on the poor by robbing resources from households having difficulties. It has affected the level of poverty in many of the developing countries. Corruption affects decision making, budgeting, and policy implementation processes in the government sector, the private sector, and citizens. When government authorities abuse their power for private gains citizens fail to receive services they need or demand. Blackburn and Forgues-Puccio (2007) presented their theoretical framework by demonstrating that bureaucrats who are responsible for implementing social programs will be biased toward wealthy individuals. Foellmi and Oechslin (2007) demonstrated that corruption helps to concentrate income toward wealthy. Wealthy individuals have necessary resources to access financial resources.

Developing and emerging economies face many challenges. Among them, corruption and income inequality are most pervasive. Despite globalization and increased labor and capital mobility, the income gap continues to prevail. Income distribution varies widely across countries, the exact reason of which remains unclear and remains under investigation (Piketty 2014). Equitable distribution of income is an important factor for maintaining a stable society and avoiding the erosion of "meritocratic values" in a country (Piketty 2014, p. 1). Therefore, understanding the causes of inequality and policy devices that can contribute to reducing inequality and increasing prosperity is very important. There is a consensus that income inequality is an obstacle for economic development and poverty reduction (de Ferranti et al. 2004), and access to education and healthcare facilities, leading to "inequality traps" that can perpetuate across generations (World Development Report 2006). To paraphrase Ferreira and Ravallion (2009, p. 6), no country has successfully developed beyond middle-income status while retaining a very high level of income inequality. Latin American, Caribbean, and South and East Asian

regions have seen increased income inequality over the years (Morley 2001; Kakwani and Krongkaew 2000).

Corruption level in a country presents poor institutional quality and is a common problem for many of the developing countries. Existing literature suggests that corruption reduces opportunities and resources that are available for distribution in the society, increases the cost of capital, and reduces productive entrepreneurial activity (Estrin et al. 2013; Mauro 1995; Tanzi and Davoodi 1997; Wei 1999).

## 6.3 Contribution of Corruption to Income Inequality

Much of the empirical literature supports a positive relationship between corruption and income inequality, more corruption higher inequality (see Ades and Di Tella 1997; Gupta et al. 2002; Gyimah-Brempong and Muñoz de Camacho 2006; Li et al. 2000). Using a mixed group of countries that includes both developed and developing countries, Li et al. (2000) and Chong and Calderon (2000) found an inverse U-shaped relationship between corruption and income inequality. Chong and Calderon (2000) and Gupta et al. (2002) both analyzed the effects of corruption on poverty as well as on income inequality and found a positive and linear relationship. Corruption distorts the distribution of resources. Apergis et al. (2010) and Chong and Gradstein (2007a, b) and Uslander (2007) found that corruption and inequality can lead to a vicious trap because individuals with resources are better able to gain education and skills that help them to gain better livelihoods and healthcare resources. This access to resources also allows them to have better access to financial resources since many formal financial institutions require collateral. Individuals with access to fewer resources are not able to get any of these and this lack of access to resources continues over generations. The children of low-income parents receive access to lower quality education and health resources.

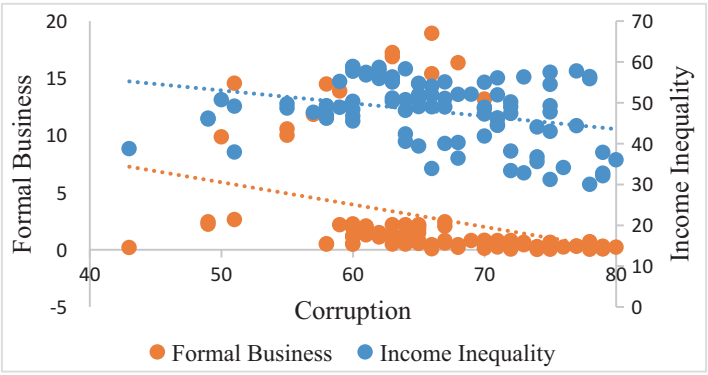
Existing literature suggests that colonial heritage of a region can also contribute to the tolerance of corruption. Engeman and Sokoloff (2005, 2002, 2000, 1997) and Acemoglu et al. (2002) suggested that the root of current inequality is the colonial era. These studies have examined the influence of the colonial era in the Latin American region. During the colonial era, the concentration of wealth and profit-generated activities were concentrated on the hand of few wealthy ruling class. These ruling classes created institutions that benefited them greatly and created inequality in the society. The trend continued even after the end of the colonial era because ruling elites maintained their connection with the formation and implementation of the institutions and government policies. This long tradition of corruption has allowed individuals to become accustomed to it.

## 6.4 Corruption, Income Inequality, and Entrepreneurship

Can entrepreneurship help with reducing income inequality? Similar to everyone, entrepreneurs have the desire for improving living standard through engaging in activity that has been their desire. Combination of individual's motivation, cognitive ability, and contextual environment can help to improve an individual's living standard and to reduce income inequality in the society. However, just starting the entrepreneurial activity and subsequent continuation of the activity can be challenging in certain context.

At the initial level of a venture, entrepreneurs rely on several resources for engaging in entrepreneurial activity and existing unequal access to resources could be a deterrent for an entrepreneur. For instance, the World Bank's 2006 World Development Report, Equity, and Development argues that inequality of opportunity results in squandered human potential and deteriorates potential for overall prosperity. For instance, individuals who are situated in an extensive regulatory environment, corruption may hurt the entrepreneurs who does not have access to adequate resources. Rose-Ackerman (2007) presents that bad regulations rather than the size of government create opportunities for corruption. Broadman and Recanatini (2001) show that higher regulations that create entry barriers to market lead to higher corruption. This study included transition economies in Europe and Central Asia. Djankov et al. (2002) found that regulations related to a number of procedures, time, and costs associated with starting a new business are highly correlated with corruption. The study included 71 countries. Svensson (2005, p. 29) found that level of corruption is correlated with the number of business days needed to obtain legal status.

So how is income inequality, corruption, and entrepreneurship interrelated? As Gupta et al. put it, "The benefits from corruption are likely to accrue to the better-connected individuals … who belong mostly to high-income groups" (Gupta et al. 2002, p. 23). Therefore, the burden of corruption or negative impact of corruption falls disproportionately on low-income individuals. Low-income individuals have less opportunity and access to education. This lack of access can translate to low earning potential and less access to financial resources. For an entrepreneur both human capital and financial resources are important. In case of an entrepreneur with less human capital, the low earning potential will take on low-quality entrepreneurial activity because the opportunity cost is low and helps to meet them their basic necessity. In addition, individual entrepreneurs in low-income groups would have to pay to overcome these extensive regulations. They would also pay a higher proportion of their income than the individuals in high-income groups. Entrepreneurs who have a high concentration of assets and access to other financial resources can influence public policy through lobbying for legislation that serve their purpose. In highly unequal society, assets, access to financial resources, and access to public officials and information resources can be concentrated to elite few who can use their wealth to lobby the government for favorable policies. Figure 6.1 shows a linear relationship between formal business, corruption, and income inequality. As the level of corruption increases, formal businesses decrease at a higher rate. The relationship between corruption and income inequality is less negative.




Source: Data from World Development Indicator

**Fig. 6.1** Relationship between formal business, corruption, and income inequality. Source: Data from World Development Indicator

## 6.5 Empirical Evidence

### *6.5.1 Data and Methods*

We compiled our data from the following sources at the country level: World Bank Group Entrepreneurship Snapshot (2004–2012), World Development Indicators (2004–2012), Doing Business Database (2004–2012), Global Entrepreneurship Monitor (GEM) (2004–2012), Polity (2004–2012), and World Governance Indicators (2004–2012). Countries included in our sample are low- and middle-income countries in Latin America, the Caribbean, and South and East Asia as classified by the World Bank. Low-income countries have per capita gross national income, or GNI $\leq$ $4085 and middle-income countries have GNI of $4085–$12,615. Table 6.1 presents a definition, sources, and hypotheses related to the variables. We have 141 observations in our sample. Countries included in this article are Argentina, Bangladesh, Bolivia, Colombia, Costa Rica, Dominican Republic, Guatemala, India, Indonesia, Jamaica, Malaysia, Pakistan, Panama, Peru, the Philippines, and Thailand.

### *6.5.2 Income Inequality Measures*

We used two different measures of inequality. The first measure of inequality is from World Development Indicator. Gini coefficient is computed based on Lorenz curve. Y-axis of the curve presents the cumulative percentage income held by shares of society and X-axis presents the percentage of the population holding the particular income share. Gini coefficient ranges from 0 to 100 with 100 being perfect inequality and zeroes being perfect equality (Li et al. 2013; Knight 2013; Deininger and Squire 1996). The second measure is the income held by the top 10% of the population.

