

A Proposed Framework to Analyze the Impact Investing Ecosystem in a Cross-Country Perspective*

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Abstract

This study developed an impact investing ecosystem framework to present a comprehensive overview of the impact investing sector, identifying key challenges and possibilities. Two Asian countries, Japan and Singapore, were used as case studies. The proposed framework revealed that the market scales in Japan and Singapore were small and each country faces unique challenges for developing impact investing. For Japan, the low level of philanthropic activities and the small social sector were the key challenges to overcome for impact investing growth. For Singapore, the government's low social expending strategy may limit the development. However, both countries have supportive environments for impact investing due to high-quality human resources, well-developed financial markets and political interest. In particular, the high total wealth of high network individuals (HNWI) in Japan and large donations to charities in Singapore (% GDP) offer rich potential.

Keywords: entrepreneurial ecosystem, impact investing, public policy, social impact investment framework, social impact bonds

1. Introduction

New approaches to address increasing social challenges are necessary, especially as national economies develop and additional strain is placed on social and environmental demands. Pollution, natural resource exhaustion, income inequality, and increasing healthcare costs are new problems requiring attention across the globe. While the challenges are growing, the traditional solutions from the public sector that have been relied upon are insufficient — many governments are debt-ridden, and charities and non-profit organizations (NPOs) continue to struggle to raise funds. In this context, impact investing has emerged as an innovative cross-sector arrangement to support the work of the social sector while still generating financial revenue. In this process, impact investors provide capital to social-purpose organizations (SPOs), aiming at creating both financial and social returns (Bugg-Levine & Emerson, 2011; Nicholls, 2010).

During the past decade, efforts have been made to build a formal impact investing industry at a global level. Market infrastructures, networks, platforms, and methods to measure social impacts have been established (Jackson, 2013). In addition, academic research has provided empirical evidence that impact investing has been successfully implemented in a wide range of forms (Ormiston, Charlton, Donald, & Seymour, 2015). Governmental institutions, such as the European Commission and G8 countries (now G7) led by the United Kingdom, have shown their support (European Commission, 2011; Social Impact Investment Taskforce [SIITF], 2014). The emergence of impact bonds has also actively included public capital in the practice of impact investing. Across the globe, there are currently 89 impact bonds being implemented and capital amounting to USD 322 million has been raised for the projects (Social Finance UK, 2017).

Despite the attention and support, more commitment is needed to stimulate the development of impact investing globally. Geographically, the major actors in the impact investing market are based in Europe and North America (Jackson, 2013). In Asia, where impact investing is a relatively new concept, only a few players are involved (Asian Development Bank,

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2011). There is very limited academic literature focusing on this topic. As the structure and function of the social sector vary across different countries, a further contextual examination is necessary, particularly with regard to Asia. Therefore, the primary attempt of this research is to propose a framework to assess and compare the impact investing ecosystems in a cross-country perspective, considering the role of public policy in the development of the market, and then offering policy recommendations. For this purpose, this research applies an entrepreneurial ecosystem approach (based on the Babson Entrepreneurship Ecosystem Project (BEEP)) and adapts it to the context of impact investing based on the Social Impact Investment Framework from the Organization for Economic Co-operation and Development (OECD). With this approach, a comprehensive overview of the development is presented, possibilities and challenges of impact investing are identified, and the key determinants are evaluated. Japan and Singapore are used as case studies, and the highly developed UK impact investing market is used as a benchmark for policies and strategies concerning market development.

This paper is organized into four sections: the first section explains the concept of impact investing and provides the theoretical framework for the proposed social impact investing framework. The second section presents the six domains of the framework, and the methodology used to select the indicators for evaluating the ecosystem in the selected countries. The third section analyzes and interprets the relevant findings to answer the research questions: *What are the current developments of impact investing in Asia? Who are the main actors in the market? What are the possibilities and challenges? How can public policy enable the development of impact investing?* The fourth section presents the conclusions and policy recommendations for each country individually.

2. Theoretical Framework

Impact Investing

The term “impact investing” was coined in 2007 by the Rockefeller Foundation (Harji & Jackson, 2012). It presents a new investment logic that has gained growing attention over the past decade — the impact investors provide capital to social entrepreneurs, actively aiming at creating measurable social changes with the goal of obtaining financial returns as well (Bugg-Levine & Emerson, 2011; Jackson, 2013; Nicholls, 2010). Following this model, various investment activities have emerged across the globe.

Impact investing is a new political-economic arrangement between the government, business, and social sectors. More concretely, it emerged alongside three major trends. Firstly, it is related to an attitude change toward new capitalism (M.T. Dacin, P. A. Dacin, & Tracey, 2011; Clark, Emerson, & Thornley, 2014). Society now requires a more sustainable and ethical way to develop the economy. For example, consumers in the newer generations demand “good” products that are environmentally and socially ethical (Herman, 2010; Nicholls & Opal, 2005). This change of attitude has stimulated the practice of impact investing, giving financial incentives for investors to create social values. Secondly, impact investing is seen as the evolution of Corporate Social Responsibility (CSR) and Socially Responsible Investing (SRI) movements (Ormiston et al., 2015). The third trend that contributes to impact investing is the change in the social sector. During the past decades, the social sector has begun to adopt and adapt business techniques in order to address social problems, generating revenue to be more self-sustaining; accordingly, social enterprises have emerged (Borzaga & Defourny, 2001, 2004; Seelos & Mair, 2005; Volkmann, Tokarski, & Ernst, 2012). These developments shaped the modern social sector in a way that resembles market economies and created investing opportunities for impact investors.

These trends show that impact investing serves as a cross-sector collaborative approach that can create mutual benefits for all three participating parties. For governments, it helps them solve social problems; for private investors, it responds to the demands of consumers and creates financial benefits; and for the social sector, it provides needed resources and improves their effectiveness.

The impact investing sector is still young and faces several challenges, including a lack of sufficient capital and high-quality investment opportunities (Wilson, Silva, & Ricardson, 2015; Achleitner, Heinecke, Noble, Schöning, & Spiess-Knafl, 2011), and the need of more enabling environments, effective intermediaries, and proper legal frameworks for further growth (Bugg-Levine & Goldstein, 2009; Mendell & Barbosa, 2013; Wilson et al., 2015). To overcome these challenges, more governmental involvement is recommended to shape and boost the market (Mendell & Barbosa, 2013; Moore, Westley, Tjornbo, & Holroyd, 2012b; Sunley & Pinch, 2012; Wood, Thornley, & Grace, 2013). Furthermore, a more tailored academic engagement is needed to support the design of effective interventions. Research has yet to theorize on the investment structure and clearly define the epistemological boundaries (Moore, Westley, & Nicholls, 2012a). Despite Nicholls’ (2010) significant contribution to conceptualize impact investments and examine the investment logic and rationality, impact investing requires further conceptual clarification. At this early stage of development, researchers have diverse understandings of the notion and difficulty providing a precise definition (Höchst älter & Scheck, 2015; Moore et al., 2012a; Wilson et al., 2015). Furthermore, there is a wide range of related terms to describe impact investing that are utilized interchangeably or with overlapping concepts (Louche, Arenas, & Cranenburgh, 2012; Wilson et al., 2015; Wood & Hagerman, 2010). The most common ones are social investing and

socially responsible investing (SRI) (Höchst ädter & Scheck, 2015). Despite the use of different terms, the concepts do not differ from impact investing fundamentally (Louche et al., 2012; Wilson et al., 2015; Wood & Hagerman, 2010). The term “social investing” emerged earlier in 2000 and is commonly used in Europe in line with impact investing. It usually covers a broader meaning and includes all investing actions with a social or environmental purpose (Höchst ädter & Scheck, 2015; Wilson et al., 2015). The term “SRI” is used to describe a more traditional view of ethical or sustainable investing (Höchst ädter & Scheck, 2015). For our research purposes, the two terms are included in the discussion of impact investing, in an attempt to cover the full potential of its development.

