Current demand and supply of impact investments across different geographic regions,

sectors, and stages of business: Match or mismatch?

Syrus M. Islam Auckland University of Technology Auckland, New Zealand Email: <u>syrus.islam@aut.ac.nz</u>

Tom Scott Auckland University of Technology Auckland, New Zealand

Suggested citation:

Islam, S. M. & Scott, T. (2021). Current demand and supply of impact investments across different geographic regions, sectors, and stages of business: Match or mismatch? *Australian Journal of Management*. https://doi.org/10.1177/03128962211053411

Current demand and supply of impact investments across different geographic regions, sectors, and stages of business: Match or mismatch?

Abstract

We examine the match/mismatch between the demand and supply of impact investments. We show that some geographic regions display an upward match, while others exhibit a downward match. We explain how regions with well-developed (or less-developed) economies are not necessarily equal to regions with well-developed (or less-developed) impact investment markets. We also highlight the sectors exhibiting a match or mismatch between the demand and supply of investments, and explain the potential reasons. Regarding both geographic and sector concentration, the demand for investments is much more concentrated than their supply. Finally, early-stage companies suffer from an undersupply of investments, while growth-stage companies display an upward match and mature companies have an oversupply of investments. These findings have implications for impact investing theory and practice, including the attainment of Sustainable Development Goals.

Keywords: Impact investing; Demand and supply; Match or mismatch; Geographic region; Investment sector; Early-stage company; Impact investment market

1. Introduction

Over the last decade, the phenomenon of impact investing has received increased attention from both scholars and practitioners around the world. Generally, impact investing refers to investments made into companies, projects, and/or funds to generate measurable positive social and/or environmental impact alongside generating financial returns (Hehenberger et al., 2019; Phillips and Johnson, 2021; Brest and Born, 2013). Impact investing is considered to have some distinctive characteristics that differentiate it from other forms of investments that are also socially motivated, such as socially responsible investments (SRI). For example, while SRI mainly focuses on avoiding harm by adopting positive or negative screening strategies, impact investing seeks to intentionally create positive impact by proactively addressing social/environmental challenges (Höchstädter and Scheck, 2015; Roundy, 2020). Furthermore, SRI generally invests in large corporations through public equity and debt and seeks to generate at least risk-adjusted market returns, while impact investing usually targets early- and growthstage firms through private equity and debt and expects to generate both risk-adjusted market returns and below-market returns (Brest et al., 2018; Islam, 2021a). Indeed, unlike typical SRI, impact investing sometimes intentionally sacrifices financial returns for desired social impact (e.g., investing in high-risk projects that cannot generate market-rate returns but could change the life of hundreds of marginalized people in developing countries) (Bannick et al., 2017; Bugg-Levine et al., 2012).

Latest estimates show that the size of the global impact investing market is USD 715 billion and that the market is growing rapidly (Hand et al., 2020). The impact investing market has attracted a wide variety of individual and institutional investors, such as development finance institutions, private foundations, family offices, individual investors, pension funds, religious institutions, and fund managers (International Finance Corporation, 2019; Mudaliar et al., 2019). These investors allocate their capital to targeted investee companies directly or via impact investment intermediaries (Hazenberg et al., 2015; Glänzel and Scheuerle, 2016). Here, investors primarily make an impact by financing the growth of investee companies (e.g., social enterprises) i) whose products/services are addressing pressing social/environmental problems (Islam, 2021b; Islam, 2020), and/or ii) whose operational practices have a positive impact on their employees (e.g., disadvantaged employees' health and economic security) and supply chain (e.g., sourcing materials from environmental-friendly suppliers) (Brest and Born, 2013; Bannick et al., 2017). To maximize their investments' impact potential, investors also provide nonfinancial support to the investee companies, such as business model and strategy development, financial management, impact measurement and reporting system development, and access to networks (Mayer and Scheck, 2018; Milligan and Schöning, 2011; Di Lorenzo and Scarlata, 2019).

As the primary focus of impact investing is to invest in tackling global challenges (e.g., extreme poverty, global hunger, and growing inequalities), it is considered a promising investment vehicle to attain the United Nations Sustainable Development Goals (SDGs) by addressing the \$2.5 trillion annual SDG investment gap (Pineiro et al., 2018; OECD, 2019; Doumbia and Lauridsen, 2019; United Nations, 2020a). However, realizing the full potential of impact investing to contribute to attaining SDGs would largely depend on the state of the match or mismatch between the demand and supply of impact investments worldwide. Unfortunately, to date, very little research exists in this regard. This represents a major shortcoming, constraining our understanding of a comprehensive view of demand and supply phenomena in the impact investing industry.

The present study constitutes a first step to address this issue and examines the linkage between the current demand and supply of impact investments in the global impact investing industry. More specifically, it addresses the following research question: To what extent does a match or mismatch exist between the demand and supply of impact investments across different

4

geographic regions, sectors, and stages of business? The current research is important because it can advance our understanding of the linkage between the demand and supply of impact investments in the global impact investing industry. Indeed, the current study responds to the call of researchers and practitioners (International Finance Corporation, 2019; Nicholls, 2010) to provide a better understanding of demand and supply phenomena in impact investing. Furthermore, an investigation of the match or mismatch between the demand and supply of impact investments across different geographic regions, sectors, and stages of business could help government policymakers and other practitioners to better understand, for example, whether any specific region, sector, or stage of business is seriously suffering from an undersupply of impact investments. This could then help them take appropriate courses of action (e.g., policy responses) to address this issue.