**Table 6.1** List of variables, hypotheses, and sources

| Variable | Description | Hypothesis | Sources |
|---|---|---|---|
| *Dependent variables* | | | |
| GINI | Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality | | World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm). World Development Indicator Database. Data is available at http://data.worldbank.org/indicator/SI.POV.GINI |
| Income held by top 10% of the population | The percentage share of income or consumption is the share that accrues to subgroups of population indicated by deciles or quintiles | | World Bank, Development Research Group. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database. For more information and methodology, please see PovcalNet (http://iresearch.worldbank.org/PovcalNet/index.htm). World Development Indicator Database. Data is available at http://data.worldbank.org/indicator/SI.POV.GINI |
| *Methodological controls* | | | |
| Democracy | The POLITY score ranges from +10 (strongly democratic) to −10 (strongly autocratic) | – | Polity IV |

**Table 6.1** (continued)

| Variable | Description | Hypothesis | Sources |
|---|---|---|---|
| Openness | Foreign direct investment is the net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors and is divided by GDP (% of GDP) | + | International Monetary Fund, International Financial Statistics and Balance of Payments databases, World Bank, International Debt Statistics, and World Bank and OECD GDP estimates |
| Economic development | GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant local currency (constant LCU) | − | World Bank National Accounts data, and OECD National Accounts data files |
| Tertiary | Tertiary school gross enrollment ratio (% gross) | − | United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics |
| Business environment | Time required to enforce a contract is the number of calendar days from the filing of the lawsuit in court until the final determination and, in appropriate cases, payment (days) | − | World Bank, doing business project (http://www.doingbusiness.org/) |
| Natural resources | Total natural resource rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents (% of GDP) | + | Estimates based on sources and methods described in "The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium" (World Development Indicator Database) |
| *Independent variables* | | | |

(continued)

**Table 6.1** (continued)

| Variable | Description | Hypothesis | Sources |
|---|---|---|---|
| Corruption (WGI) | Perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. The score ranges from −2.5 to 2.5; a score of greater than zero corresponds to the low level of corruption | – | Kauffmann et al. (2013); World Governance Indicator (WGI) |
| Corruption (IEF) | Corruption data was primarily derived from Transparency International's Corruption Perceptions Index (CPI). The index score ranges from 0 to 100 with 100 being less corruption | – | Index of Economic Freedom (IEF) |
| New formal start-up firms | New businesses registered are the number of new limited liability corporations registered in the calendar year | – | World Bank's Entrepreneurship Survey and database (http://econ.worldbank.org/research/entrepreneurship) |
| Necessity–opportunity ratio | Necessity entrepreneurs are those who are involved in TEA (TEA) because they had no other option for work (% of those involved in the total entrepreneurial activity). Opportunity entrepreneurs are those involved in total entrepreneurial activity (TEA) who claim to be driven by opportunity as opposed to finding no other option for work and who indicate that the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income (% of those involved in total entrepreneurial activity) | – | Global Entrepreneurship Monitor (GEM) |
| TEA | Individuals who are either a nascent entrepreneur or owner-manager of a new business (% of 18–64-year population) | – | Global Entrepreneurship Monitor (GEM) |

### 6.5.3 Corruption Measures

We used two measures of corruption. Corruption (WGI) was derived from the World Governance Indicators and reflects the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests (Kaufmann et al. 2009). The measure was calculated by averaging data from 32 existing data sources. Data sources include surveys of households and firms, commercial business information providers, nongovernmental information providers, and public sector organizations. The original score for the indicator ranges from −2.5 to 2.5 with a higher score corresponding to less corruption (Kaufmann et al. 2009). We also include corruption measure from Index of Economic Freedom (IEF). IEF data for corruption is collected from Transparency International (TI) (McMullen et al. 2008). TI's Corruption Perception Index (CPI) measures the level of corruption perceived in the public sector. We reversed both measures: higher score means more corruption. The measures are collected from 180 countries around the world.

### 6.5.4 Entrepreneurship Measures

Our entrepreneurship measures were collected from two different sources. We measure new formal start-up firms using formal entry density, calculated as the number of new limited liability companies (LLCs) per 1000 people (Klapper and Love 2011). Necessity–opportunity ratio measure was calculated by dividing necessity measure by opportunity entrepreneurship measure. Necessity entrepreneurship is the percentage of those involved in TEA who are involved in entrepreneurship because they had no other option for work (Ardagna and Lusardi 2008; McMullen et al. 2008). Opportunity entrepreneurship entails an individual's decision to engage in entrepreneurial activity which is motivated by opportunity, and is measured by percentage of those involved in TEA who claim to be driven by opportunity as opposed to finding no other option for work and who indicate that the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income (Ardagna and Lusardi 2008; McMullen et al. 2008). The ratio of the measures reflects the quality of entrepreneurship in a country; a higher ratio would reflect the prevalence of more opportunity-related entrepreneurship and the lower ratio would reflect more necessity-oriented entrepreneurship. TEA is measured by the percentage of the population (18–64) who are either a nascent entrepreneur or owner-manager of a new business (Ardagna and Lusardi 2008).

### *6.5.5 Control Variables*

#### 6.5.5.1 Democracy

The democratic political environment can help to redistribute resources in a society and can contribute to reducing income inequality in a society. Democratically elected governments are more likely to be held accountable to voters than authoritarian governments. Elected officials more likely to adopt redistributive policies as voters demand more equitable distribution of resources and as officials become attuned to voters' needs. Based on theoretical and empirical studies (Reuveny and Li 2003; Boix 1998; Chan 1997), we also expect that democratic government system will help to reduce income inequality. Democracy data was collected from Polity IV.

#### 6.5.5.2 Human Capital

Human capital is proxied as the tertiary school gross enrollment ratio and reflects the quality of labor international entrepreneurs may be able to access. Better educated population in a country is an important factor for promoting economic development and reducing income inequality (Dasgupta 1993; Glomm and Ravikumar 1992).

#### 6.5.5.3 Access to Finance

Access to financial resources is important for entrepreneurs. Poor entrepreneurs lack adequate collateral, credit scores/histories, and connections, so often they lack access to resources from formal financial institutions which leads to credit constraints and flow of financial capital (Galor and Zeira 1993).

#### 6.5.5.4 Economic Openness

Economic openness is measured by FDI. FDI is measured by net inflows of investment. FDI contributes to economic activity in several ways from promoting technology transfer from developed countries to developing countries to wage increases (Nafziger 1997). Previous studies have found that openness has a positive impact on income inequality (Reuveny and Li 2003; Tsai 1995). We also expect that economic openness will help to reduce inequality.

#### 6.5.5.5 Economic Development

The relationship between economic development and income inequality has been established based on Kuznets hypothesis (1955). Kuznets (1955) hypothesized that economic development and income inequality are inverted U-shape; income inequality rises below a certain level of economic development and above a certain level of economic development income inequality decreases. In this study, economic development is measured as GDP per capita for the country (Carree et al. 2002).

#### 6.5.5.6 Business-Friendly Environment

The business-friendly environment is an important factor for entrepreneurship. Inefficient regulatory environment and bureaucratic delays can have a negative impact on entrepreneurship (Klapper et al. 2006, 2015).

#### 6.5.5.7 Natural Resource Endowment

The relationship between natural resource endowment and inequality has a long history of research. In many of the developing countries, elites in society control access to these resources and redistribution of society is poor (Engeman and Sokoloff 2000, 2002).

Table 6.2 presents correlation of all the variables included in the study. Both measures of income inequality are highly correlated. None of the other variables are correlated with each other except the two measures of corruption, which suggests that both measures are consistent with our definition of corruption.

## 6.6 Empirical Methodology

We use OLS method. To assess the hypothesis of this study I use the following equation:

$$\text{Inequality}_{it} = f\left(\alpha,\ \beta\text{Corruption}_{it-1},\ \theta y_{it-1}, \mu X_{it-1},\ \gamma T_t,\ \mu_{it}\right) \tag{6.1}$$

where $\text{inequality}_{it}$ represents income inequality in country $i$ during period $t$. Corruption represents corruption in a country, $y_{it}$ is entrepreneurship in country $i$ at time $t$, $\beta$ are parameters to be estimated, and $x_{it}$ represents the set of control variables. $T_t$ represents the set year dummies, and $\mu_{it}$ represents the error term. To alleviate the endogeneity concern, I lagged all the independent variable 1 year.