According to the literature review, the general definition of impact investing centers on three core elements: the creation of both social and financial returns, the intention, and measurable impacts. Namely, investors intentionally provide capital to organizations to generate a “blended value” of both social impacts and financial profits (Höchst ädter & Scheck, 2015; Nicholls, 2010). The idea of blended value creation attempts to focus on both of these outcomes without trade-offs (Emerson, 2003), and this idea represents what impact investing aims to achieve (Bugg-Levine & Emerson, 2011). While discussions of impact investing highlight the intention and measurement of social impacts, the level of financial return rates is usually not limited and the investors can adopt different investment strategies (Höchst ädter & Scheck, 2015; Nicholls, 2010). This research is based on this general understanding of impact investing. In this context, impact investing can be practiced in a wide range of forms to address social or environmental issues wherever needed. Firstly, impact investing can appear in the form of debt, equity, loans, microfinance funds, venture philanthropy, or hybrid capital (Achleitner et al., 2011; Bugg-Levine & Emerson, 2011; Ormiston et al., 2015). In other words, impact investors can choose from a broad spectrum of investment strategies for any combination of social and financial risks and returns, according to their investing interest and rationality (Nicholls, 2010; Rangan, Appleby, & Moon, 2011; SIITF, 2014). As a consequence, the flexibility and diversity of strategic options in the impact investing market attract various types of investors seeking social and/or environmental impact plus profit.

The OECD Social Impact Investment Framework

To explore the landscape of impact investing and the role public policy can play in catalyzing its development, a comprehensive understanding of the actors and influencing factors in the impact investing industry is necessary. Because the impact investing market is nascent, the focus of the academic field is usually on measuring the impact of value creation rather than evaluating the entire impact investing market (Jackson, 2013). Hence, there are limited approaches available for the analysis of current developments. The OECD provides the most systemic approach.

As shown in Figure 1, the Social Impact Investment Framework by the OECD presents the elements that make up the social impact investment market (Wilson et al., 2015). It provides a clear overview of the impact investing industry as an “ecosystem”, identifying the relevant actors, investing channels and influencing factors in the market. This concept closely corresponds to this study’s goal to explore the scale and size of the impact investing market in a cross-country perspective. Nevertheless, the framework combines different types of key factors under the same category “enabling environment”. Given that this research attempts to explore the impact investing industry for policy-makers, it is essential to examine these core enabling environment conditions in a more organized way, avoiding omissions and without too much focus on the investors, investees, and intermediaries. Therefore, this research reorganized the elements of this framework based on an associated entrepreneurial ecosystem approach.

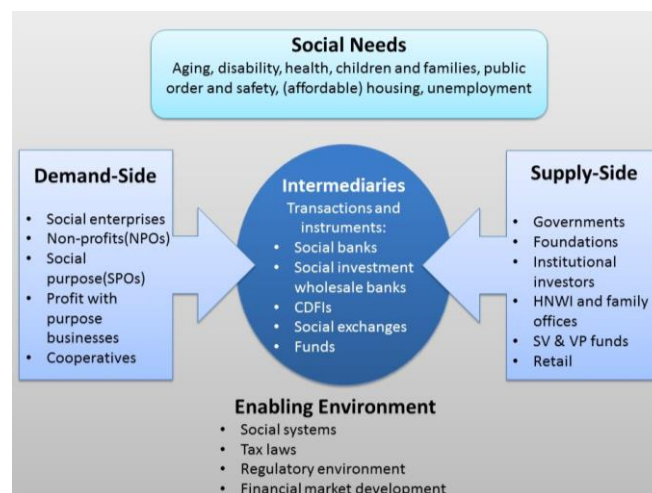


Figure 1. OECD’s Social Impact Investment Framework

Source: Authors, adapted from Wilson et al., 2015.

The Entrepreneurial Ecosystem Approach

Since the OECD framework to examine the impact investing industry is limited, this research paper explores the ecosystem approach utilized in the field of entrepreneurship creation. The entrepreneurial ecosystem approach provides a comprehensive method to examine, support, or stimulate entrepreneurship. It studies the creation of new businesses in a region as the outcome of a self-sustaining entrepreneurial ecosystem with a unique environment, consisting of various interacting components (Isenberg & Onyemah, 2016; Neck, Meyer, Cohen, & Corbett, 2004; Stam, 2015). A healthy entrepreneurial ecosystem is believed to lead to job creation and economic growth (Neck et al., 2004; Stam, 2015). For public policy, this approach presents a holistic and systemic view, focusing on enabling a self-sustaining ecosystem that leads to entrepreneurship growth instead of intervening in the business of particular entrepreneurs (Ács, Autio, & Szerb, 2014; Autio, Kenney, Mustar, Siegel, & Wright, 2014; Mason & Brown, 2014; Stam, 2015). Measuring the existing ecosystem could provide a comprehensive overview of the enabling actors, the possible challenges, and opportunities. Hence, mapping the ecosystem could be the first step towards encouraging entrepreneurial actions.

This approach was chosen for the following reasons. First, the impact investing sector resembles traditional entrepreneurship activities as it involves the creation of both social and financial values. By considering impact investing an emerging new sector of entrepreneurship, this approach is suitable to help understand current developments, identify the actors, potential and challenges in the market, and consequently provide the information required to design suitable policies. In addition, the concept of examining entrepreneurship like an ecosystem has similarities to the Social Impact Investing Framework developed by the OECD. Lastly, previous research has also applied a broader ecosystem approach in the field of modern economics for various sectors with different scopes and objectives (Adner, 2017; Cohen, 2006; Ferdinand & Meyer, 2017; Fraiberg, 2017; Park & Choi, 2014).

This study utilized the entrepreneurial ecosystem framework from the Babson Entrepreneurship Ecosystem Project (BEEP). As presented in Figure 2, the BEEP identifies the key components of the entrepreneurial ecosystem by categorizing them into six domains: policy, markets, human capital, culture, supports, and finance (Isenberg & Onyemah, 2016). These elements form an interactive and self-sustaining environment that leads to entrepreneurship growth (Isenberg & Onyemah, 2016). The BEEP framework was chosen because it focuses more on the interacting actors and factors instead of measuring their performances and impacts, which is more suitable for the industry in an early stage of development. Moreover, it is more general and conceptual, as it does not utilize a defined set of indicators. This allows for more flexibility in the selection of proper indicators, which is necessary given the nature of the impact investing industry.

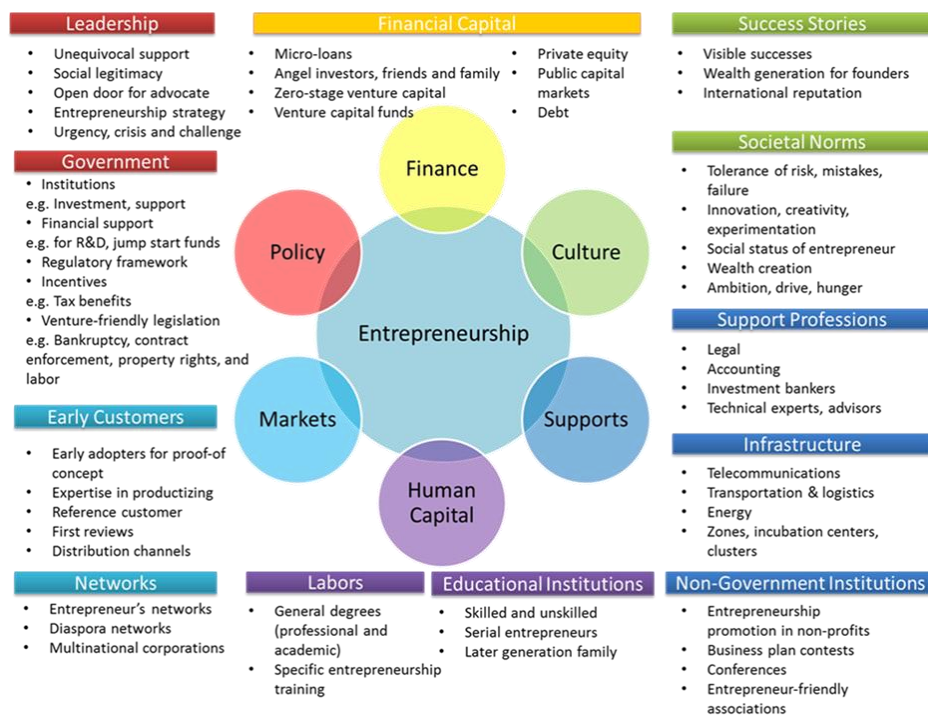


Figure 2. BEEP: Components of the Ecosystem

Source: Authors, adapted from Isenberg & Onyemah, 2016.

Isenberg (2016), the head of the BEEP project, argued that the entrepreneurship ecosystem should be observed in small geographic units

² because some components of the framework are linked to culture (e.g. risk aversion, ambition, creativity, etc.), which differs across regions. However, studies focusing on national systems of entrepreneurship exist as well (see Ács et al., 2014). For this study, the BEEP framework would be adapted to assess the impact investing sector within the selected cases on a national level. Nevertheless, to further understand the environment and design policies for impact investment, examination at sub-national levels is recommended.