At a broader level, the current study contributes to the growing literature on impact investing (e.g., Lee et al., 2020; Phillips and Johnson, 2021; Block et al., 2021; Islam, 2021a; Barber et al., 2021) by being the first to systematically investigate the match or mismatch between the demand and supply of impact investments in the global impact investing industry.

At a more specific level, this study makes several contributions to the literature. First, it contributes to the literature that focuses on geographic locations in impact investing (e.g., Mersland et al., 2020; López-Arceiz et al., 2017) by providing important insights into the match or mismatch between the demand and supply of impact investments across geographic regions worldwide. This paper shows that while the demand and supply of impact investments match in almost all geographic regions, not all matching is the same. In some regions, an upward matching exists where a higher demand for investments matches a higher supply of investments. In contrast, a downward matching exists in other regions where a lower investment demand matches a lower investment supply. This paper further contributes to this literature by providing insights into how the regions with well-developed (or less-developed)

economies are not necessarily equal to the regions with well-developed (or less-developed) impact investment markets.

Second, this paper contributes to the literature discussing issues around sectors in impact investing (e.g., Castellas et al., 2018; Apostolakis et al., 2018b) by providing insights into the sectors exhibiting an upward or downward matching in terms of the demand and supply of impact investments. It also advances this literature by highlighting which sectors appear to be suffering from an undersupply of impact investments and which sectors appear to have an oversupply of investments, and explaining the implications of these findings.

Third, this study offers insights into the geographic and sector concentration of the demand and supply of impact investments. For both regions and sectors, the demand for investments is much more concentrated than their supply. Indeed, only a handful of regions and sectors account for most of the sample demand for investments, suggesting the presence of a significant imbalance in investment readiness across regions and sectors in impact investing.

Finally, this paper contributes to the literature addressing issues around stages of business in impact investing (e.g., Arena et al., 2018; Hazenberg et al., 2015; Lyon and Owen, 2019) by offering insights into the match or mismatch between the demand and supply of impact investments across different stages of business. It shows that early-stage companies (i.e., seed/startup/venture) suffer from an undersupply of impact investments. In contrast, growth-stage companies display an upward match, and mature companies appear to have an oversupply of investments. This paper also highlights how the current state of demand and supply of impact investments across different stages of business could prevent the impact investing industry from realizing its full potential to contribute to the attainment of SDGs.

The rest of the paper is structured as follows. The next section provides the theoretical background of the study. Section 3 details research methods. Findings are presented in Section

4. Section 5 discusses the theoretical contributions and practical implications of these findings. Section 6 concludes the paper and provides some directions for future research.

2. Theoretical background

This paper examines the match or mismatch between the demand and supply of impact investments. While a balanced growth of the impact investing industry would largely depend on the state of match or mismatch between the demand and supply of impact investments, very little research has addressed this issue. For example, one stream of impact investing research has focused on understanding various individual-level and organizational-level criteria that impact investors use to evaluate investment projects. At the individual level, impact investors positively evaluate social entrepreneurs who display high voluntary accountability efforts and have a strong passion for social change and high professionalism (Achleitner et al., 2013; Miller and Wesley, 2010; Hazenberg et al., 2015). At the organizational level, impact investors favorably judge investee companies that operate in their preferred investment sectors (e.g., health and social services sector) and that are located in more populous and advanced economic regions (Mersland et al., 2020; Rajan et al., 2014; López-Arceiz et al., 2017). Here, researchers also show that investee organizations' mission, the authenticity of their leadership team, their financial sustainability, and the importance of the societal problems being addressed are some of the most important evaluation criteria for impact investors (Block et al., 2021; Leborgne-Bonassié et al., 2019; McWade, 2012). Furthermore, researchers highlight the importance of designing an effective impact investing decision-making system by considering financial returns, social impact, and risks, as well as combining quantitative and qualitative data (e.g., Viviani and Maurel, 2019; Brandstetter and Lehner, 2015; King, 2017; Serrano-Cinca and Gutiérrez-Nieto, 2013).

Research on impact investing has also addressed issues around impact evaluation. Here, researchers show that in impact investing, impact evaluation mainly serves as an accountability mechanism where investors hold investees accountable for achieving impact (Ebrahim and Rangan, 2014; Phillips and Johnson, 2021). However, impact evaluation also plays a legitimacy-building role, helping impact investors legitimize their investment decisions to key stakeholders (e.g., their peers and industry networks) (Urban and George, 2018; Glänzel and Scheuerle, 2016). Interestingly, in an investor-investee relationship, the specific role that impact evaluation plays may change over time (e.g., from serving as an accountability mechanism in the early stage to serving as an organizational learning mechanism in the mature stage) (Lall, 2019; Mayer and Scheck, 2018). With regard to impact evaluation, researchers have also discussed issues around difficulties in conducting rigorous impact evaluation (e.g., the inherent complexity of measuring output, outcome, and impact regarding a social issue) and suggested some possible ways forward to address them (Ebrahim and Rangan, 2014; Addy et al., 2019; Dufour, 2019; Reeder et al., 2015).