**Table 6.2** Descriptive statistics and correlation

| | | Obs. | Mean | Std. dev. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Gini | 141 | 3.8 | 0.2 | 1 | | | | | | | | | | | | | | |
| 2 | Extreme inequality | 141 | 3.56 | 0.17 | 0.98* | 1 | | | | | | | | | | | | | |
| 3 | Unbounded Gini | 141 | −0.08 | 0.15 | 0.99* | 0.99* | 1 | | | | | | | | | | | | |
| 4 | Democracy | 141 | 0.07 | 0.03 | 0.45* | 0.42* | 0.43* | 1 | | | | | | | | | | | |
| 5 | Human capital | 141 | 30.47 | 15.7 | 0.56* | 0.45* | 0.53* | 0.30* | 1 | | | | | | | | | | |
| 6 | Access to finance | 141 | 0.58 | 0.31 | −0.14 | −0.17* | −0.16 | −0.24* | 0.12 | 1 | | | | | | | | | |
| 7 | Economic openness | 141 | 0.07 | 0.01 | 0.51* | 0.45* | 0.49* | 0.39* | 0.35* | 0.07 | 1 | | | | | | | | |
| 8 | Economic development | 141 | 0.01 | 0.03 | 0.03 | 0.08 | 0.04 | 0.06 | −0.08 | 0.13 | 0.11 | 1 | | | | | | | |
| 9 | Economic development (sq) | 141 | 0 | 0 | 0.02 | 0.07 | 0.04 | 0.05 | −0.07 | −0.12 | 0.11 | 0.99* | 1 | | | | | | |
| 10 | Business environment | 141 | 0.04 | 0.03 | −0.1 | −0.11 | −0.11 | 0.1 | −0.17* | −0.30* | −0.2 | 0.30* | 0.26* | 1 | | | | | |
| 11 | Natural resource endowment | 141 | 0.08 | 0.08 | 0.13 | 0.13 | 0.15 | −0.11 | 0.1 | 0.04 | 0.1 | 0.15 | 0.16 | 0.17* | 1 | | | | |
| 12 | Corruption (WGI) | 141 | 0.44 | 0.42 | 0.42* | 0.36* | 0.40* | 0.28* | 0.42* | 0.30* | 0.39* | 0.02 | 0.04 | 0.01 | −0 | 1 | | | |
| 13 | Corruption (IEF) | 141 | 0.69 | 0.09 | 0.38* | 0.33* | 0.36* | 0.16 | 0.36* | 0.37* | 0.39* | 0.03 | 0.04 | 0.14 | 0.06 | 0.89* | 1 | | |
| 14 | New formal start-up firms | 141 | 2.47 | 4.78 | 0.34* | 0.32* | 0.34* | 0.28* | 0.25* | 0.17* | 0.25* | −0.12 | −0.13 | −0.11 | −0.30* | −0.47* | −0.39* | 1 | |
| 15 | Necessity–opportunity ratio | 141 | 1.25 | 0.69 | 0.55* | 0.59* | 0.56* | 0.22* | 0.08 | −0.56* | 0.20* | −0.18* | −0.18* | −0.20* | −0.20* | −0.01 | 0.01 | 0.03 | 1 |
| 16 | TEA | 141 | 17.52 | 7.33 | 0.51* | 0.54* | 0.52* | 0.24* | 0.25* | −0.29* | 0.25* | 0.16 | 0.17* | 0.28* | 0.41* | 0.08 | 0.14 | −0.18* | 0.26* |

*$p < 0.05$

Multicollinearity is a major concern in institutional analysis. I have utilized variance inflation factor (VIF) to detect any issues related to multicollinearity. None of the variables included in the models have VIF score above 10 (Kutner et al. 2004). Given that all VIFs are below the accepted level of 10, I concluded that multicollinearity is not a significant factor and unlikely to have biased the results.

## 6.7 Results

Table 6.3 presents results of all countries from both Latin America and the Caribbean and South and East Asian regions. Specification 1 includes results of all factors that Ire emphasized in previous studies of inequality. This is our baseline model. A majority of the factors, but not entire, are consistent with previous findings. Democratic environment reduces income inequality as found in previous studies. Human capital increases income inequality and significance ($p < 0.001$), which is expected because better educated individuals are more likely to have better earning and opportunity and more likely to take on the entrepreneurial opportunity that eventually becomes successful (Davidsson and Honig 2003). Access to finance has a negative relationship with inequality which is expected ($p < 0.001$) because access to financial resources can help to create or exploit opportunities that contribute to increase inequality (Blanchflower and Oswald 1998). Economic openness helps to increase income inequality and significance. The U-shaped relationship between economic development and income inequality is similar to previous studies. At the initial stages of development inequality increases but decreases as development continues (Kuznets 1955; Lewis 1954). The business-friendly environment helps to reduce income inequality and natural resource endowment helps to increase inequality; both results are expected (Klapper et al. 2006; Gupta et al. 2002; Sachs and Warner 2001).

Model 2 presents results with corruption measure from WGI. Our result related to corruption is unexpected; as corruption increases inequality decreases and significance. Model 3 includes our measure of entrepreneurship variable new formal start-up firms and interactions with corruption. New formal start-up firms increase inequality in a country but not significance, but interaction coefficient is positive and significant ($p < 0.001$). Model 4 includes results for necessity–opportunity ratio and interaction of corruption (WGI). The direct effect is similar to the new formal start-up firms, positive with income inequality, but interaction effect is different, negative with inequality ($p < 0.001$). The result suggests that in corrupt environment quality of entrepreneurship can be a contributor to reducing inequality. Model 5 represents results for TEA; TEA increases income inequality similar to new formal start-up firms and results are significant for both direct effect and interaction effect.

Table 6.4 presents results for South and East Asian countries and Latin American and Caribbean countries. We found conflicting results, which suggests that regional differences play an important role. For Asian countries, new formal start-up firms increase income inequality but interaction coefficient shows that in highly corrupt countries it reduces income inequality. However, for Latin American and Caribbean

**Table 6.3** OLS results

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Democracy | 1.01*<br>(0.47) | 0.65<br>(0.48) | 1.04**<br>(0.39) | 0.56<br>(0.38) | 0.28<br>(0.33) |
| Human capital | 0.004***<br>0 | 0.003**<br>0 | 0.004***<br>0 | 0.002**<br>0 | 0.002***<br>0 |
| Access to finance | −0.19***<br>(0.04) | −0.24***<br>(0.04) | 0.15**<br>(0.04) | −0.18***<br>(0.04) | 0.03<br>(0.03) |
| Economic openness | 3.67**<br>(1.32) | 3.59**<br>(1.23) | 2.08*<br>(0.98) | 0.97<br>(1.15) | 0.41<br>(0.82) |
| Economic development | 2.56<br>(4.83) | 3.03<br>(4.61) | −2.92<br>(3.84) | 6.81+<br>(3.72) | 1.63<br>(2.94) |
| Economic development (sq) | −25.5<br>(55.21) | −33.1<br>(52.83) | 43.32<br>(42.09) | −71.42<br>(43.23) | −10.2<br>(32.18) |
| Business environment | −1.99***<br>(0.55) | −1.36*<br>(0.58) | −0.27<br>(0.48) | −3.23***<br>(0.42) | −0.98*<br>(0.38) |
| Natural resource endowment | 0.39**<br>(0.12) | 0.46**<br>(0.14) | 0.61***<br>(0.10) | −0.26+<br>(0.15) | 0.20*<br>(0.10) |
| Corruption (WGI) | −0.10***<br>(0.03) | −0.17***<br>(0.04) | 0.03<br>(0.05) | −0.47***<br>(0.08) | −0.37***<br>(0.06) |
| New formal start-up firms | | 0.003<br>0.00 | | | 0.003<br>0.00 |
| Corruption (WGI)*New formal start-up firms | | 0.02***<br>(0.01) | | | 0.03***<br>(0.01) |
| Necessity–opportunity ratio | | | 0.23***<br>(0.03) | | 0.20***<br>(0.04) |
| Corruption (WGI)*Necessity–opportunity ratio | | | −0.09*<br>(0.04) | | −0.10*<br>(0.05) |
| TEA | | | | 0.01**<br>0 | 0.0005<br>0 |
| Corruption (WGI)*TEA | | | | 0.02***<br>0 | 0.02***<br>0 |
| Constant | 3.64***<br>(0.10) | 3.69***<br>(0.10) | 3.13***<br>(0.09) | 3.85***<br>(0.11) | 3.50***<br>(0.09) |
| *N* | 141 | 141 | 141 | 141 | 141 |
| *R*-sq. | 0.58 | 0.63 | 0.76 | 0.73 | 0.87 |
| RMSE | 0.14 | 0.13 | 0.11 | 0.11 | 0.08 |
| *F* stat | 9.54 | 19.87 | 27.94 | 31.57 | 54.74 |
| Log likelihood | 89.77 | 98.13 | 128.13 | 121.04 | 171.45 |

+0.10, *0.05, **0.01, ***0.001. Regression results for year dummies are available on request

countries it helps to reduce inequality but not significance and the relationship is also negative when corruption is included for interactions.