The Impact Investing Ecosystem Framework

Considering that the impact investing sector is different from traditional entrepreneurship, this research combined and adapted the two above mentioned frameworks. Thus, a new framework was established – the Impact Investment Ecosystem Framework, as shown in Figure 3. It is based on the six domains categorized by the BEEP ecosystem framework: policy, markets, human capital, culture, supports, and finance (Isenberg & Onyemah, 2016). The determinants of the OECD's Social Impact Investment Framework have been reorganized into these six domains. Some of the aspects considered in BEEP, but not in the OECD's Social Impact Investment Framework, have been added to complement the domains of this new framework. The environment variable in the market domain has been added by the authors to acknowledge the fact that impact investment can create environmental value as well. The aspect of networks has been allocated to the supports domain rather than the market domain considering their essential role in supporting the industry and building capacity.

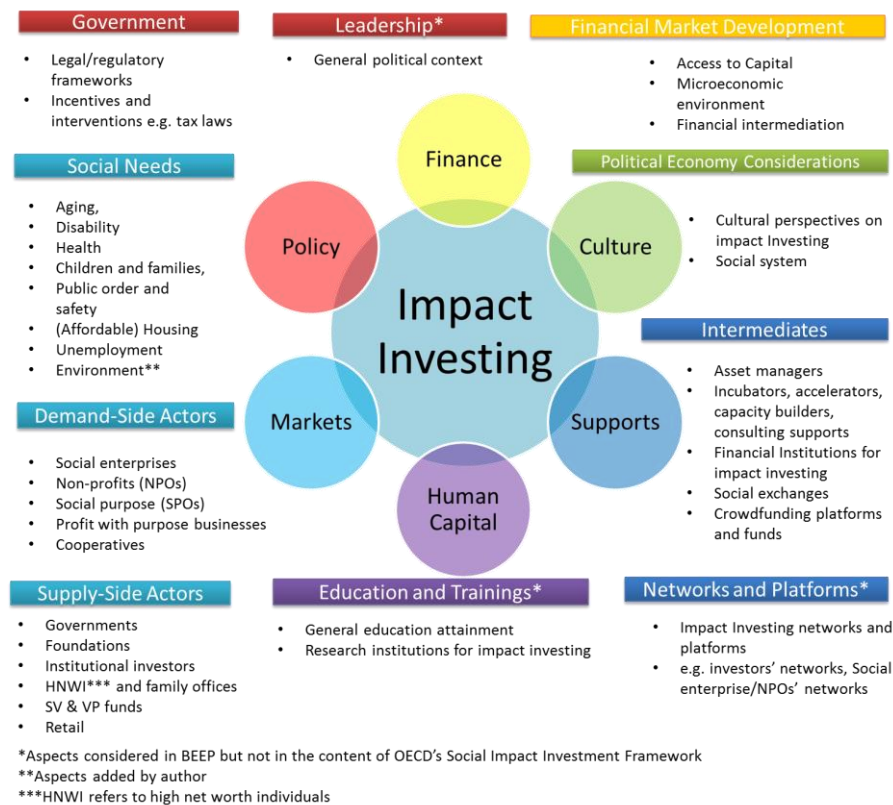


Figure 3. Impact Investing Ecosystem Framework

Source: Authors, adapted from Wilson et al., 2015 and Isenberg & Onyemah, 2016

3. Methodology

The proposed impact investing ecosystem framework was applied in a case study approach to obtain empirical insight into the development of impact investing in Asia. Japan and Singapore were selected as cases. While impact investing is still nascent in Asia, the two chosen countries have relatively active impact investing markets compared to other Asian countries. Japan is a member of the G8 (now G7) Social Impact Investment Taskforce to catalyze the development of impact investing across the globe (SIITF, 2017), while Singapore is the home of important impact investing networks in

² For example, cities with a population of less than 2 million (see Isenberg & Onyemah, 2016 for cases).

Asia, such as the Asian Venture Philanthropy Network (AVPN) and Impact Investment Exchange Asia (IIX).

The benchmark for this research is the highly developed impact investing market in the UK, which is currently the largest across the globe. Furthermore, with the British government's support, various research studies and practices were conducted over the years. Consequently, the UK provides the most data on the development of impact investing (Wilson et al., 2015) and serves as a suitable reference point to make cross-country comparisons.

To assess the six domains of the proposed impact investing ecosystem framework, a set of indicators was selected. This research used secondary data from well-established cross-country development indicators and official governmental information to assure data credibility. Additional information from key impact investing networks in Asia, such as the AVPN, was utilized as a proxy to estimate the market size and identify key players.

The policy domain of the framework examines the political context influencing the impact investing ecosystem in two aspects: leadership and government. The leadership determinant concerns the general political context that enables impact investing. It was assessed through the World Governance Indicators (WGI) by the World Bank (2016), such as political stability, government effectiveness and regulatory quality. The government determinant refers to legislation and governmental interventions. It was evaluated through the existence or absence of an appropriate legal framework (legal forms for social enterprises in particular), the key initiatives, laws, and policies that the government has developed in relation to impact investing. This data was collected through governmental publications and the reports published under the Social Impact Investment Taskforce.

The determinants assessed in the markets domain are demand (social needs), market demand-side actors, and supply-side actors. A set of indicators was selected to measure social needs, including the Social Progress Index (the variables of which are health and wellness, personal safety, shelter, water and sanitation, environmental quality, and maternal and child mortality rates) (Social Progress Imperative, 2017), the World Bank indicators (population ages 65 and above, unemployment rate) (2017a; 2017b), OECD's (2017b) GINI Coefficient for income inequality, and the United Nations Development Program (UNDP)'s (2016) Human Development Index (Gender Inequality Index). The demand-side actors of the market were measured through the number and size of the actors, according to the country-specific forms of related organizations and governmental data. The supply-side actors of the market were assessed through the number of investments made by these actors to address social needs. The indicators include the government's social expenditure (OECD, 2017a; Singapore Government, 2017), the budget of charities and NPOs (Cabinet Office, Japan 2016; Commissioner of Charities [COC], Singapore Government, 2015; Government of UK, 2017a), total donations to charities (Japan Fundraising Association [JFRA], 2015; COC, Singapore Government, 2015; National Council for Voluntary Organisations [NCVO], 2017), total sustainable investment assets (Eurosif, 2016; Global Sustainable Investment Alliance [GSIA], 2016), the size of the impact investment market (Big Society Capital, 2015; Japan National Advisory Board [Japan NAB], 2016) and the total wealth of high network individuals (HNWIs) (Capgemini, 2016). Additionally, examples of impact investors were collected.

The human capital domain, particularly education and training, were assessed through the education index shown in the human development index (HDI) by the UNDP (2016), the years of tertiary schooling according to the Social Progress Index (Social Progress Imperative, 2017) and the Program for International Student Assessment (PISA) by the OECD (2015). Furthermore, several research institutions with a focus on impact investing were examined based on desk research, utilizing information collected by the AVPN (Mohan, Harsh, Modi, & Gupta, 2017) and the institutions' official websites. Nevertheless, it was difficult to ascertain whether an institution does research on impact investing.

The culture domain analyzes political economy considerations, including cultural perspectives and the social system. The cultural perspectives on impact investing were assessed using the World Giving Index (Charities Aid Foundation [CAF], 2016) as a proxy for citizen attitudes and willingness to engage in solving social problems. The social systems, in this research defined as the political and economic structure of the society, were examined based on Acemoglu and Robinson's (2013) research on the influences of "inclusive" or "extractive" political economic structures.

The supports domain uses a set of relevant organizations to analyze the intermediaries, networks and platforms of impact investing in each country and provides a list of examples.

The finance domain examines the general financial development. The development was assessed through the World Bank Development Indicators (central government finance: debts) (2017c), the World Economic Forum's Inclusive Development Index (financial intermediation of real economy investment) (2017), and the World Competitiveness Index (macroeconomic environment, financial market development, and market size) (2016). All indicators are listed in the table annexed to this paper.

The limitation of this methodology is related to the difficult access to measurable and comparable data for Japan, Singapore and the UK. Since the impact investing industry is at an early stage of development in Asia, there is often

insufficient information available.

4. Results and Discussion

The Policy Domain

Leadership: General political context. Understanding the governments' role in the impact investing ecosystem is essential for creating a positive environment. Generally speaking, the political environments for impact investing in Japan, Singapore, and the UK are enabling. All countries gain positive governance scores in all six WGI indicators by the World Bank (2016), except for Singapore. Although Singapore has a -0.1 score (-2.5 to +2.5) in voice and accountability, it has nearly perfect scores in the other five indicators, which still implies an enabling political environment for governance and implementing interventions (World Bank, 2016). As for Japan, its regulatory quality (+1.2) and rule of law (+1.5) are slightly lower than those of Singapore (+2.3 and +1.9) and the UK (+1.9 and +1.8) (World Bank, 2016). Therefore, it might face more regulatory barriers when developing impact investing. For the UK, the score in political stability and absence of violence is significantly lower (+0.6) than the scores for Japan (+1.0) and Singapore (+1.2) (World Bank, 2016); this could increase uncertainty in the development of impact investing if the political interest changes.