Recent research on impact investing has focused on understanding behavioral issues. Here, researchers show that younger (rather than older) investors are more likely to contribute part of their overall capital to impact investing, suggesting that private investors' age plays a vital role in impact investment behavior (Schrötgens and Boenigk, 2017; Apostolakis et al., 2018a). Furthermore, the characteristics of impact investment products influence impact investment behavior. For example, private investors display a positive attitude towards the impact investment products that are perceived to be highly innovative in solving social/environmental problems and that do not require them to sacrifice financial returns beyond a specific limit to achieve the desired social impact (Apostolakis et al., 2018a; Barber et al., 2021; Schrötgens and Boenigk, 2017). Here, researchers have also highlighted cognitive factors (e.g., categorical

cognition) that may limit the outcome efficiency of impact investing decisions and how investors may overcome this issue (Lee et al., 2020).

While the above studies provide important insights into several issues around impact investing, they do not address the state of match or mismatch between the demand and supply of impact investments. This represents a major shortcoming in the literature. The present study aims to address this shortcoming by examining the match or mismatch between the current demand and supply of impact investments across different geographic regions, sectors, and stages of business.

3. Data and methods

We adopt a descriptive research approach, which is particularly useful when the research examines the frequencies, characteristics, and categories of a phenomenon (Jiang et al., 2018). Furthermore, as in the current study, a descriptive research approach is a good first step towards understanding a phenomenon for which not much is known and can set the basis for future theory-building or theory-testing research (Rajgopal, 2020; Helfat, 2007).

Data for this study were collected from multiple sources. As most impact investing activities occur in private markets rather than public markets (Phillips and Johnson, 2021; Brest et al., 2018; Glänzel and Scheuerle, 2016), data collection is a major challenge to study issues in impact investing, especially the demand and supply of impact investments. However, recent market-leadership initiatives in the impact investing industry undertaken by a few leading organizations provided a unique opportunity to study the demand and supply of impact investments. More specifically, data regarding the demand for impact investments were collected from a digital impact investing platform, named *Abaca*. This platform was launched by the US-based Village Capital – one of the largest firms in the world supporting impact-

driven, early-stage companies – in 2019 to connect impact-driven companies with impact investors (Abaca, 2020). Abaca helps impact-driven companies to raise finance by assessing their strengths and weaknesses as well as providing them with a common language to communicate with impact investors. It also supports impact investors to identify investment deals according to their preferred criteria as well as locating potential co-investors to jointly pursue an investment deal.

This study uses the number of impact-driven firms that are investment ready and seeking finance as a proxy for impact investment demand. A total of 292 impact-driven, finance-seeking companies across the world were listed on Abaca's platform as of 21 September 2020. Based on the data availability, we manually collected demand-related data in relation to geographic regions, sectors, and stages of business for all 292 companies from Abaca. First, the demand for impact investments across different geographic regions was determined based on the operating countries of finance-seeking companies. Second, the demand for impact investment sectors was determined based on the sectors in which finance-seeking companies operate. Third, the demand for impact investments across different stages of business of finance-seeking companies. Table 1 provides a summary of data collection.

--- Insert Table 1 here ---

In addition, we visited the official website and/or social media pages of these finance-seeking companies and manually collected various types of data, including their product/service offerings, operations, and mission and vision (see Table 1). This provided us with an opportunity to obtain a deeper understanding of the context of the demand for impact investments and cross-validate the data collected from Abaca.

Furthermore, because the current study aims to examine the linkage between the current demand and supply of impact investments, it was also necessary to collect the latest supplyrelated data. We use the amount of impact investing capital managed by impact investing organizations as the proxy for impact investment supply. Data regarding the current supply of impact investments across different geographic regions, sectors, and stages of business were collected from a 2020 industry report by Global Impact Investing Network (GIIN) (see Hand et al., 2020). As the global champion of impact investing, GIIN is considered the de facto industry leader. It helps develop the global impact investing industry by conducting and publishing industry-relevant research, undertaking market leadership initiatives, providing training programs for impact investors and fund managers, and facilitating networking and collaboration (GIIN, 2020). Considering its global reputation, reports prepared by GIIN are regarded as credible and of high quality, and have also been used in prior studies in impact investing (see Höchstädter and Scheck, 2015).

4. Findings and analysis

4.1 Geographic regions and the demand and supply of impact investments

This section presents the findings regarding the demand and supply of impact investments across different geographic regions. The demand and supply of impact investments are presented according to the geographic classification adopted by GIIN (Hand et al., 2020) (see Table 2). The percentage of demand for impact investments attributed to each geographic region was determined by dividing the number of finance-seeking companies located in a specific region by the total number of finance-seeking companies. For example, 131 (out of 292) finance-seeking companies were in the US and Canada region. Thus, 44.9% was attributed to this region as the demand for impact investments. The percentage of supply of impact

investments assigned to each region was directly imported from the 2020 industry report by GIIN. For example, the report shows that 30% of sample impact investing capital was allocated to the US and Canada region (see Hand et al., 2020). We note that this data source lists 5% of investment supply as "other" category.