Necessity–opportunity ratio also increases inequality but reduces when corruption is included. The results are also similar for both sets of countries. TEA helps to reduce inequality but increases with corruption and results hold true for both coun-

**Table 6.4** OLS results for subsamples

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Democracy | 0.55* (0.26) | 0.47* (0.21) | 0.57+ (0.30) | 0.44+ (0.24) | 0.62*** (0.15) | −5.66*** (1.08) | −5.25*** (1.18) | −4.82*** (1.04) | −5.93*** (1.19) | −3.72** (1.31) |
| Human capital | 0.02*** 0 | 0.02*** 0 | 0.02*** 0 | 0.02*** 0 | 0.01*** 0 | −0.002*** 0 | −0.002*** 0 | −0.003*** 0 | −0.002*** 0 | −0.003*** 0 |
| Access to finance | −0.52*** (0.05) | −0.46*** (0.04) | −0.44*** (0.06) | −0.43*** (0.06) | −0.23*** (0.05) | 0.08* (0.04) | 0.03 (0.08) | 0.12*** (0.03) | 0.02 (0.06) | 0.11+ (0.07) |
| Economic openness | −2.04* (0.81) | −1.29+ (0.76) | −1.42 (1.01) | −2.32** (0.81) | −2.08* (0.81) | 2.40* (0.96) | 2.32* (1.07) | 1.22 (1.00) | 1.63 (1.00) | 1.31 (1.11) |
| Economic development | 8.96** (3.04) | 6.28+ (3.45) | 1.66 (4.45) | 11.90** (3.56) | 0.45 (4.22) | −1.41 (1.55) | −1 (1.69) | −0.88 (1.40) | −1.91 (1.64) | 0.41 (1.78) |
| Economic development (sq) | −122.2*** (31.86) | −94.59** (35.36) | −45.15 (47.04) | −144.9*** (34.84) | −26.05 (42.38) | 19.24 (16.42) | 17.68 (18.00) | 10.51 (14.72) | 24.74 (17.63) | −0.43 (19.17) |
| Business environment | −2.28*** (0.42) | −1.58** (0.49) | −1.48* (0.60) | −2.73*** (0.52) | −1.30* (0.54) | 0.64+ (0.37) | 0.68+ (0.39) | 0.29 (0.35) | 0.12 (0.53) | 0.25 (0.45) |
| Natural resource endowment | 1.70*** (0.31) | 1.67*** (0.29) | 2.08*** (0.42) | 0.84 (0.52) | 1.76*** (0.45) | 0.23*** (0.05) | 0.26** (0.08) | 0.10+ (0.05) | 0.16* (0.07) | 0.09 (0.09) |
| Corruption (WGI) | −0.02 (0.02) | −0.01 (0.02) | 0.07 (0.05) | −0.28** (0.09) | −0.29** (0.09) | −0.02 (0.03) | 0.01 (0.05) | 0.21* (0.10) | −0.14+ (0.08) | 0.46* (0.23) |
| New formal start-up firms | | 0.01* 0 | | | 0.01*** 0 | | −0.002 0 | | | −0.004 0 |
| Corruption (WGI)* New formal start-up firms | | −0.003 (0.01) | | | 0.001 0.00 | | −0.01 (0.01) | | | −0.02+ (0.01) |
| Necessity–opportunity ratio | | | 0.12* (0.06) | | 0.11** (0.04) | | | 0.02 (0.04) | | 0.04 (0.05) |

(continued)

**Table 6.4** (continued)

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Corruption (WGI)*Necessity–opportunity ratio | | | −0.12+ (0.06) | | −0.04 (0.04) | | | −0.13* (0.05) | | −0.17+ (0.09) |
| TEA | | | | −0.01** 0 | −0.004+ 0 | | | | −0.001+ 0 | 0.003+ 0 |
| Corruption (WGI)*TEA | | | | 0.02** (0.01) | 0.03*** (0.01) | | | | 0.005 0.00 | −0.005 0.00 |
| Constant | 3.74*** (0.07) | 3.66*** (0.06) | 3.53*** (0.12) | 3.90*** (0.09) | 3.53*** (0.12) | 4.28*** (0.14) | 4.25*** (0.16) | 4.30*** (0.17) | 4.42*** (0.17) | 4.10*** (0.22) |
| *N* | 78 | 78 | 78 | 78 | 78 | 63 | 63 | 63 | 63 | 63 |
| *R*-sq. | 0.89 | 0.93 | 0.9 | 0.92 | 0.97 | 0.89 | 0.89 | 0.91 | 0.9 | 0.92 |
| RMSE | 0.06 | 0.05 | 0.06 | 0.06 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| *F* stat | 52.75 | 84.45 | 41.53 | 74.4 | 264.62 | 45.13 | 41.02 | 41.81 | 44.5 | 38.41 |
| Log likelihood | 113.13 | 127.62 | 115.9 | 125.15 | 159.41 | 141.6 | 142.35 | 151.07 | 144.62 | 154.98 |

+0.10, *0.05, **0.01, ***0.001. We included year dummies in the regression

tries. The results suggest that not all types of entrepreneurial activity have a similar impact on inequality.

## 6.8 Robustness

We utilize panel-feasible generalized least squares (FGLS) regression ("xtgls" command in Stata) with robust standard error (panel heteroskedasticity) and first-order autoregressive processes (Greene 2000). Panel heteroskedasticity specifies a heteroskedastic error structure with no cross-sectional correlation. First-order autoregressive specifies that within panels there is AR(1) autocorrelation and that the coefficient of the AR(1) process is common to all the panels.

To assess the hypothesis of this chapter we use the following equation:

$$\text{Inequality}_{it} = f\left(\alpha,\ \beta\text{Corruption}_{it-1},\ \theta y_{it-1},\ \mu X_{it-1},\ \gamma T_t,\ \epsilon L_{it},\ \mu_{it}\right) \tag{6.2}$$

where $\text{inequality}_{it}$ represents income inequality in country $i$ during period $t$. Corruption represents corruption in a country, $y_{it}$ is entrepreneurship in country $i$ at time $t$, $\beta$ are parameters to be estimated, and $x_{it}$ represents the set of control variables. $T_t$ represents the set year dummies, $L_{it}$ represents legal origin dummies, and $\mu_{it}$ represents the error term.

We also transform the Gini variable using the formula log[Gini/(100−Gini)] (Andres and Ramlogan-Dobson 2011; Reuveny and Li 2003) since previous studies have established that OLS may be problematic since it assumes that the dependent variable is unbounded.

Table 6.5 presents results for xtgls related to Latin American and Caribbean countries for Gini. Results hold true for new formal start-up firms and necessity–opportunity ratio. TEA results hold true for South and East Asian countries but not for Latin American and Caribbean countries (Table 6.5).

Table 6.6 presents results for income held by the top 10% in the natural log. New formal start-up firms' entry helps to reduce inequality, but in high-corrupt countries, the benefit is reduced. The results confirm the previous result. The negative impact of corruption, an increase in income inequality, is significant for all models except TEA. Tables 6.7 and 6.8 present results for unbounded Gini and IEF corruption measure, respectively. Our results are consistent with previous results.

## 6.9 What Does Our Result Show?

We explored the role of entrepreneurship in reducing inequality in society. We found that not all types of entrepreneurship have a consistent effect on reducing inequality. New formal start-ups and necessity–opportunity ratio increase inequality. When we included corruption as interaction it reduced income inequality. Our study presents