Government: Regulatory frameworks for social enterprises. The existence of enabling regulatory frameworks for social enterprises can directly increase investment opportunities for impact investors. Currently, the legal status of social enterprises is still complex and without a precise definition in the three countries. There has been more progress in the UK. While social enterprises can appear in many forms, a specific form, the community interest company (CIC), was established in 2004 for businesses that benefit the community (Government of UK, 2017b; UK National Advisory Board [UK NAB], 2014). In Singapore, social enterprises come in various entities including for-profit and non-profit (The Law Society of Singapore, 2016). However, the government-funded Singapore Centre for Social Enterprise (raiSE) has provided a status for social enterprises with memberships (raiSE, 2017). For Japan, there is no specific legal entity for social enterprises either (Japan NAB, 2014). The closest effort is the report conducted by the cabinet office to define social enterprises and estimate the market scale (Cabinet Office, Government of Japan, 2015). To help create more impact investments, the three countries, especially Japan, should further consider a specific legal framework for social enterprises.

Government: Interventions and incentives for impact investing. The policy interest in impact investing is evident for all three countries. The UK government is the most active, with a wide range of initiatives, regulations, and policies to support the development of impact investing, including encouraging investors, improving financial environments for social organizations, engaging public actors, building market capacity and infrastructure and creating social impact bonds (see annex). In Japan, two key policies were developed under the initiative of the Social Impact Investment Taskforce, based on the experiences in the UK. Firstly, the government passed a law to enable the use of capital from dormant bank accounts for impact investing purposes. The implementation of this policy is expected by 2019 and applies to the dormant capital since the end of 2016. The approach is similar to the UK's Big Society Capital (The Japan Times, 2016). Secondly, three pilot projects of social impact bonds were launched in 2015, focusing on family care, aging support, and youth employment (Japan NAB, 2016; The Nippon Foundation, 2015). These developments in Japan are considered an encouraging progress for impact investing. In Singapore, there are policies which imply an indirect, not yet specific political interest in the impact investing market, such as providing attractive tax incentives for donations, supporting social enterprises and the social sector (see annex).

In summary, for further development of the impact investing market, the two Asian countries should pursue a comprehensive plan with various types of policies like in the UK.

The Markets Domain

Demand: Social needs. If social problems are present, there is the opportunity for impact investing in developing a new approach to solving them. Compared with Japan and Singapore, the UK seems to have a greater need to handle social problems in most of the selected areas of this research. However, there is a demand for impact investing in all three countries, although with different focuses and levels of priority.

Regarding the aging of the population, there is a high demand for social projects in all three countries. The Japanese society faces the most serious problem of aging: 26% of the population in Japan was above 65 years old in 2015 (World Bank, 2017a). While this figure is lower for the UK and Singapore (18% and 12% respectively), it is still higher than the world average (8.3%) and therefore raises concerns (World Bank, 2017a). For disability and health issues, assessed through the Social Progress Index's Health and Wellness indicators, the three countries gain similar scores, although Japan presents the lowest (79.89 out of 100). The performance of the three countries is acceptable, but there is still a demand for healthcare programs (Social Progress Imperative, 2017).

There is a greater demand to improve the welfare of children and families in Singapore and the UK. Singapore presents a

higher maternal mortality rate (9.98 deaths per 100,000 live births), while the figures for the UK (9.11) and Japan (5.43) are considerably lower (Social Progress Imperative, 2017). For child mortality, the UK has a higher rate (4.2), while Japan and Singapore have the same rate (2.7 deaths per 1,000 live births) (Social Progress Imperative, 2017). In addition, all three countries face the problem of income inequality as they all present figures higher than the OECD average (OECD, 2017a; OECD, 2017b; Department of Statistics Singapore, 2016). Regarding gender, Singapore has a remarkably low gender inequality³ (0.068), but the figures for Japan and the UK are also low (0.116 and 0.131 respectively), showing few differences between men and women (UNDP, 2016).

For public order and safety, all three countries earn high scores in the Social Progress Index: Singapore scored 93.90 out of 100, the score for Japan is 91.66, and that for the UK is 85.45 (Social Progress Imperative, 2017). However, there is still room for improvement, especially in the UK. For house ownership, Japan and Singapore obtain the similar good scores in the indicator of shelter in the Social Progress Index, at 93.25 and 94.28 out of 100, respectively (Social Progress Imperative, 2017). The UK has a lower score of 87.53, due to a much more serious problem of affordable housing compared with Japan and Singapore (Social Progress Imperative, 2017). Concerning the job market, the three countries have lower unemployment rates than the world average. The UK has the highest unemployment rate among the three at 4.8% of the total labor force; for Japan, it is 3.1%, and for Singapore, it is only 1.8% (World Bank, 2017b).

For the environment aspect, the set of indicators for environmental quality according to the Social Progress Index was examined. Japan has the lowest total score at 83.82 and the highest greenhouse gas emissions (Social Progress Imperative, 2017). In contrast, outdoor air pollution-attributable deaths are significantly higher in Singapore than in the UK and Japan (Social Progress Imperative, 2017). Furthermore, Singapore's biodiversity and habitat protection is weaker. While the UK shows positive results for most of the indicators of environmental quality, the greenhouse gas emissions are much higher than in Singapore. The environmental conditions in the three countries are generally acceptable. Yet, there is the demand to improve different aspects.

Demand-side actors. The set of country-specific relevant demand-side actors for the three countries is annexed. The presence of these organizations implies the potential demand for impact investments. As the types of actors are different in the three countries, this research only compares the numbers for three similar forms — NPOs/charities, social enterprises, and cooperatives/cooperative societies — by adjusting the numbers according to the population. Compared with Japan and Singapore (both with around 4 per 10,000 inhabitants), the UK has extremely large numbers of NPOs/charities (25 per 10,000 inhabitants). The UK also has the most social enterprises (114 per 10,000 inhabitants). The results show that the UK has a much more active social sector, which provides higher supply and potential for impact investing. A weaker social sector can be more challenging for impact investing growth, as the society is more likely to rely on a traditional approach (the government) to address social issues, which is especially the case for Japan. However, the Japanese and Singaporean government can still apply impact investing, especially with social impact bonds, where the government is actively involved while reducing governmental burdens.

Supply-side actors. The amount of social spending can indicate the government's willingness to address social issues and their potential source of supply. In addition, it can indirectly justify the need for cross-sector collaboration to optimize the use of these resources. Except for Singapore, the levels of governmental social expenditure are high. The governments of Japan and the UK spend over 20% of their GDP on social issues (OECD, 2017a). Singapore, on the other hand, spends only 8.2% of its GDP on social development (Singapore Government, 2017). This indicates that the potential supply for impact investment from the government is more than twice as high in the UK and Japan as in Singapore.

The supply for impact investing can also be estimated through the budget of charities and total donations to charities. The charities in Singapore have the highest average budget at USD 4.7 million per year (COC, Singapore Government, 2015), while for the UK it is USD 0.56 million per year (Government of UK, 2017a) and for Japan it is USD 0.43 million per year (Cabinet Office, Government of Japan, 2016). In terms of percent of the national GDP, charities in Singapore receive higher donations than in the UK and Japan (COC, Singapore Government, 2015; JFRA, 2015; NCVO, 2017). This implies that the potential supply for impact investing is higher for Singapore or the UK. Another finding regards the source of donations, namely from individuals or the corporate/private sector. In Japan⁴, corporate donations are about the same amount as individual donations, while in the UK, corporate donations represent only a small part of the total donations (JFRA, 2015; NCVO, 2017). This additional information is important for developing impact investing because it indicates cultural differences.

As another potential supply for impact investing, Japan holds the most HNWI wealth among the three countries at USD

³ The scores of the index: 0 equals to complete equality and 1 equals to complete inequality.

⁴ For Singapore, there is no comparable data on the sources of donations. However, there are available data for individual donations (NVPC, 2016) and sources of donations of above one million dollars (Coutts, 2015).

6.57 trillion, while the figures for the UK and Singapore are lower at USD 2.02 trillion and USD 527.1 billion respectively, according to Capgemini's Global Wealth Report (2016).