--- Insert Table 2 here ---

To identify the potential match or mismatch between the demand and supply of impact investments across geographic regions, we followed the top-half and bottom-half grouping method, which is an established procedure to obtain a preliminary understanding of the overall pattern of a phenomenon, especially when a descriptive research approach is used to study the focal phenomenon (e.g., see Pohle and Chapman, 2006; Bach et al., 2009; Allgood et al., 2004). Specifically, the top half (i.e., greater than or equal to the sample median) of regions by the percentage of demand for investments were grouped as "higher demand level", and the bottom half (i.e., less than the sample median) of regions by the percentage of demand for investments were grouped as "lower demand level". In the same line, the top half of regions by the percentage of supply of investments were grouped as "higher supply level", and the bottom half of regions by the percentage of supply of investments were grouped as "lower supply level". Next, we used the following classification scheme to determine the type of match or mismatch: i) regions with both higher demand and supply of investments were labeled "match (upward)"; ii) regions with both lower demand and supply of investments were labeled as "match (downward)"; iii) regions with a higher demand but a lower supply of investments were labeled as "mismatch (undersupply)"; and iv) regions with a lower demand but a higher supply of investments were labeled as "mismatch (oversupply)".

As can be seen from Table 2, the demand and supply of impact investments display an upward match regarding five regions – US and Canada, Sub-Saharan Africa (SSA), South Asia, Latin

America, the Caribbean, and Mexico (LAC), and Western, Northern, and Southern Europe (WNS Europe). This suggests that a higher demand for impact investments in these regions matches a higher supply of investments. However, a downward match between the demand and supply of impact investments can be observed in four regions: Middle East and North Africa (MENA), Southeast Asia (SE Asia), Oceania, and East Asia. In other words, a lower demand for impact investments in these four regions matches a lower supply of investments. Overall, the results suggest that the demand and supply of impact investments all geographic regions (except for the Eastern Europe, Russia, and Central Asia (EECA) region that shows a mismatch). However, not all matching is the same. An upward matching exists between the demand and supply of impact investments in some regions, whereas a downward matching exists in other regions.

Table 2 also provides important insights into the status of the impact investment market development in developed and emerging economies. Impact investment markets are generally considered well-developed (or less-developed) when they have both higher (or lower) demand and supply of impact investments (Glänzel and Scheuerle, 2016; International Finance Corporation, 2019). This is because the presence of both higher demand and supply of impact investments in a specific geographic location is regarded as the outcome of a well-functioning impact investing market ecosystem in that location, which is characterized by, among others, active government support, the catalyzing role of large foundations, a higher level of deliberate engagement of various actors to support each other, and the availability of platform- and non-platform-based financing arrangements (Tekula and Andersen, 2019; Michelucci, 2017; Islam, 2021a). As can be seen from Table 2, not all regions in well-developed economies have well-developed impact investment markets. Here, some regions (e.g., the US and Canada) have well-developed impact investment markets (as expressed by the presence of both higher demand and supply of investments), while others (e.g., Oceania) have less-developed impact investments).

markets (as expressed by the presence of both lower demand and supply of investments). In contrast, not all regions in less-developed (i.e., emerging) economies have less-developed impact investment markets. Here, some regions (e.g., SSA) have well-developed impact investment markets (i.e., both higher demand and supply of investments), while others (e.g., SE Asia) have less-developed impact investment markets (i.e., both lower demand and supply of investments). This observation suggests that regions with well-developed economies do not necessarily have well-developed impact investment markets, and that regions with less-developed economies do not necessarily have less-developed impact investment markets.

Furthermore, we provide some insights into the geographic concentration of demand and supply of impact investments by using the Herfindahl index calculated as the sum of each region's demand and supply of investments squared. We find that demand for investments is twice as concentrated as supply (30.82% vs. 15.25%), suggesting a greater geographic concentration in demand for impact investing and more diversity in its supply. Indeed, it can be observed from Table 2 that only three regions – US and Canada, South Asia, and SSA – account for more than 85% of the sample demand for investments. The underlying reason could be that these three regions are far more impact investment-ready than the other regions.

4.2 Sectors and the demand and supply of impact investments

This section discusses the findings regarding the demand and supply of impact investments across different sectors. The demand and supply of impact investments are presented according to the sector classification adopted by GIIN (Hand et al., 2020) (see Table 3). The percentage of demand for impact investments attributed to each sector was determined by dividing the number of finance-seeking companies in a specific sector by the total number of finance-seeking companies. For example, 70 (out of 292) finance-seeking companies operate in the healthcare sector; hence 24% was attributed to this sector as the demand percentage. Again, the percentage of supply of impact investments assigned to each sector was directly imported

from the 2020 industry report by GIIN (Hand et al., 2020). We note that this report lists 11% of investment supply as "other" category.

--- Insert Table 3 here ---

We use the same method outlined above (in Section 4.1) to classify sectors into demand and supply categories. As can be seen from Table 3, the demand and supply of impact investments match in regards to five sectors. An upward matching exists in three sectors – financial services (excluding microfinance), food and agriculture, and healthcare, where a higher demand for impact investments matches a higher supply of investments. However, a downward matching exists in two sectors – arts and culture, and water, sanitation, and hygiene (WASH), where a lower demand for investments matches a lower supply of investments.

Table 3 also shows a mismatch between the demand and supply of impact investments regarding eight sectors. Here, some sectors appear to be suffering from an undersupply of impact investments. For example, although education, information and communication technologies (ICT), and manufacturing sectors have a higher demand for investments, they have a lower supply of investments. In contrast, some sectors appear to have an oversupply of impact investments. For example, energy, forestry and timber, housing, and microfinance sectors have a higher supply but a lower demand for investments.