**Table 6.5** Feasible generalized linear regression results

| | Asia | | | Latin American and Caribbean countries | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Democracy | 0.22<br>(0.14) | 0.43**<br>(0.15) | 0.41**<br>(0.15) | −4.71***<br>(1.24) | −5.47***<br>(1.01) | −5.34***<br>(1.01) |
| Human capital | 0.01***<br>0 | 0.01***<br>0 | 0.01***<br>0 | −0.002***<br>0 | −0.003***<br>0 | −0.002***<br>0 |
| Access to finance | −0.14*<br>(0.06) | −0.03<br>(0.06) | −0.15*<br>(0.06) | 0.06<br>(0.05) | 0.11***<br>(0.03) | 0.06<br>(0.04) |
| Economic openness | −0.90+<br>(0.53) | −2.26***<br>(0.51) | −2.49***<br>(0.54) | 2.28*<br>(0.90) | 1.68*<br>(0.82) | 1.87*<br>(0.83) |
| Economic development | 2.61<br>(3.27) | 4.79<br>(3.37) | 11.25***<br>(3.23) | −0.32<br>(1.47) | −1.71<br>(1.38) | −0.75<br>(1.38) |
| Economic development (sq) | −52.5<br>(34.47) | −70.43+<br>(36.10) | −139.1***<br>(34.06) | 9.582<br>(15.66) | 19.72<br>(14.81) | 11.73<br>(15.17) |
| Business environment | −0.97*<br>(0.48) | −1.94***<br>(0.44) | −2.56***<br>(0.48) | 0.64*<br>(0.26) | 0.33<br>(0.26) | 0.07<br>(0.27) |
| Natural resource endowment | 0.84***<br>(0.22) | 1.27***<br>(0.29) | 0.68*<br>(0.31) | 0.19**<br>(0.06) | 0.10+<br>(0.05) | 0.08<br>(0.05) |
| Corruption (WGI) | −0.04<br>(0.03) | 0.06+<br>(0.04) | −0.12+<br>(0.06) | 0.02<br>(0.03) | 0.13<br>(0.09) | −0.09<br>(0.06) |
| New formal start-up firms | 0.01*<br>0 | | | −0.004<br>0 | | |
| Corruption (WGI)* New formal start-up firms | 0.005<br>0.00 | | | −0.01<br>(0.01) | | |
| Necessity–opportunity ratio | | 0.14***<br>(0.04) | | | 0.003<br>(0.03) | |
| Corruption (WGI)*Necessity–opportunity ratio | | −0.12**<br>(0.04) | | | −0.08<br>(0.05) | |
| TEA | | | −0.003<br>0 | | | 0.001<br>0 |
| Corruption (WGI)*TEA | | | 0.01<br>0 | | | 0.004<br>0 |
| Constant | 3.71***<br>(0.05) | 3.66***<br>(0.07) | 3.89***<br>(0.06) | 4.20***<br>(0.13) | 4.35***<br>(0.13) | 4.30***<br>(0.13) |
| *N* | 78 | 78 | 78 | 63 | 63 | 63 |
| Chi-squared | 885.4 | 1168.77 | 835.57 | 387.59 | 484.75 | 465.28 |
| N_groups | 9 | 9 | 9 | 7 | 7 | 7 |
| Rho | 0.52 | 0.37 | 0.41 | 0.37 | 0.31 | 0.41 |

+0.10, *0.05, **0.01, ***0.001. We included year and legal origin dummies in the regression

the importance of quality of entrepreneurship (Baumol 1996). In many of the developing countries, the informal sector is large because many of these countries have a weak institutional environment which creates voids which fail to support market-related activity. For entrepreneurs in a weak institutional environment remaining in the informal sector is more beneficial and less costly than entering in the formal sector. While informal sector creates jobs and a source of income for people who

**Table 6.6** Feasible generalized least squares result

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| Democracy | 0.30* (0.12) | 0.26* (0.11) | 0.42*** (0.12) | 0.36** (0.12) | 0.50*** (0.12) | −5.11*** (1.21) | −4.62** (1.42) | −5.01*** (1.21) | −5.11*** (1.20) | −4.73** (1.46) |
| Human capital | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | −0.003*** (0.00) | −0.003*** (0.00) | −0.004*** (0.00) | −0.003*** (0.00) | −0.003*** (0.00) |
| Access to finance | −0.14** (0.05) | −0.18*** (0.05) | −0.04 (0.05) | −0.15** (0.05) | −0.21*** (0.04) | 0.15*** (0.04) | 0.13* (0.06) | 0.17*** (0.04) | 0.14** (0.05) | 0.17** (0.07) |
| Economic openness | −1.98*** (0.44) | −1.09** (0.42) | −2.30*** (0.43) | −2.30*** (0.45) | −1.85*** (0.47) | 2.21* (1.05) | 2.23* (1.10) | 1.40 (1.06) | 1.92+ (1.03) | 1.56 (1.09) |
| Economic development | 9.36*** (2.77) | 4.21+ (2.51) | 5.62* (2.80) | 11.12*** (2.73) | 1.46 (2.69) | 0.79 (1.54) | 1.14 (1.59) | 0.27 (1.63) | 0.71 (1.48) | 1.20 (1.70) |
| Economic development (sq) | −115.8*** (29.27) | −63.75* (26.36) | −74.18* (29.85) | −133.5*** (28.87) | −33.67 (28.28) | 0.16 (16.26) | −2.07 (16.54) | 3.88 (17.27) | −0.58 (15.93) | −6.79 (18.05) |
| Business environment | −1.97*** (0.37) | −0.99** (0.38) | −1.77*** (0.36) | −2.24*** (0.39) | −1.23** (0.38) | 1.06*** (0.32) | 1.09*** (0.32) | 0.84** (0.32) | 0.31 (0.35) | 0.29 (0.36) |
| Natural resource endowment | 0.41+ (0.24) | 0.61*** (0.18) | 0.93*** (0.25) | 0.45+ (0.27) | 1.21*** (0.26) | 0.19*** (0.05) | 0.20** (0.07) | 0.14* (0.06) | 0.04 (0.06) | 0.02 (0.08) |
| Corruption (WGI) | −0.02 (0.02) | −0.02 (0.02) | 0.06* (0.03) | −0.03 (0.05) | −0.31*** (0.06) | 0.01 (0.03) | 0.02 (0.04) | 0.06 (0.12) | −0.06 (0.07) | 0.14 (0.21) |
| New formal start-up firms | | 0.001*** (0.00) | | | 0.01*** (0.00) | | −0.002 (0.00) | | | −0.0001 (0.00) |
| Corruption (WGI)* New formal start-up firms | | 0.004 (0.00) | | | 0.01 (0.00) | | −0.01 (0.01) | | | −0.01 (0.01) |
| Necessity–opportunity ratio | | | 0.13*** (0.03) | | 0.10*** (0.03) | | | −0.01 (0.04) | | 0.02 (0.04) |

(continued)

**Table 6.6** (continued)

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| Corruption (WGI)*Necessity–opportunity ratio | | | −0.10** (0.03) | | −0.05 (0.03) | | | −0.03 (0.07) | | −0.06 (0.07) |
| TEA | | | | −0.001 (0.00) | −0.01* (0.00) | | | | 0.002 (0.00) | 0.003+ (0.00) |
| Corruption (WGI)*TEA | | | | 0.001 (0.00) | 0.03*** (0.00) | | | | 0.002 (0.00) | −0.001 (0.00) |
| Constant | 3.62*** (0.04) | 3.51*** (0.04) | 3.47*** (0.06) | 3.66*** (0.05) | 3.61*** (0.07) | 3.94*** (0.14) | 3.89*** (0.16) | 4.04*** (0.17) | 3.97*** (0.16) | 3.91*** (0.22) |
| *N* | 78 | 78 | 78 | 78 | 78 | 63 | 63 | 63 | 63 | 63 |
| Chi-squared | 539.51 | 1177.83 | 954.51 | 686.98 | 3595.06 | 815.07 | 813.29 | 855.25 | 947.44 | 988.10 |
| N_groups | 9 | 9 | 9 | 9 | 9 | 7 | 7 | 7 | 7 | 7 |
| Rho | 0.48 | 0.40 | 0.34 | 0.39 | 0.20 | 0.18 | 0.17 | 0.15 | 0.23 | 0.18 |

+0.10, *0.05, **0.01, ***0.001. Regression results for year and legal origin dummies are available on request.

**Table 6.7** Unbounded Gini results

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Democracy | 0.22* (0.11) | 0.17+ (0.10) | 0.34** (0.11) | 0.30** (0.11) | 0.50*** (0.12) | −5.12*** (1.00) | −4.39*** (1.14) | −5.07*** (0.92) | −4.99*** (0.93) | −3.93*** (1.05) |
| Human capital | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | −0.002*** (0.00) | −0.002*** (0.00) | −0.003*** (0.00) | −0.002*** (0.00) | −0.002*** (0.00) |
| Access to finance | −0.09+ (0.05) | −0.10* (0.04) | −0.01 (0.05) | −0.10* (0.05) | −0.21*** (0.04) | 0.08* (0.03) | 0.05 (0.05) | 0.10*** (0.03) | 0.06 (0.04) | 0.10* (0.05) |
| Economic openness | −1.47*** (0.39) | −0.72+ (0.37) | −1.92*** (0.40) | −1.86*** (0.40) | −1.85*** (0.47) | 1.87* (0.76) | 1.90* (0.80) | 1.50* (0.74) | 1.60* (0.73) | 1.69* (0.78) |
| Economic development | 6.07* (2.51) | 1.96 (2.33) | 4.08 (2.55) | 8.25*** (2.46) | 1.46 (2.69) | −0.54 (1.38) | −0.04 (1.38) | −1.27 (1.30) | −0.49 (1.32) | 0.09 (1.33) |
| Economic development (sq) | −80.53** (26.42) | −38.75 (24.50) | −57.40* (27.20) | −102.2*** (25.96) | −33.67 (28.28) | 8.67 (14.97) | 5.98 (14.86) | 14.88 (14.00) | 8.46 (14.52) | 2.44 (14.43) |
| Business environment | −1.53*** (0.34) | −0.73* (0.34) | −1.59*** (0.34) | −1.89*** (0.36) | −1.24** (0.38) | 0.52* (0.24) | 0.56* (0.23) | 0.30 (0.23) | 0.06 (0.24) | 0.09 (0.24) |
| Natural resource endowment | 0.51* (0.21) | 0.62*** (0.16) | 0.98*** (0.23) | 0.50* (0.24) | 1.21*** (0.26) | 0.16*** (0.05) | 0.18*** (0.05) | 0.09+ (0.05) | 0.07 (0.05) | 0.05 (0.06) |
| Corruption (WGI) | −0.02 (0.02) | −0.03 (0.02) | 0.05* (0.03) | −0.06 (0.05) | −0.314*** (0.06) | −0.01 (0.02) | 0.02 (0.03) | 0.12 (0.08) | −0.09 (0.05) | 0.25+ (0.15) |
| New formal start-up firms | | 0.01** (0.00) | | | 0.01*** (0.00) | | −0.003 (0.00) | | | −0.003 (0.00) |
| Corruption (WGI)* New formal start-up firms | | 0.005 (0.00) | | | 0.005 (0.00) | | −0.01 (0.01) | | | −0.01+ (0.01) |