Regarding the number of actual impact investments, the UK has the largest supply. The Global Sustainable Investment Alliance (GSIA) reflects that the UK currently holds the most sustainable investment assets (7.61% of global assets), whereas Japan has 2.07% and Singapore only 0.02% (GSIA, 2016; Eurosif, 2016). While this calculation has adopted a broader definition for sustainable investment (GISA, 2016), additional information about the market size with a narrower definition of impact investing is available for Japan and the UK. The UK's impact investment value was worth USD 1.92 billion in 2015 (Big Society Capital, 2016), and Japan presented a much smaller market share of USD 0.30 billion (Japan NAB, 2016). These two indicators show that the current impact investing industry in the UK is much more developed compared with Japan and Singapore. However, there are opportunities for the markets in Japan and Singapore to grow, especially when considering the high HNWI wealth in Japan and the larger amount of donations (% GDP) to charities in Singapore.

A list of selected impact investors in Japan, Singapore and the UK is annexed. The governments of all three countries have started to participate in the impact investing market, such as the Japan Finance Corporation (JFC) in Japan, raiSE in Singapore, and Big Society Capital in the UK. Compared with Japan, Singapore has more international impact investors, such as the LGT Impact Ventures (IV), LeapFrog Investments, and Bamboo Finance.

The Human Capital Domain

General education attainment. The development of impact investing as an innovative approach to address social needs will benefit from better education and human resources, as these factors facilitate innovation (Mariz-Pérez, Teijeiro-Álvarez, & García-Álvarez, 2012). The Education Index from UNDP's Human Development Index measures the average length of education in a country (UNDP, 2016). The three countries all have high scores. The figure for Japan is 0.842 (on a scale between 0 and 1; 1 being the highest); for Singapore, it is 0.814 and for the UK it is 0.896 (UNDP, 2016). While the figure for Singapore is slightly lower, the country instead presents the highest result concerning tertiary education. According to the Social Progress Index, the duration of tertiary schooling is 1.73 years in Singapore, 1.37 years in Japan and only 0.96 years in the UK (Social Progress Imperative, 2017). To evaluate the quality of education, this study used the OECD's (2015) PISA assessment which targets 15-year-old students in different countries and measures their performance in science, mathematics, and reading. Students in Singapore and Japan present significantly high achievements in all three subjects, while the performance of UK students is about average for an OECD country (OECD, 2015). In addition, only 4.8% of students in Singapore have low performances in all three subjects compared with 5.6% in Japan (OECD, 2015). In the UK, 10.1% are low performers in all subjects; this is not much better than other OECD countries (13.0%) (OECD, 2015).

Singapore and Japan present considerably better results in the above indicators, while all three countries have well-developed human capital to a certain extent. The quality and quantity of human resources in Singapore and Japan are highly advanced, compared with the UK and other countries. This provides a positive environment for impact investing. The valuable human capital in Japan and Singapore enables the creation of social innovations. This is especially the case for Singapore, where the performances are outstanding.

Research institutions for impact investing. Whether there is research interest in impact investing in a country can influence the degree of development, since accessible knowledge is essential for innovative ideas. This research highlighted a few examples as a proxy for the environment of impact investing research. Impact investing is a new field with unclear boundaries; therefore, this research included NPOs and philanthropy, social impact, social enterprises, social innovation, and social finance. The AVPN's latest report on the landscape of impact investing in Asia identified the key relevant research institutions in 16 Asian regions (Mohan et al., 2017). Most of the identified research institutions in Singapore are universities, while Japan has more non-profit associations and foundations (Mohan et al., 2017). In the UK, based on online keyword research, several research institutions exist (see annex). A few research institutions in these three countries have begun to focus on impact investing. It is particularly worth mentioning the establishment of the Social Investment Research Council (SIRC) which consists of five founding members (Big Lottery Fund, Big Society Capital, the Cabinet Office, Citi, and the City of London) and coordinates impact investing research efforts in the interest of key market actors (Big Society Capital, 2015). This is a significant development for impact investing research. However, the field would benefit from further academic engagement. The governments of Japan and Singapore could follow the example of the SIRC initiative in the UK and encourage a research collaboration.

The Culture Domain

Culture perspectives on impact investing. Cultural perspectives examine to what extent civil society is willing to engage in addressing social challenges. The World Giving Index provides insights into the attitudes of citizens with regard to helping a stranger, donating money, and volunteering (CAF, 2016). This could be a proxy for understanding the cultural

differences regarding impact investing. Among the three countries, the UK obtains the highest rank for philanthropic activities, ranking in the top eight in the world (CAF, 2016). Singapore is ranked 28th; the participation in these activities is approximately 10% lower (CAF, 2016). Clearly behind the UK and Singapore, Japan is ranked 114th in the world; only 24% of the citizens in the survey participate in philanthropic activities and the score is 30% lower than that of the UK (CAF, 2016).

These very different figures demonstrate how the culture of giving differs in the three societies. The UK has a very active social sector that can contribute to solving social problems and further lead to the development of social innovations. The culture of giving is also promising in Singapore, which represents an enabling factor that supports the growth of impact investing. The culture of giving in Japan, on the other hand, seems weak. This could be a key challenge for developing impact investing there.

Social system. The design of social systems, meaning the general political and economic structures, influences the impact investing ecosystem. Acemoglu and Robinson (2013) have indicated that a nation's development depends on whether their political economic institutions are inclusive of society or extractive for the benefits of a few elites. Inclusive institutions are more likely to promote entrepreneurship and innovations (Acemoglu & Robinson, 2013). Likewise, this can enable social innovations and social entrepreneurship, further supporting the development of impact investing. Based on this theory and the analysis of the World Economic Forum's Global Competitiveness Index (2016), the economic institutions in research are all qualified as inclusive. The three countries are ranked in the top 10 in the world (World Economic Forum, 2016). To assess the political institutions, the World Bank's (2016) WGI indicators were applied as standards. Japan and the UK's political institutions are more inclusive as they gain positive scores in all WGI indicators. Singapore's political institutions are rather extractive, earning negative scores for voice and accountability. Japan and the UK, where the economic and political institutions are all inclusive, are more likely to enable the development of impact investing. However, Singapore's political economic environment is a special case. While its political power is not well distributed, the government is especially efficient. Moreover, the economic environment is remarkably enabling. As a result, the development of impact investing in Singapore is not limited, though it might be more challenging politically.

The Supports Domain

Intermediaries. Intermediaries are important support for the impact investing ecosystem, as they help to develop market infrastructures, build capacity, and improve market efficiency. The focus of this research is to determine whether certain intermediation exists between the supply and demand and to identify examples. A list of examples⁵ for intermediaries is presented in four categories (see annex). Through this list, this research has collected evidence that intermediaries are currently building the capacity of impact investing in the UK, Japan, and Singapore, with the participation of public, private, and social sectors together. The set of intermediaries is different for the three countries, but organizations with similar functions usually exist. In Japan, there seem to be fewer public actors involved in market intermediation. In the UK, the most important examples of governmental actors include Big Society Capital, CDC which provides tailored overseas investment support (CDC Group, 2017) and a pilot P2P Impact Fund established in 2015 which supports social enterprises in accessing crowdfunding platforms (Cabinet Office, Government of UK, 2015). In Singapore, the National Council of Social Service, raISE, and Tote Board are quasi-governmental organizations that provide support to social enterprises and the social sector. The philanthropic crowdfunding platform "Giving.sg." has also been established by the government. In addition, the presence of the social stock exchange platforms in Singapore and the UK gives the two countries a higher level of intermediation than Japan.

Platforms and networks. The existence of networks and platforms is essential for impact investing as they provide information and knowledge that can improve communication and build capacity. A list of networks and platforms, though not exhaustive, is provided in the annex. The three countries have access to platforms with similar functions, from global-level networks to regional or local ones. The AVPN report has identified the key networks and platforms for Singapore and Japan (Mohan et al., 2017). There are fifteen organizations listed in Singapore, but only seven in Japan. From this aspect, it seems that Singapore has more access to impact investing networks and platforms. This result suggests that the Japanese government could consider putting more effort into building infrastructure support for the impact investment market, while it is evident that the intermediaries, networks and platforms are developing in all three countries.