The sectors displaying an upward match (e.g., financial services and healthcare) and an oversupply of investments (e.g., energy, housing, and microfinance) suggest that they have become more developed sectors in terms of impact investment infrastructure availability, profitability, and scalability (O'Donohoe et al., 2010; Phillips and Johnson, 2021). As a result, i) new market participants often consider these sectors a relatively safer launching pad into the impact investing markets, and ii) existing market participants continue to invest in these sectors to enjoy higher certainty about their investments (e.g., guaranteed minimum returns). In

contrast, the sectors displaying a downward match (e.g., arts and culture, and WASH) and an undersupply of investments (e.g., education and ICT) suggest that they may not be investment ready. That is, potential investee companies in these sectors may not have viable and scalable business models as preferred by impact investors. It could also be the case that reasonable investment opportunities exist in these sectors, but impact investors and intermediaries (who mainly have an awareness of and expertise in investment opportunities available in mainstream sectors such as energy and financial services) are not familiar with and/or do not have enough knowledge and expertise to effectively deal with investment opportunities existing in these non-mainstream sectors (e.g., arts and culture, and WASH). As a result, they mainly allocate their impact investing capital to mainstream sectors over non-mainstream sectors.

Again, we calculate the Herfindahl index and find that the demand for investments is more concentrated than their supply (12.96% vs. 7.92%). Indeed, it can be observed from Table 3 that only three sectors – healthcare, ICT, and financial services – account for more than 50% of sample demand for investments. This suggests that these three sectors are significantly more developed for absorbing impact investments than other sectors.

4.3 Stages of business and the demand and supply of impact investments

This section presents the findings regarding the demand and supply of impact investments across different stages of business. Drawing on prior work (e.g., Agrawal et al., 2016; Kanze et al., 2018; Gompers, 1995; Hand et al., 2020), we adopted three broader classifications of stages of business (see Table 4): i) early stage (i.e., seed/startup/venture) – business ideas exist but they are going through the initial market validation process, or market-ready products/services exist and they have just started to reach markets, ii) growth stage – sales and other operational activities are growing, and iii) mature stage – company has stabilized at scale. Again, we use the same method outlined above (in Sections 4.1 and 4.2) to classify stages of business into demand and supply categories (see Table 4).

--- Insert Table 4 here ---

As can be seen from Table 4, only growth-stage companies exhibit a match between the demand and supply of impact investments. Here, the upward matching suggests that a higher demand for impact investments in growth-stage companies matches a higher supply of investments. Table 4 also shows the mismatch between the demand and supply of impact investments regarding the other stages of business. More specifically, mature companies appear to have an oversupply of impact investments. In contrast, although early-stage companies have a higher demand for impact investments, they have a lower supply of investments. This suggests that these companies appear to be suffering from an undersupply of impact investments.

An upward matching regarding growth-stage companies and an oversupply of investments in mature companies suggest that investors strongly prefer to invest in these companies. The underlying reasons could be that these companies often have stable business models, solid history of revenue/profit generating, and a high-profile management team, which, in turn, provide more confidence to impact investors about realizing their investments' full potential. Furthermore, growth-stage and mature companies can absorb a large amount of investment deals (e.g., over \$1 million) and can generate attractive financial returns in a short period (Hazenberg et al., 2015), making them lucrative investment targets. In contrast, an undersupply of investments in early-stage companies suggests that impact investors may consider these companies too risky to invest due to their unproven business models and immature organizational structure. Furthermore, many impact investors appear to be only interested in large investment deals that would generate a large amount of profit (Castellas et al., 2018), making early-stage companies less attractive investment targets. It could also be the case that many of these early-stage companies may not have a skilled leadership team to develop an

effective and attractive business plan and organizational strategy, making them less appealing to investors.

4.4 Sensitivity tests and additional analysis

We acknowledge that the top-half and bottom-half grouping method is a simplistic approach that uses the median as an arbitrary cut-off. However, it has advantages in being exploratory in nature, implementable with small sample sizes, and understandable to a non-statistical audience. Hence, we believe that it is an appropriate method for this paper. However, to test the robustness of our results, we also adopt an alternative approach. As picking an alternative threshold for our groups would be open to the same criticisms of an arbitrary cut-off, we use the SPSS K-Means Cluster Analysis module. This approach seeks to create the most homogenous groupings based on Euclidean distance from cluster mean. We require two clusters to be formed and repeat the analysis in Sections 4.1 and 4.2 (we do not repeat this analysis for Section 4.3 due to only having 3 observations).

The sensitivity test conducted largely supports our main inferences of matches and mismatches for geographic regions. We find two differences in our results – i) EECA changes from a mismatch (oversupply) to a match (downward), and ii) SSA changes from a match (upward) to a mismatch (undersupply). This perhaps suggests that for EECA, the mismatch between the demand (0%) and supply (6%), which we observed in our main results, may be mild with both the demand and supply of investments in EECA are towards the lower end. In contrast, for SSA, the upward match observed in our main results between the demand (29.5%) and supply (11%) of investments may be weak. This approach suggests that while SSA has a higher demand and supply level, its supply level is comparatively lower.

For sectors, we find one difference in our results – infrastructure changes from a mismatch (undersupply) to a match (downward). This suggests that the mismatch observed in our main

results between the demand (6.2%) and supply (4%) of investments for the infrastructure sector may be weak, and that both the demand and supply of investments are towards the lower end.