(continued)

**Table 6.7** (continued)

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Necessity–opportunity ratio | | | 0.11*** (0.03) | | 0.10*** (0.03) | | | 0.004 (0.03) | | 0.02 (0.03) |
| Corruption (WGI)*Necessity–opportunity ratio | | | −0.10** (0.03) | | −0.05 (0.03) | | | −0.07 (0.05) | | −0.10* (0.05) |
| TEA | | | | −0.002 (0.00) | −0.01* (0.00) | | | | 0.001 (0.00) | 0.002+ (0.00) |
| Corruption (WGI)*TEA | | | | 0.003 (0.00) | 0.03*** (0.00) | | | | 0.003 (0.00) | −0.002 (0.00) |
| Constant | −0.07+ (0.04) | −0.15*** (0.04) | −0.18** (0.06) | −0.01 (0.04) | 3.61*** (0.07) | 0.35*** (0.10) | 0.28* (0.12) | 0.40*** (0.12) | 0.37** (0.12) | 0.22 (0.16) |
| *N* | 78 | 78 | 78 | 78 | 78 | 63 | 63 | 63 | 63 | 63 |
| Chi-squared | 544.02 | 912.26 | 984.36 | 709.38 | 3595.06 | 341.11 | 388.01 | 485.21 | 445.32 | 670.69 |
| N_groups | 9 | 9 | 9 | 9 | 9 | 7 | 7 | 7 | 7 | 7 |
| Rho | 0.53 | 0.53 | 0.38 | 0.43 | 0.20 | 0.41 | 0.37 | 0.31 | 0.42 | 0.27 |

+0.10, *0.05, **0.01, ***0.001. Regression results for year and legal origin dummies are available on request

**Table 6.8** IEF corruption results

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Democracy | 0.42** (0.14) | 0.39** (0.14) | 0.42** (0.14) | 0.42** (0.14) | 0.36** (0.11) | −4.16*** (0.93) | −3.63** (1.13) | −4.32*** (0.95) | −3.95*** (0.93) | −3.79** (1.23) |
| Human capital | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | 0.01*** (0.00) | −0.002*** (0.00) | −0.002*** (0.00) | −0.003*** (0.00) | −0.002*** (0.00) | −0.003*** (0.00) |
| Access to finance | −0.14* (0.06) | −0.19** (0.06) | −0.10+ (0.06) | −0.16** (0.06) | −0.27*** (0.04) | 0.10** (0.03) | 0.09+ (0.05) | 0.11*** (0.03) | 0.10* (0.04) | 0.09+ (0.05) |
| Economic openness | −2.54*** (0.51) | −1.68** (0.57) | −2.37*** (0.52) | −2.42*** (0.54) | −1.52*** (0.42) | 2.48** (0.87) | 2.60** (0.92) | 1.56+ (0.81) | 2.46** (0.82) | 1.48+ (0.81) |
| Economic development | 11.11*** (2.97) | 5.740+ (3.14) | 6.64* (3.31) | 11.33*** (3.03) | −0.58 (2.68) | 0.33 (1.26) | 0.61 (1.39) | −0.97 (1.32) | 0.52 (1.31) | −0.30 (1.47) |
| Economic development (sq) | −137.3*** (31.56) | −84.84** (32.76) | −93.14** (35.10) | −140.3*** (31.96) | −17.19 (28.17) | 3.86 (13.58) | 2.77 (15.07) | 16.08 (14.20) | 1.14 (14.23) | 10.51 (15.81) |
| Business environment | −2.18*** (0.40) | −1.30** (0.47) | −2.03*** (0.42) | −2.12*** (0.44) | −0.90* (0.36) | 0.95** (0.30) | 1.04*** (0.30) | 0.69* (0.29) | 0.43 (0.30) | 0.39 (0.30) |
| Natural resource endowment | 0.52* (0.25) | 0.81*** (0.22) | 1.05*** (0.28) | 0.52+ (0.28) | 1.08*** (0.27) | 0.14** (0.05) | 0.13** (0.05) | 0.10+ (0.05) | 0.05 (0.05) | 0.04 (0.06) |
| Corruption (IEF) | −0.44*** (0.11) | −0.33** (0.12) | 0.01 (0.18) | −0.39 (0.27) | −1.17*** (0.24) | 0.19 (0.12) | 0.28+ (0.15) | −0.12 (0.36) | −0.004 (0.25) | 0.13 (0.50) |
| New formal start-up firms | | 0.01 (0.01) | | | −0.003 (0.01) | | 0.01 (0.02) | | | 0.02 (0.02) |
| Necessity–opportunity ratio | | | 0.40** (0.14) | | 0.38*** (0.10) | | | −0.17 (0.14) | | −0.09 (0.14) |
| TEA | | | | 0.005 (0.01) | −0.06*** (0.01) | | | | −0.002 (0.01) | 0.001 (0.01) |

(continued)

**Table 6.8** (continued)

| | Asia | | | | | Latin American and Caribbean countries | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Corruption (IEF)*New formal start-up firms | | −0.001 (0.02) | | | 0.02 (0.02) | | −0.02 (0.02) | | | −0.04 (0.03) |
| Corruption (IEF)*Necessity–opportunity ratio | | | −0.52** (0.19) | | −0.47** (0.15) | | | 0.18 (0.20) | | 0.08 (0.21) |
| Corruption (IEF)*TEA | | | | −0.01 (0.02) | 0.09*** (0.02) | | | | 0.01 (0.01) | 0.001 (0.01) |
| Constant | 4.19*** (0.10) | 3.99*** (0.12) | 3.79*** (0.16) | 4.14*** (0.20) | 4.31*** (0.18) | 3.98*** (0.16) | 3.87*** (0.18) | 4.38*** (0.28) | 4.08*** (0.25) | 4.14*** (0.40) |
| *N* | 78 | 78 | 78 | 78 | 78 | 63 | 63 | 63 | 63 | 63 |
| Chi-squared | 907.72 | 1120.57 | 1268.22 | 837.56 | 2617.93 | 448.84 | 434.16 | 445.91 | 517.97 | 477.30 |
| N_groups | 9 | 9 | 9 | 9 | 9 | 7 | 7 | 7 | 7 | 7 |
| Rho | 0.48 | 0.42 | 0.40 | 0.51 | 0.25 | 0.32 | 0.31 | 0.35 | 0.36 | 0.36 |

+0.10, *0.05, **0.01, ***0.001. We included year and legal origin dummies in regression

don't have access or opportunity to a better job/source of income in the formal economy, it also reduces revenue for the government that can be used to provide resources such as infrastructure and education. As the quality of entrepreneurship increases in a country and entrepreneurs decide to enter into a formal sector it creates more jobs and productivity in the society. By entering in the formal sector, a business increases government revenue that is generated from corporate tax.

Increased productivity can also increase social protection in society. As an individual's earnings increase government revenue that is generated from personal tax also increases. This increased revenue generated from both the corporate and individual taxes allows the government to provide better social services through higher quality of education and healthcare services.

Our study also demonstrates the dual role, grabbing hand vs. helping hand, that corruption may play in a society and its importance. Results of our study have implications for policy makers. Policy makers are interested in reducing income inequality and generating entrepreneurial activity in a society. Our study suggests that corruption can help to reduce inequality. However, this can be a risky proposition because corruption can be an added burden on entrepreneurs. Perhaps ideal situation and a safer way to promote entrepreneurship and reduce inequality would be to create corruption predictable what Shleifer and Vishny (1993) called coordinated bribery or Wedeman (2002) called developmental corruption. When it is coordinated bribery, transaction cost is known and transparent and individuals' expectation is met. On the other hand, in uncoordinated corruption, an agent has the power to extract bribe at every transaction which can become burdensome on entrepreneurs.