The Finance Domain

Governments in debt. The government's financial condition can show whether the governmental resources are sufficient

⁵ The intermediaries in Japan and Singapore are identified by the AVPN report (Mohan et al., 2017). Additionally, based on keyword research and the information on existing networks, such as the Social Investment Forum (UK) and the Global Impact Investment Network, examples for the three countries are given.

to address the growing social needs. The World Development Indicators provide information about the revenue and expenses of the governments, as well as the amount of their debt (World Bank, 2017c). It is observed that all three governments are in debt. This reflects why impact investing is needed in the first place — new solutions are essential for society especially given a lack of traditional resources. The Japanese government has the highest debt (198% GDP) among the three countries (World Bank, 2017c). In the UK and Singapore, the governmental debts are lower at 107.6% GDP and 107.2% GDP, yet still higher than the average of high-income countries (101.1%) (World Bank, 2017c). In addition, the governments of the UK and Japan struggle to balance their budgets with deficits. Singapore, on the other hand, keeps a revenue of 2.2% GDP (World Bank, 2017c). In general, there is a demand for impact investing in all three countries because they all face insufficient governmental resources. Especially the UK and Japan could profit from engaging private capital as part of the development of impact investing.

Financial market development. A well-developed financial market is more likely to support the development of impact investing. Singapore and Japan have enabling financial conditions in general for impact investing growth similar to the UK. With regard to economic development in general, the World Competitiveness Index has shown that all three countries are more advanced than the rest of the world (World Economic Forum, 2016). Notably, Singapore is ranked in the top two in the index, while the UK is in the top seven and Japan in the top eight (World Economic Forum, 2016). For financial market development, in particular, Singapore is ranked second as well, while the UK (16th) and Japan (17th) are at about the same level (World Economic Forum, 2016). However, Japan and the UK have advantages in market size (ranked fourth, and ninth) in contrast to Singapore's relatively small market (ranked 37th) (World Economic Forum, 2016). Compared with other economies in the world, the three countries have relatively efficient, trustworthy, and confident market and financial systems. The conditions in the two Asian countries create an enabling environment for impact investing. The smaller market size in Singapore does not limit the development of impact investing.

Financial intermediation for inclusive growth. In addition to the general financial market development, this research further examined the aspect of inclusive economic growth through the “financial intermediation of real economy investment” pillar by the World Economic Forum's (2017) new Inclusive Development Index. An inclusive economy enables impact investing to grow. The results show that the three countries all have medium-high financial foundations and environments for inclusive growth. Singapore, with the highest score of 5.50 (from lowest 1 to highest 7) among the three countries, performs in the top 20% among advanced economies (World Economic Forum, 2017). The UK obtained a score of 4.77 (top 40%), and Japan a score of 4.53 (World Economic Forum, 2017). The financial system inclusion in Singapore has room to improve, especially when compared with the UK. Namely, it can increase the affordability of accessing capital and financial services in the country. The financial intermediation in Japan is also relatively weak compared with Singapore, the UK, and other advanced countries. Therefore, the efficiency of intermediation from assets to investment opportunities needs to be improved to encourage the development of impact investing.

5. Conclusions and Policy Recommendations

The proposed impact investing ecosystem framework has provided a comprehensive overview of the actors in the impact investing market and has identified its key challenges and possibilities. The merge and adaptation of the OECD social impact investment framework and the entrepreneurial ecosystem approach have proven as an effective method since it complements the analytical approaches of the two frameworks and allows cross-country comparisons. In this case study, the proposed impact investing ecosystem framework has found overall enabling environments in Japan and Singapore for the development of impact investing, although different challenges exist. While the market demand is relatively small compared with the UK due to fewer apparent social needs, the two Asian countries have similar political economic systems, high-quality human resources and well-developed financial markets. As Japan faces heavy debt and social expenditures and Singapore has a limited budget for social development, impact investing is beneficial for both countries as a new solution to supplement governmental resources. Essential intermediaries and networks are already developing in both countries to support the market. Consequently, impact investing has great potential to grow in Japan and Singapore. To maximize this potential, public policy plays an important role. Firstly, it is essential that the governments understand how they can influence every determinant of the impact investing ecosystem, e.g. the legal frameworks and existing policies. By supporting enabling factors in all the different domains of this ecosystem, the government can catalyze its development. As the benchmark of the UK shows, public policy can build market capacity, increase demand, encourage investors, and provide capital or shape the social systems to invest private capital in social services.

Japan. Japan is a country with high governmental social spending. Since it has the highest debt among the three countries and cannot balance its budget, the government should seek alternative resources to help solve the growing social issues. Therefore, the demand for impact investing is high. The government has the following suggestions to promote impact investing in Japan. Firstly, when compared to the other two countries, the key challenges are aging, income inequality, unemployment, and the environment (especially greenhouse gas emissions). The government can first examine the current structures of social services in these areas and then provide incentives for impact investments. Secondly, as the

Japanese society has a relatively weak social sector, the government should put more efforts into building market capacity and catalyzing private capital. For example, it can become more involved in supporting intermediaries, investing in relevant research, or providing training programs. Additionally, given Japan's unique donation structure, the government can provide tax incentives for the corporate sector to invest in SPOs. The government can also focus on mobilizing the HNWI's in the country because they offer a rich source for impact investing. Thirdly, a legal framework for social enterprises is needed. The regulatory quality and rule of law in general are relative weaknesses of the Japanese governance compared with the other two countries. A clear framework will allow the government to create tailored tax incentives and attract impact investors. Lastly, the Japanese government should consider the proposals of the Japan Impact Investment Taskforce which provides a comprehensive plan for the development of impact investing in Japan. These proposals, based on the successful experiences of the UK government, can also help to overcome the challenge of a weaker social sector.

Singapore. Singapore has the highest quality and quantity of human resources, the most advanced financial market, and a government that ranks higher on good governance rankings compared to the other two countries. Furthermore, it has more access to international impact investors as well as international and regional impact investing networks than Japan. As a result, the impact investing industry in Singapore is promising. Impact investments can serve as a great additional resource for solving social problems given the fact that the government has a limited budget. Based on the analysis of this research, the key social challenges are aging, welfare for children and families, income inequality and environmental issues (especially outdoor air pollution, biodiversity, and habitat protection). The government can take all domains of the ecosystem into consideration to enable impact investing and design new interventions that address these problems. Singapore can take advantage of the access to international networks and financial markets to engage impact investors. Additionally, the government can establish a research institution to gain and provide essential knowledge in the field. Lastly, the government can consider introducing social impact bonds to promote impact investing. The implementation of pilot social impact bonds can demonstrate the benefit to society and the cost-effectiveness for the government which would allow Singapore to maintain its low social spending strategy. Given the effectiveness and trustworthiness of the Singaporean government, there is a great potential for these projects to succeed.

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Annex. Indicators for the Impact Investing Ecosystem Framework.						
Actors/Factors	Data Sources and Dates	Indicators	Unit	Japan	Singapore	UK
Domain: Policy						
Leadership						
General political context	Worldwide governance indicators (WGI) 2015 (World Bank, 2016)	Voice and Accountability	Governance score (-2.5 to +2.5)	1.0 [79.3]	-0.1 [42.9]	1.3 [92.1]
		Political Stability and Absence of Violence	[Percentile Rank (low: 0 to high: 100)]	1.0 [82.4]	1.2 [93.3]	0.6 [62.4]
		Government Effectiveness		1.8 [95.7]	2.3 [100.0]	1.7 [93.8]
		Regulatory Quality		1.2 [85.1]	2.3 [100.0]	1.9 [98.6]
		Rule of Law		1.5 [89.4]	1.9 [96.6]	1.8 [93.8]
		Control of corruption		1.6 [91.3]	2.1 [97.1]	1.9 [94.2]
Government						
Legal/regulatory frameworks	Government of UK, 2017b; UK NAB, 2014;; raiSE, 2017; Japan NAB, 2014; Cabinet Office, Government of Japan, 2015	The existence or absence of legal frameworks for social enterprises	--	No specific legal status	No specific legal status	Not limited to one specific legal status
				Regulated by the Cabinet Office	Certification: raiSE membership	Specific form: CIC
Interventions and incentives e.g. tax laws	Japan NAB, 2014; Japan NAB, 2016; The Japan Times, 2016; The Nippon Foundation, 2015; UK NAB, 2014; Government of UK, 2016; raiSE, 2017; Singapore Government (MCCY, 2014a, 2014b, 2017c); Community Chest, 2017; AVPN (Mohan et	Key initiatives, laws, policies, and actions created for impact investing:	--	--	--	--
		Initiatives to support the development of impact investing	--	▪The G8 Social Impact Investment Taskforce	▪ raiSE (2015)	▪ Social Value Act
					▪ National Volunteer and Philanthropy Centre (NVPC)	▪ The G8 Social Impact Investment Taskforce
		Tax incentives for non-profits and social enterprises	--	Furusato Tax (Hometown Tax) System	Tax incentives for public-interest corporations, certified non-profit	Tax incentives for Institutions of Public Character (IPCs)
Social Investment Tax Relief						

	al., 2017)			corporations		
		Providing capital to non-profits and social enterprises	--	METI: Environmental Community Business Development Program	Voluntary Welfare Organizations (VWOs)-Charities Capability Fund (VCF)	Social Outcomes Fund
				Osaka Prefectural Government: Social Entrepreneur Support Project	Central Cooperative Fund	The Dementia Discovery Fund
				Japan Finance Corporation: Social business support fund	raiSE Impact Finance	Arts Impact Fund
					VentureForGood (Youth)	Peer to Peer guarantee fund
		Other financing support	--	Enabling the use of funds from dormant bank accounts	Donation-matching platform: SHARE as One	Dormant Bank and Building Society Accounts Act
				Credit-guarantee system for NPOs		Big Society Capital
		Social impact bonds	--	3 pilot projects	--	32 social impact bonds
						Department for Work and Pensions Innovation Fund
						The Centre for Social Impact Bonds
		Infrastructure support	--	--	--	Commissioning Academy
						Access – the Foundation for Social Investment
		Legal reform	--	--	--	Charitable Trustees' Duties Reform
						Investment Intermediaries Fiduciary Duties Reform