We also investigate the region-sector match/mismatch between the demand and supply of impact investments. We find that the demand and supply of investments display some meaningful differences between developed and emerging regions for the following sectors – financial services, infrastructure, manufacturing, and microfinance. These sectors exhibit a downward match or undersupply for developed regions, but an upward match or oversupply for emerging regions. This suggests that, from an impact investing perspective, these sectors are much more developed and investment-ready in emerging regions than developed regions.

5. Discussion

5.1 Theoretical contributions

The current study makes several contributions to the literature. The first contribution is to advance the literature that focuses on geographic locations in impact investing (e.g., Mersland et al., 2020; López-Arceiz et al., 2017) by providing several insights into the demand and supply of impact investments across different geographic locations worldwide. We show that while the demand and supply of impact investments match in almost all geographic regions, not all matching is the same. In some regions (e.g., the US and Canada), an upward matching exists, suggesting that regions with a higher demand for impact investments receive a higher supply of investments. In other regions (e.g., SE Asia), a downward matching exists, indicating that regions with a lower demand for impact investments receive a lower supply of investments. This observation supports prior literature (Phillips and Johnson, 2021) that suggests that the lack of a higher supply of impact investments in several regions in the impact investing industry

may be less about the shortage of capital availability and more about the lack of adequate demand for impact investments or absorption capacity in the focal impact investment markets.

The second insight of this study is related to the status of impact investment market development in developed and emerging economies. The presence of both higher demand and supply of impact investments in a geographic region is considered the outcome of a wellfunctioning impact investing market ecosystem therein (Tekula and Andersen, 2019; Michelucci, 2017; Islam, 2021a). As a result, impact investment markets are generally regarded as well-developed (or less-developed) when they have both higher (or lower) demand and supply of impact investments (Glänzel and Scheuerle, 2016; International Finance Corporation, 2019). In this regard, the main insight that the current study provides is that economically welldeveloped regions do not necessarily have well-developed impact investment markets, and that economically less-developed regions do not necessarily have less-developed impact investment markets. For example, although the Oceania region has well-developed economies, it has less-developed impact investment markets (as expressed by the presence of both lower demand and supply of impact investments). In contrast, while the SSA region has lessdeveloped economies, it has well-developed impact investment markets (as expressed by the presence of both higher demand and supply of impact investments). Overall, the current study advances the literature on geographic locations in impact investing (e.g., Mersland et al., 2020; López-Arceiz et al., 2017) by providing the insight that regions with well-developed (or lessdeveloped) economies are not necessarily equal to regions with well-developed (or lessdeveloped) impact investment markets.

Another contribution of this study is to advance the literature discussing issues around sectors in impact investing (e.g., Castellas et al., 2018; Apostolakis et al., 2018b) by providing important insights into the match or mismatch between the demand and supply of impact investments across different sectors. It shows that some sectors (e.g., financial services, food

20

and agriculture, and healthcare) display an upward match, and that some sectors (e.g., energy, housing, and microfinance) have an oversupply of investments. This suggests that these sectors have become more developed regarding impact investment infrastructure availability, profitability, and scalability, thus attracting both new and existing market participants to invest therein. Furthermore, this study shows that some sectors (e.g., arts and culture and WASH) exhibit a downward match, and that some sectors (e.g., education, ICT, and manufacturing) appear to be suffering from an undersupply of investments. This suggests that these sectors may not be investment ready and/or impact investors and intermediaries may not be aware of and have the expertise to effectively deal with investment opportunities available in these non-mainstream sectors. Here, one of the most concerning issues is an apparent undersupply of impact investments in the education and manufacturing sectors – two sectors hit hardest by the COVID-19 pandemic (OECD, 2020). This could further jeopardize the chance of attaining SDG 4 (quality education) and SDG 8 (decent work and economic growth), for which the world was already off-track to achieve even before the outbreak of COVID-19 (United Nations, 2020b).

The fourth contribution of this study is to provide insights into the geographic and sector concentration of the demand and supply of impact investments. It shows that for both geographic regions and sectors, the demand for investments is much more concentrated than their supply. Indeed, most of the sample demand for investments comes from only three regions (US and Canada, South Asia, and SSA) and three sectors (healthcare, ICT, and financial services). This suggests that a handful of regions and sectors are far more investment-ready than the rest of the other regions and sectors, highlighting the presence of a significant imbalance in investment readiness across geographic regions and sectors in impact investing.

Finally, this study contributes to the literature discussing issues around stages of business in impact investing (e.g., Arena et al., 2018; Hazenberg et al., 2015; Lyon and Owen, 2019) by

providing insights into the demand and supply of impact investments across different stages of business. It shows that growth-stage companies display an upward match and mature companies appear to have an oversupply of impact investments. This suggests that investors strongly prefer to invest in these companies, which could be due to, for example, their stable business models, solid history of revenue/profit making, and high-profile management team. However, early-stage companies (i.e., seed/startup/venture) suffer from an undersupply of impact investments. This observation resonates with the prior literature speculating the existence of the "pioneering gap" in the impact investing industry in that impact investors prefer to invest in mature companies while ignoring early-stage companies that have the potential to bring alternative solutions to existing social/environmental problems but need greater capital to survive and grow (Bannick et al., 2015; Bildner, 2017). This suggests that many impact investors may consider early-stage companies too risky or unattractive investment projects due to their unproven business models, immature organizational structure, and inability to generate attractive financial returns in a short period. That said, early-stage companies are considered the backbones of most economies worldwide, and their development is strongly linked with the attainment of SDGs (Salamon and Haddock, 2015; Sobir, 2018). As a result, the presence of an undersupply of impact investments in the early-stage companies, as the current study shows, could seriously prevent the impact investing industry from realizing its full potential to contribute to attaining the SDGs.