## References

Acemoglu, D., Johnson, S., & Robinson, J. A. (2002). Reversal of fortune: Geography and institutions in the making of modern world income distribution. *Quarterly Journal of Economics, 117*(4), 1231–1294.

Ades, A., & Di Tella, R. (1997). The new economics of corruption: A survey and some results. *Political Studies, 45*(3), 496–515.

Andres, A. R., & Ramlogan-Dobson, C. (2011). Is corruption really bad for inequality? Evidence from Latin America. *Journal of Development Studies, 47*(7), 959–976.

Apergis, N., Dincer, C. D., & Payne, J. E. (2010). The relationship between corruption and income inequality in US states: Evidence from a panel co-integration and error correction model. *Public Choice, 145*(1), 125–135.

Ardagna, S., and Lusardi, A. (2008). *Explaining international differences in entrepreneurship: The role of individual characteristics and regulatory constraints* (No. w14012). National Bureau of Economic Research.

Banerjee, A., & Iyer, L. (2005). History, institutions, and economic performance: The legacy of colonial land tenure systems in India. *The American Economic Review, 95*(4), 1190–1213.

Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Business Venturing, 11*(1), 3–22.

Blackburn, K., & Forgues-Puccio, G. F. (2007). Distribution and development in a model of misgovernance. *European Economic Review, 51*(6), 1534–1563.

Blanchflower, D. G., & Oswald, A. J. (1998). What makes an entrepreneur? *Journal of Labor Economics, 16*(1), 26–60.

Boix, C. (1998). *Political parties, growth and equality: Conservative and social democratic economic strategies in the world economy*. Cambridge: Cambridge University Press.

Broadman, H. G., & Recanatini, F. (2001). Seeds of corruption—Do market institutions matter? *MOST: Economic Policy in Transitional Economies, 11*(4), 359–392.

Carree, M., Van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. *Small Business Economics, 19*(3), 271–290.

Chan, S. (1997). Democracy and inequality: Tracking welfare spending in Singapore, Taiwan, and South Korea. In M. Midlarski (Ed.), *Inequality, democracy and economic development* (pp. 227–243). Cambridge: Cambridge University Press.

Chong, A., & Calderon, C. A. (2000). Institutional quality and income distribution. *Economic Development and Cultural Change, 48*(4), 761–786.

Chong, A., & Gradstein, M. (2007a). Inequality and institutions. *Review of Economics and Statistics, 89*(3), 454–465.

Chong, A., & Gradstein, M. (2007b). Inequality and informality. *Journal of Public Economics, 91*(1–2), 159–179.

Cornia, G.A. (2015). *Income inequality in Latin America*. WIDER Working Paper 2015/020, Helsinki, United Nations University UNU-WIDER.

Dasgupta, P. (1993). *An inquiry into well-being and destitution*. Oxford: Clarendon.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*(3), 301–331.

De Ferranti, D., Guillermo, P., Francisco, F., & Walton, M. (2004). *Inequality in Latin America: Breaking with history?* Washington, DC: World Bank.

Deininger, K., & Squire, L. (1996). A new data set measuring income inequality. *The World Bank Economic Review, 10*, 565–591.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *The Quarterly Journal of Economics, 117*(1), 1–37.

Elliott, R. J., & Lindley, J. K. (2006). Trade, skills and adjustment costs: A study of intra-sectoral labor mobility. *Review of Development Economics, 10*(1), 20–41.

Engerman, S. L., & Sokoloff, K. L. (1997). Factor endowments, institutions and differential paths of growth among new world economies: A view from economic historians of the United States. In S. Haber (Ed.), *How Latin America fell behind* (pp. 260–304). Stanford, CA: Stanford University Press.

Engerman, S. L., & Sokoloff, K. L. (2000). History lessons: Institutions, factor endowments, and paths of development in the new world. *The Journal of Economic Perspectives, 14*(3), 217–232.

Engerman, S. L., and Sokoloff, K. L. (2002). *Factor endowments, inequality and paths of development among new world economies*. NBER Working Paper 9259. Cambridge, MA: National Bureau of Economic Research.

Engerman, S. L., and Sokoloff, K. L. (2005). *Colonialism, inequality and long-run paths of development*. NBER Working Paper 11057. Cambridge, MA: National Bureau of Economic Research.

Estrin, S., Korosteleva, J., & Mickiewicz, T. (2013). Which institutions encourage entrepreneurial growth aspirations? *Journal of Business Venturing, 28*(4), 564–580.

Ferreira, F. H. G., & Ravallion, M. (2009). Global poverty and inequality: A review of the evidence. In B. Nolan, F. Salverda, & T. Smeeding (Eds.), *Oxford handbook on economic inequality*. Oxford: Oxford University Press.

Foellmi, R., & Oechslin, M. (2007). Who gains from noncollusive corruption? *Journal of Development Economics, 82*(1), 95–119.

Galor, O., & Zeira, J. (1993). Income distribution and macroeconomics. *Review of Economic Studies, 60*, 35–52.

Glomm, G., & Ravikumar, B. (1992). Public versus private investment in human capital: Endogenous growth and income inequality. *Journal of Political Economy, 100*, 818–834.
Greene, W. (2000). *Econometric analysis* (4th ed.). Englewood Cliffs: Prentice Hall.
Grossman, G. M., & Shapiro, C. (1982). A theory of factor mobility. *The Journal of Political Economy, 90*, 1054–1069.
Gupta, S., Davoodi, H., & Alonso-Terme, R. (2002). Does corruption affect income inequality and poverty? *Economics of Governance, 3*(1), 23–45.
Gyimah-Brempong, K., & de Camacho, S. M. (2006). Corruption, growth, and income distribution: Are there regional differences? *Economics of Governance, 7*(3), 245–269.
Kakwani, N., & Krongkaew, M. (2000). Economic growth, poverty and income inequality in the Asia-Pacific region. *Journal of the Asia Pacific Economy, 5*(1–2), 9–13.
Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). *Governance matters VIII: Aggregate and individual governance indicators, 1996–2008*. World Bank Policy Research Working Paper (4978).
Klapper, L., & Love, I. (2011). The impact of the financial crisis on new firm registration. *Economics Letters, 113*(1), 1–4.
Klapper, L., Laeven, L., & Rajan, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics, 82*(3), 591–629.
Klapper, L., Love, I., & Randall, D. (2015). New firm registration and the business cycle. *International Entrepreneurship and Management Journal, 11*(2), 287–306.
Knight, J. (2013). *Inequality in China: An overview*. The World Bank Research Observer, lkt006.
Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). *Applied linear regression models*. Boston: McGraw-Hill/Irwin.
Kuznets, S. (1955). Economic growth and income inequality. *American Economic Review, 45*, 1–28.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. *Journal of Law, Economics, and Organization, 15*(1), 222–279.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*(1), 3–27.
Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester School, 22*(2), 139–191.
Li, H., Xu, L. C., & Zou, H. F. (2000). Corruption, income distribution, and growth. *Economics and Politics, 12*(2), 155–181.
Li, S., Chuliang, L., & Sicular, T. (2013). Overview: Income inequality and poverty in China, 2002–2007. In L. Shi, H. Sato, & T. Sicular (Eds.), *Rising inequality in China: Challenge to the harmonious society* (pp. 24–59). Cambridge and New York: Cambridge University Press.
Mauro, P. (1995). Corruption and growth. *Quarterly Journal of Economics, 110*, 681–712.
McMullen, J. S., Bagby, D., & Palich, L. E. (2008). Economic freedom and the motivation to engage in entrepreneurial action. *Entrepreneurship Theory and Practice, 32*(5), 875–895.
Morley, S. A. (2001). *The income distribution problem in Latin America and the Caribbean* (Vol. 65). United Nations Publications.
Nafziger, W. (1997). *The economics of developing countries*. Englewood Cliffs, NJ: Prentice Hall.
Piketty, T. (2014). *Capital in the 21st century. Cambridge*, MA: Harvard University Press.
Porta, R. L., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy, 106*(6), 1113–1155.
Reuveny, R., & Li, Q. (2003). Economic openness, democracy, and income inequality: An empirical analysis. *Comparative Political Studies, 36*(5), 575–601.
Rose-Ackerman, S. (Ed.). (2007). *International handbook on the economics of corruption*. Edward Elgar Publishing, Cheltenham.
Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review, 45*(4), 827–838.
Schoar, A. (2010). The divide between subsistence and transformational entrepreneurship. *Innovation Policy and the Economy, 10*(1), 57–81.
Shleifer, A., & Vishny, R. (1993). Corruption. *Quarterly Journal of Economics, 108*(3), 599–617.