Domain: Markets						
Demand: Social Needs						
Aging	World Bank estimates 2015 (World Bank, 2017a)	Population aged 65 and above	% of total [World average]	26 [8.3]	12 [8.3]	18 [8.3]
Disability Health	Social Progress Index 2017 (Social Progress Imperative, 2017)	Health and wellness (based on: Life expectancy at 60, premature deaths from non-communicable diseases, suicide rate)	Calculated Score (low: 0 to high: 100)	79.89	83.78	81.16
Children and families	Social Progress Index 2017 (Social Progress Imperative, 2017)	Maternal mortality rate	Deaths/100,000 live births	5.43	9.98	9.11
		Child mortality rate	Deaths/1,000 live births	2.70	2.70	4.20
	OECD, 2017a; 2017b Department of Statistics, Singapore, 2016	GINI Coefficient (household; disposable income, post taxes and transfers)	0 to 1 (date of data) [OECD average 2014] (complete equality: 0; complete inequality: 1)	0.33 [0.318] (2012)	0.402 [0.318] (2016)	0.358 [0.318] (2013)
	Human Development Index (HDI) 2015 (UNDP, 2016)	Gender Inequality Index	0 to 1 (complete equality: 0; complete inequality: 1)	0.116	0.068	0.131
Public order and safety	Social Progress Index 2017 (Social Progress Imperative, 2017)	Personal Safety (based on: Homicide rate, level of violent crime, perceived criminality, political terror, traffic deaths)	Calculated Score (low: 0 to high: 100)	91.66	93.90	85.45
(Affordable) Housing	Social Progress Index 2017 (Social Progress Imperative, 2017)	Shelter based on:	Calculated Score (low: 0 to high: 100)	93.25	94.28	87.53
		Availability of affordable housing	% satisfied	76	75	44
		Access to electricity	% of population	100.00	100.00	100.00
		Quality of electricity supply	Scale (low: 1 to high: 7)	6.55	6.81	6.67
		Household air pollution-attributable	deaths/100,000	0.00	0.00	0.00

		table deaths				
Unemployment	World Bank 2016 (modeled ILO estimate) (2017b)	Unemployment rate	% of total labor force [world average]	3.1 [5.7]	1.8 [5.7]	4.8 [5.7]
Environment	Social Progress Index 2017 (Social Progress Imperative,2017)	Water and Sanitation (based on: Access to piped water, rural access to improved water sources, access to improved sanitation facilities)	Calculated Score (low: 0 to high: 100)	99.58	100.00	99.74
		Environmental Quality based on:	Calculated Score (low: 0 to high: 100)	83.82	87.11	91.88
		Outdoor air pollution-attributable deaths	deaths/100,000	16.83	32.45	22.80
		Wastewater treatment	% of wastewater	56.53	100.00	96.34
		Biodiversity and habitat	Protection (low: 0 to high: 100)	93.25	72.26	98.98
		Greenhouse gas emissions	CO ₂ equivalent per GDP	301.27	141.59	237.80
Demand-Side Actors						
Social enterprises NPOs SPOs Profit-with-purpose businesses Cooperatives	Japan: Cabinet Office: (2017; 2015; Public Interest Commission, 2014); Japan NAB, 2014. Singapore: raiSE, 2016; Singapore Government (COC, 2015; Ministry of Culture,	Number of organizations	Number [per 1,000,000 population ⁶]	NPOs: 51,508 [405.13] Certified NPOs ⁷ : 1016 [7.99]	Charities: 2,217 [400.54] IPCs ⁸ : 633 [114.36]	Charities: 167,109 [2,565.82]
				Social enterprises: 205,000 [1612.38]	Social enterprises ⁹ : 303 [54.74]	Social enterprises: 741,000 [11,377.44]
				Cooperatives: 36,492 [287.02]	Cooperative societies:85 [15.36]	Cooperative and community benefit societies: 8,208 [126.03]
				▪Social welfare	▪Mutual	Community

⁶ The authors calculated all of these based on the World Bank Development Indicators (population total, 2015) (World Bank, 2017e).

⁷ Donations to Certified NPOs are eligible for income tax deduction.

⁸ IPCs refer to the exempt or registered charities capable of issuing tax-deductible receipts to donors. Donations to the certified IPCs are tax-deductible (Charity Portal, Singapore Government, 2017).

⁹ Number of Social Enterprises with memberships in the raiSE.

	Community and Youth [MCCY], 2014a, 2017a, 2017b; National Council of Social Service [NCSS], 2017) UK: Government of UK (2017a; Cabinet Office, 2016); Financial Conduct Authority, 2017			organizations: 19,000 [149.44] ▪Education organizations: 8,000 [62.92] ▪Associations/Foundations: 41,000 [322.48] ▪Public-interest corporations: 9300 [73.15]	Benefit Organizations: 84 [15.18]. ▪Voluntary welfare organizations (VWOs) ¹⁰ : 473 [85.46]	interest companies (CICs): 11922 [183.05]
Supply-Side Actors						
Governments Foundations Institutional investors HNWI and family offices SV & VP funds Retail	OECD Social Expenditure (OECD, 2017a; Singapore: Singapore Government, 2017)	Social expenditure (public)	% of GDP [% of OECD average]	23.06 [21.12] (2013)	8.2 [21.03] (2016)	21.49 [21.03] (2016)
	Cabinet Office, Japan 2016; COC, Singapore Government, 2015; Government of UK, 2017a	Annual charity budget (Japan: NPOs)	total USD [USD ¹¹ per organization]	22.27 bn ¹² [432 k] (2017)	10.51 bn [4,742 k] (2014)	93.58 bn [560 k] (2014)
	JFRA, 2015; COC, Singapore Government, 2015; NCVO, 2017	Total donations to charity	USD [% of 2014 GDP ¹³]	12.96 bn [0.0027]	1.82 bn [0.0059] (2014)	11.14 bn [0.0037]
		Individual donations		6.67 bn [0.0014] (2014)	N/A	9.79 bn [0.0033] (2014/15)

¹⁰ Number of VWOs with membership in the National Council of Social Service (NCSS). VWOs are NPOs (service providers) that benefit the community in Singapore (NCSS, 2017).

¹¹ The authors estimated all financial values in the table and calculated from local currencies to USD with exchange rates: 1 Euro = 1.12 USD; 1 British Pound = 1.28 USD; 1 Japanese Yen = 0.0090 USD; 1 Singapore Dollar = 0.72 USD (achieved through Google Finance, 2017/06/19).

¹² Estimated for the current number of NPOs (51,508) from the average annual income of NPOs by Japan's Cabinet Office in 2015 (Cabinet Office, Government of Japan, 2016)

¹³ Figures calculated by the authors based on the World Bank Development Indicators (GDP, 2014) (World Bank, 2017d).