5.2 Practical implications

This study also has several practical implications. First, this study shows that several geographic regions (e.g., MENA) and sectors (e.g., arts and culture) with a lower demand for impact investments receive a lower supply. If the demand for impact investments could be increased in these regions and sectors, the supply of investments is also likely to be increased (Callanan, 2017; Phillips and Johnson, 2021). In this regard, governments and other

stakeholders could launch investment readiness programs (see Hazenberg et al., 2015) targeting specific regions and sectors to increase the demand for impact investments therein. Such an investment readiness program could involve providing training, advisory, and other support to impact-driven, finance-seeking companies in targeted regions and sectors to develop effective business plans and increase their management team's profile and skills, thus making them investment-ready. This, in turn, could increase the potential impact-investment opportunities for investors intending to invest in these regions and sectors, thus potentially increasing the supply of impact investments in targeted regions and sectors.

Second, the current study has implications for how impact investors evaluate impactinvestment projects based on geographic regions. The existing literature shows that while selecting impact-investment projects, impact investors favorably assess projects located in relatively stronger economies (see Mersland et al., 2020; Larcom et al., 2015). Here, the assumption is that stronger economies will have stronger impact investment markets (e.g., stronger market infrastructure and ecosystems), which will result in, among others, lower investment risk and better returns. However, the observation of the current study suggests that while evaluating impact-investment projects based on geographic locations, impact investors need to acknowledge that regions with well-developed (or less-developed) economies are not necessarily equal to regions with well-developed (or less-developed) impact investment markets. This suggests that impact investors intending to invest in well-developed impact investment markets need to pay attention mainly to a region's impact investment market development status (e.g., the presence or absence of higher demand and supply of impact investments), as opposed to its economic development status (e.g., the presence or absence of higher Gross Domestic Product).

Third, this study shows that early-stage companies appear to be suffering from an undersupply of impact investments. Yet, early-stage companies are the ones that need greater capital to survive and grow (Arena et al., 2018; Bildner, 2017). To increase the supply of impact investments in early-stage companies, government policymakers could develop appropriate policies (e.g., deferral and/or reduction of capital gain tax) to incentivize impact investors to invest adequately in these companies rather than primarily focusing on mature or growth-stage companies.

6. Conclusion and future research directions

This study examines the match or mismatch between the current demand and supply of impact investments in the global impact investing industry. It shows that some geographic regions display an upward match between the demand and supply of impact investments while others show a downward match. This paper suggests that regions with well-developed (or lessdeveloped) economies are not necessarily equal to regions with well-developed (or lessdeveloped) impact investment markets, indicating that impact investors need to be mindful of it while evaluating impact investment projects based on geographic locations. It also shows that early-stage companies alongside some important sectors (e.g., education and manufacturing) appear to be suffering from an undersupply of impact investments, which can seriously prevent the impact investing industry from realizing its full potential to contribute to the attainment of SDGs. Finally, this study shows that for both geographic regions and sectors, the demand for investments is much more concentrated than their supply, highlighting the presence of a significant imbalance in investment readiness across regions and sectors in impact investing.

The current study also offers several exciting future research opportunities. For example, building on current research, future research could investigate why some economically well-developed regions (e.g., Oceania) have less-developed impact investment markets while others

24

(e.g., US and Canada) have well-developed impact investment markets, and why some economically less-developed regions (e.g., SSA) have well-developed impact investment markets while others (e.g., MENA) have less-developed impact investment markets. Future research could also explore what sorts of policy responses would be more effective to address the phenomenon of an undersupply of impact investments in some important sectors as well as early-stage companies. Furthermore, where time-series data are available, researchers could investigate whether the status of match/mismatch between the demand and supply of impact investments across geographic regions, sectors, and stages of business could change over time and what factors could potentially drive that change. Insights generated from the above research have the potential to significantly advance the theory and practice in impact investing.

References

Abaca (2020) About Abaca. Available at: https://abaca.app/about.

- Achleitner AK, Lutz E, Mayer J, et al. (2013) Disentangling gut feeling: Assessing the integrity of social entrepreneurs. *Voluntas* 24: 93-124.
- Addy C, Chorengel M, Collins M, et al. (2019) Calculating the value of impact investing. *Harvard Business Review* 97: 102-109.
- Agrawal A, Catalini C and Goldfarb A (2016) Are syndicates the killer app of equity crowdfunding? *California Management Review* 58: 111-124.
- Allgood S, Bosshardt W, Van Der Klaauw W, et al. (2004) What students remember and say about college economics years later. *American Economic Review* 94: 259-265.
- Apostolakis G, van Dijk G, Blomme RJ, et al. (2018a) Predicting pension beneficiaries' behaviour when offered a socially responsible and impact investment portfolio. *Journal of Sustainable Finance and Investment* 8: 213-241.
- Apostolakis G, van Dijk G, Kraanen F, et al. (2018b) Examining socially responsible investment preferences: A discrete choice conjoint experiment. *Journal of Behavioral and Experimental Finance* 17: 83-96.
- Arena M, Bengo I, Calderini M, et al. (2018) Unlocking finance for social tech start-ups: Is there a new opportunity space? *Technological Forecasting and Social Change* 127: 154-165.
- Bach S, Corneo G and Steiner V (2009) From bottom to top: The entire income distribution in Germany, 1992–2003. *Review of Income and Wealth* 55: 303-330.
- Bannick M, Goldman P and Kubzansky M (2015) Frontier capital: Early stage investing for financial returns and social impact in emerging markets. California: Omidyar Network.
- Bannick M, Goldman P, Kubzansky M, et al. (2017) Across the returns continuum. *Stanford Social Innovation Review* 15: 42-48.