Svensson, J. (2005). Eight questions about corruption. *The Journal of Economic Perspectives, 19*(3), 19–42.

Tanzi, V., & Davoodi, H. (1997). *Corruption, public investment, and growth*. IMF Working Paper 139. Washington, DC: International Monetary Fund.

Tsai, P.-L. (1995). Foreign direct investment and income inequality: Further evidence. *World Development, 23*(3), 469–483.

Uslander, E. (2007). *Corruption and the inequality trap in Africa*. Afro Barometer Working Paper No. 69.

Wedeman, A. (2002). Development and corruption: The East Asian paradox. In *Political Business in East Asia* (pp. 34–61). London: Routledge.

Wei, S. J. (1999). *Corruption in economic development: Beneficial grease, minor annoyance, or major obstacle?* World Bank Policy Research Working Paper 2048. Washington, DC: The World Bank.

World Bank. (2006). World Development Report 2006: *Equity and Development*. New York: World Bank.

# Chapter 7
# Epilogue

Inclusive growth model requires reduction of poverty at a sustained level by allowing people to contribute to the economic growth. Entrepreneurial activity is a way for individuals to pursue either own motivation or meet their needs. In order to achieve the inclusive growth in the society macro- and microstructures along with policies formulated by the policy makers for generating entrepreneurship and inclusive growth are important.

Governments are increasingly inclined to look for policies and mechanisms to encourage entrepreneurship. Policy makers are hoping to harness gains from entrepreneurship, through job creation, innovation, and economic growth along with the market competition and social welfare (OECD 2014; Haltiwanger et al. 2013; Tracy 2011). Former US President Obama emphasized the importance of start-ups and small business in creating jobs in the community, and took steps to support entrepreneurship during his years in office. For example, he supported laws such as the Small Business Jobs Act of 2000 and the Jumpstart Our Business Startups (JOBS) Act of 2012. Entrepreneurship has been a key part of strategies in developing and developed countries, as well as international organizations (e.g., World Bank) and regional commissions (e.g., European Commissions). Policy makers seeking to support entrepreneurship can take several approaches depending on the type of entrepreneurial activity and related gains which are desired. To provide information for policy formulation, measurement, and conceptualization of entrepreneurship becomes an important component. As we have seen in Chap. 3, the concept of entrepreneurship is multidimensional. If policy makers want to promote entrepreneurial activity that creates job for the community they are likely to formulate policies that have long-term growth objective. Therefore, alignment between the way in which entrepreneurship is conceptualized and measured and how policy makers plan to target and design policies to harness its gains needs to be aligned closely. For illustration, when entrepreneurship is measured as new limited liability companies (LLCs), as is often the case, policy makers who want to increase the overall rate of LLC entry can look at two mechanisms. First, they can find ways to influence the willingness of an



F. Chowdhury et al., *Corruption, Entrepreneurship, and Social Welfare*,
SpringerBriefs in Entrepreneurship and Innovation,
DOI 10.1007/978-3-319-64916-0_7

individual to become an entrepreneur in the first place—the overall propensity for entrepreneurship. Second, and more specific to LLCs, they can find ways to ease the process of LLC entry. This can include, for example, reducing the financial and other costs of registering a new LLC, or reforming the tax code to make business activities under an LLC more attractive. Costs related to new LLC entry may be as straightforward as simply reducing the financial cost of registration in the appropriate government office, or more complicated, like simplifying the procedures so they take less time. When policy makers are interested in entrepreneurship in order to alleviate unemployment, which could be the case in some developing countries, they may want to consider strategies which enable self-employment, and which can enhance the quality of growth potential of the self-employed. One related policy activity could also be to support the self-employed who may have entered into entrepreneurship for necessity reasons, but who soon can transition into pursuing significant opportunity. Policy makers could even consider outcomes of entrepreneurship when designing policies. For example, if policy makers specifically want to support entrepreneurs who can grow quickly, they can craft interventions which target high-potential individuals or firms. Policy makers can also address both the push and pull factors of entrepreneurship as well as target specific outcomes.

In addition, many common policies in developed and developing countries focus on the broader environment and inputs into entrepreneurship. These can include policies related to the attainment of education, access to finance, and business regulations and administrative process. Many European countries have made a greater effort toward innovation (European Commission 2014), closely related to entrepreneurship. Many developing countries have undertaken reforms to streamline or reduce costs in the business environment. The ideal policy mix in a country is elusive, because there are many components within and surrounding the entrepreneurship process. For example, although the Bangladeshi Government has taken steps to enable business registration online since 2008, it also made tax filing more difficult by increasing the time needed to file value-added tax returns (http://www.doingbusiness.org/reforms).

In addition to reforms in the business environment, policy makers have focused on access to finance in several ways. If there is limited access to credit and financial resources entrepreneurship and investment suffer. High proliferation of mobile phones has also reduced the digital divide especially for developing-country entrepreneurs. Financial services can be delivered through mobile phones as well as information. With respect to entrepreneurs who have taken entrepreneurship out of necessity, policy makers can develop forms of cash-based assistance programs through e-payment, which delivers services cheaply to them. For inclusive growth model to thrive financial inclusion is very important.

In addition to the financial resources, the question of adequate infrastructure is relevant particularly to low-income countries. While this is not usually a big focus in developed countries, infrastructure can still be a barrier in other countries. For example, logistics infrastructure, ports, roadways, and customs facilities can help entrepreneurs achieve export potential and reach export markets. Without this infrastructure, a potential entrepreneur would have to internalize these costs, which may not be reasonable. Investment in infrastructure is expensive for any government to

undertake, but can be especially challenging in developing countries which face extreme weather and climate disasters. Strengthening the relationship between public private partnerships can be an efficient and effective way to provide services.

Weak institutions and prevalence of corruption in many countries have shaken people's trust in government. Corruption and weak institutions affect trust in a society since people do not trust in their legal system and the uniform applicability of law to their fellow citizens. From an entrepreneur's point of view, a weak legal environment can provide little comfort for the protection of their property or resolving any dispute. This lack of trust in government officials affects how an individual in society conduct their business in the society as identified, "trust in the behavior of government officials may be important in determining citizens' obedience to rules and hence the effectiveness of third party enforcement" (Raiser 1999, p. 6).

Strengthening relationship with civil society can also help with gaining trust in government in a weak institutional environment, defined as the organizations "located between the family, the state, and the market in which people associate voluntarily to advance common interests" (Anheier 2004, p. 20). Many of the international organizations are increasingly putting importance on the role of civil society in the society specially in the countries with weak institutions, as the Organization for Economic Cooperation and Development (OECD 2003, p. 7) puts it: "Civil society plays a key role in fighting corruption… it has become a leitmotiv of anti-corruption discourses."

In addition to strengthening civil society, in order for the inclusive growth and entrepreneurship to have a positive impact on the society institutions can play a dominant role. Strong institutions will help to foster an environment conducive to cooperation and trust between government officials and citizens and the need for the institutional change in some instances may be eminent. Yet institutions take a long time to change and institutional change can be a complex process that involves many agents, and at the same time faces the challenge of inertia since important actors in the society do not consider them as a problem. If weak institutions are considered/recognized to be a problem as suggested by Kingdon (2003, p. 109), "when we come to believe that we should do something about them," then policy makers will take steps to change the institutions in a country by adopting and implementing policies. The process of institutional change can also come through social ties. Entrepreneurs and their ties with different actors, e.g., regulators and policy makers with whom they interact, can be instrumental in initiating institutional change. In a corruption-ridden society institutional entrepreneurs may lack the motivation necessary to change the status quo because entrepreneurs, regulators, and policy makers can use it to their advantage.

## References

Anheier, H. K. (2004). *Civil society: Measurement, evaluation, policy*. London: Earthscan.

European Commission. (2014). European competitiveness report: Helping firms grow. Brussels: Directorate-General for Enterprise and Industry, European Commission.

Haltiwanger, J. C., Jarmin, R. S., & Miranda, J. (2013). Who creates jobs? Small vs. large vs. young. *The Review of Economics and Statistics, 95*(2), 347–361.

Kingdon, J. W. (2003). *Agendas, alternatives and public policy* (2nd ed.). Harlow: Longman.
OECD. (2014). *Entrepreneurship at a glance 2014*. Paris: Organization for Economic Co-operation and Development Press.
OECD, Organization for Economic Cooperation and Development. (2003). *Fighting corruption what role for civil society? The experience of the OECD*. OECD Report. Paris: OECD.
Raiser, Martin. (1999). *Trust in transition*. Retrieved from http://www.colbud.hu/honesty-trust/raiser/pub02.PDF
Tracy, Spencer L. (2011). *Accelerating job creation in America: The promise of high-impact companies*. U.S. Small Business Administration, Office of Advocacy Working Paper.