		Corporate/Private sector donation		Corporate: 6.29 bn [0.0013] (2014)	N/A	1.35 bn [0.0005] (2014/15)
	Eurosif, 2016; GSIA, 2016	Total sustainable investment assets ¹⁴	USD [% of global assets]	473.6 bn [2.07]	4.3 bn [0.02]	1,742.0 bn [7.61]
	Big Society Capital, 2015; Japan NAB, 2016.	Impact investment market size	USD	0.30 bn (2016)	N/A	1.92 bn (2015)
	Capgemini: Global Wealth Report, 2016	HNWI Wealth	USD [% of global HNWI wealth]	6,571.4 bn [11.20]	527.1 bn [0.90]	2,024.0 bn [3.45]
		HNWI Population	Population [% of country's total population ¹⁵]	2,720.0 k [2.14]	103.6 k [1.87]	552.8 k [0.85]
	Japan NAB, 2016; AVPN (Mohan et al., 2017); keyword research	Examples of impact investors (e.g. impact funds, foundations)	--	▪ JFC	▪ LGT Impact Ventures (IV)	▪ Big Society Capital
				Nippon Foundation	Bamboo Finance	Big Issue Invest
				Mitsubishi Corporation Disaster Relief Fund	Omidyar Network	Esmee Fairbairn Foundation
				Music Securities, Inc.	East Ventures	Social Investment Business
				Gojo & Company, Inc.	LeapFrog Investments	UnLtd
				Fukutake Foundation	raiSE	Big Lottery Fund
				Inamori Foundation	DBS Foundation	LGT Impact
				Benesse Corporation Toyota Tsusho		City Bridge Trust
				Globis Capital Partners, KIBOW		Lloyds Bank Foundation
						RBS MicroFinance Funds (MFF)
Domain: Human Capital						
Education and Training						
General education attainment	Human Development Index (HDI) 2015 (UNDP, 2016)	Education Index (0 to 1)	Low: 0, High: 1	0.842	0.814	0.896
		Mean Years of Schooling	Years	12.5	11.6	13.3
		Expected Years of Schooling	Years	15.3	15.4	16.3

¹⁴ The assets that are professionally managed under responsible investment strategies.

¹⁵ Figures calculated by the authors based on the World Bank Development Indicators (Population total, 2015) (World Bank, 2017e).

	Social Progress Index 2017 (Social Progress Imperative, 2017)	Years of tertiary schooling	Years	1.37	1.73	0.96
	PISA (OECD, 2015)	Student performance in: Science	mean score [OECD countries' average score]	538 [493]	556 [493]	509 [493]
		Mathematics		532 [490]	564 [490]	492 [490]
		Reading		516 [493]	535 [493]	498 [493]
		Low performers in all subjects: (math, reading, and science)	% [% OECD Average]	5.6 [13.0]	4.8 [13.0]	10.1 [13.0]
Research institutions for impact investing	AVPN (Mohan et al., 2017); keyword research	Examples of research institutions for impact investing	-	Fujitsu Research Institute	Earth Observatory of Singapore, Nanyang Technological University	Centre for Enterprise and Economic Development Research, Middlesex University London
				Japan Foundation Center	INSEAD (Singapore)	Institute for Social Innovation and Impact, University of Northampton
				Japan Fundraising Association (JFRA)	Lien Centre for Social Innovation (LCSI)	iSE
				Japan NPO Center	NUS Asia Centre for Social Entrepreneurship and Philanthropy	Marshall Institute for Philanthropy and Social Entrepreneurship, The London School of Economics and Political Science
				Nippon Foundation	Republic Polytechnic	Oxford University, Saïd Business School
				Sasakawa Peace Foundation	School of Social Sciences, Singapore Management University	SIRC
					Singapore	

					University of Social Sciences (SUSS)	
Domain: Culture						
Political Economic Considerations						
Cultural perspectives on impact investing	CAF 2016	World Giving Index	Rank (high:1) [Score %]	114 [24]	28 [44]	8 [54]
		Participation in: Helping a stranger		138 [25]	79 [50]	33 [61]
		Donating money		83 [23]	19 [58]	7 [69]
		Volunteering time		55 [23]	54 [23]	22 [33]
Social system	Acemoglu & Robinson, 2013; Global Competitive ness Index (World Economic Forum, 2016) WGI (World Bank, 2016)	Political institutions	Inclusive or extractive	Inclusive	Extractive	Inclusive
		Economic institutions	Inclusive or extractive	Inclusive	Inclusive	Inclusive
Domain: Supports						
Intermediaries ¹⁶						
Funds Independent financial advisors Brokers, dealers Commercial banks Investment banks Social banks Social investment wholesale banks CDFIs Social exchanges Crowdfunding platforms and funds	AVPN (Mohan et al., 2017); Japan NAB, 2016; UK NAB, 2014; Social Investment Forum, 2017; keyword research	Asset managers Incubators Accelerators Capacity builders Consulting support	--	Arun LLC	Milaap Social Ventures (SG)	Arts Impact Fund
				Ashoka Japan	National Council of Social Service	Big Society Capital
				Entrepreneurial Training for Innovative Communities	NUS Asia Centre for Social Entrepreneurs hip and Philanthropy	Bridges Ventures
				Hub Tokyo	raiSE	CAN
				Impact Hub	Singapore International Foundation	CDC
				Japan Sustainable Investment Forum (JSIF)	Tech For Good	CAF
				Japan Venture Philanthropy Fund	The Impact Hub Singapore	ClearlySo
				Mistletoe	Tote Board	FSE Group
				NPO Edge	Tsao Foundation	Impact Ventures UK (IVUK)

¹⁶ The list of intermediaries is not exhaustive. In addition, some organizations might function across the categories.

				NPO ETIC		Investing For Good
				Social Business Network		Mårten Wetterberg
				Social Innovation Park		NESTA
				w Social Venture Partners Tokyo		w Social Finance
		Financial institutions for Impact investing, Community development institutions		NPO Banks:	DBS Bank	Big Society Capital
				Community Youth Bank Momo	Community Development Council (CDC)	CAF Bank
				Mirai Bank	Community Foundation of Singapore	Charity Bank
				Community Foundations:	Tan Chin Tuan Foundation	Community Development Finance Association (CDFA)
				The Sanaburi Foundation		Triodos Bank
		Social exchanges	--	--	IIX	SSX
		Crowdfunding and fundraising platforms and funds	--	Aizu Solar Citizen Fund	Crowdo	Crowdfunder
				Give2Asia	Give2Asia	CrowdPatch
				Kanagawa Children's Future Fund	GiveAsia	Crowdshed
					Giving.sg	Ethex
					Indiegogo	Hubbub
					Milaap	JustGiving Crowdfundin g
Networks and Platforms						
Impact investing networks e.g. Investors/Soci al enterprises	AVPN (Mohan et al., 2017); Japan NAB, 2016; keyword research	Examples of networks and platforms	--	ANDE Japan	AVPN	Edinburgh Social Enterprise
				AVPN	BoP Hub	EngagedX
				British Council East Asia and China region	BRIDGE	EVPA
				GIIN	British Chamber of Commerce	GIIN
				JFRA	CSR Asia (Singapore)	Global Social Entrepreneurship Network (GSEN)
				JSIF	Family	Social

					Business Network Asia	Enterprise Lancashire Network – Selnet
				Social Business Networks	Forum for the Future	Social Enterprise UK
				Toniic	GIIN	Social Investment Forum
					National Council for Social Service	Social Value UK
					raiSE	UK Sustainable Investment and Finance Association (UKSIF)
					Singapore Compact for CSR (Global Compact Network Singapore)	
					Singapore Venture Capital and Private Equity Association (SVCA)	
					Social Innovation Park	
					The Impact Hub Singapore	
					The President’s Challenge Social Enterprise Award	
					Toniic	
Domain: Finance						
Financial Market Development						
Debt Access to capital Microeconomic environment Financial intermediation	World Development Indicators 2015 (World Bank, 2017c)	Central government finances: Revenue (excluding grants)	% of GDP[High-income countries average]	12.6 [25.3]	18.7 [25.3]	35.1 [25.3]
		Expenses		17.2 [28.0]	16.5 [28.0]	38.6 [28.0]
		Total Debt		198.0 [101.1]	107.2 [101.1]	107.6 [101.1]
	Global Competitiveness Index (World	Global Competitiveness Index	Scale (low: 1, high: 7) [Rank high: 1]	5.5 [8]	5.7 [2]	5.5 [7]
		Pillar:		4.1 [104]	6.1 [11]	4.4 [85]

	Economic Forum, 2016)	Macroeconomic environment				
		Pillar: Financial Market Development		4.9 [17]	5.7 [2]	4.9 [16]
		Pillar: Market Size		6.1 [4]	4.7 [37]	5.7 [9]
	Inclusive Development Index 2017: Policy and Institutional Indicators (World Economic Forum, 2017)	Pillar: Financial intermediation of real economy investment	Scale (low: 1, high: 7) [top % comparing with peer countries]	4.53 [60]	5.50 [20]	4.77 [40]
		Sub-pillar: Financial System Inclusion		5.23 [60]	5.23 [60]	5.66 [40]
		Sub-pillar: Intermediation of Business Investment		3.83 [60]	5.78 [20]	3.88 [40]
Source: Authors						

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