- Barber BM, Morse A and Yasuda A (2021) Impact investing. *Journal of Financial Economics* 139: 162-185.
- Bildner J (2017) The urgency to fund early-stage social entrepreneurs. Stanford SocialInnovationReview.Availableat:

 $https://ssir.org/articles/entry/the_urgency_to_fund_early_stage_social_entrepreneurs$

- Block JH, Hirschmann M and Fisch C (2021) Which criteria matter when impact investors screen social enterprises? *Journal of Corporate Finance* 66: 1-18.
- Brandstetter L and Lehner OM (2015) Opening the market for impact investments: The need for adapted portfolio tools. *Entrepreneurship Research Journal* 5: 87-107.
- Brest P and Born K (2013) When can impact investing create real impact? *Stanford Social Innovation Review* 11: 22-31.
- Brest P, Gilson RJ and Wolfson MA (2018) How investors can (and can't) create social value. Journal of Corporation Law 44: 206-231.
- Bugg-Levine A, Kogut B and Kulatilaka N (2012) A new approach to funding social enterprises. *Harvard Business Review* 90: 118-123.
- Callanan L (2017) Capital for creativity. Stanford Social Innovation Review 15: 59-60.
- Castellas E, Ormiston J and Findlay S (2018) Financing social entrepreneurship: The role of impact investment in shaping social enterprise in Australia. *Social Enterprise Journal* 14: 130-155.
- Di Lorenzo F and Scarlata M (2019) Social enterprises, venture philanthropy and the alleviation of income inequality. *Journal of Business Ethics* 159: 307-323.
- Doumbia D and Lauridsen M (2019) Closing the SDG financing gap Trends and data. Washington: International Finance Corporation.

- Dufour B (2019) Social impact measurement: What can impact investment practices and the policy evaluation paradigm learn from each other? *Research in International Business and Finance* 47: 18-30.
- Ebrahim A and Rangan VK (2014) What impact? A framework for measuring the scale and scope of social performance. *California Management Review* 56: 118-141.
- Glänzel G and Scheuerle T (2016) Social impact investing in Germany: Current impediments from investors' and social entrepreneurs' perspectives. *Voluntas* 27: 1638-1668.
- Global Impact Investing Network (2020) About the GIIN. Available at: https://thegiin.org/about/
- Gompers PA (1995) Optimal investment, monitoring, and the staging of venture capital. *The journal of finance* 50: 1461-1489.
- Hand D, Dithrich H, Sunderji S, et al. (2020) Annual impact investor survey 2020. New York: Global Impact Investing Network.
- Hazenberg R, Seddon F and Denny S (2015) Intermediary perceptions of investment readiness in the UK social investment market. *Voluntas* 26: 846-871.
- Hehenberger L, Mair J and Metz A (2019) The assembly of a field ideology: An idea-centric perspective on systemic power in impact investing. *Academy of Management Journal* 62: 1672-1704.
- Helfat CE (2007) Stylized facts, empirical research and theory development in management. *Strategic Organization* 5: 185-192.
- Höchstädter AK and Scheck B (2015) What's in a name: An analysis of impact investing understandings by academics and practitioners. *Journal of Business Ethics* 132: 449-475.
- International Finance Corporation (2019) Creating impact: The promise of impact investing. Washington: World Bank Group.

- Islam SM (2020) Towards an integrative definition of scaling social impact in social enterprises. *Journal of Business Venturing Insights* 13: 1-7.
- Islam SM (2021a) Impact investing in social sector organisations: A systematic review and research agenda. *Accounting & Finance* in-press: 1-29.
- Islam SM (2021b) Social impact scaling strategies in social enterprises: A systematic review and research agenda. *Australian Journal of Management* in-press: 1-24.
- Jiang J, Wang IY and Wangerin DD (2018) How does the FASB make decisions? A descriptive study of agenda-setting and the role of individual board members. *Accounting, Organizations and Society* 71: 30-46.
- Kanze D, Huang L, Conley MA, et al. (2018) We ask men to win and women not to lose:Closing the gender gap in startup funding. *Academy of Management Journal* 61: 586-614.
- King J (2017) Using economic methods evaluatively. *American Journal of Evaluation* 38: 101-113.
- Lall SA (2019) From legitimacy to learning: How impact measurement perceptions and practices evolve in social enterprise–social finance organization relationships. *Voluntas* 30: 562-577.
- Larcom M, Flahive T, Tilleard M, et al. (2015) Investing in impact off the beaten path. *Stanford Social Innovation Review.* Available at: https://ssir.org/articles/entry/investing_in_impact_off_the_beaten_path
- Leborgne-Bonassié M, Coletti M and Sansone G (2019) What do venture philanthropy organisations seek in social enterprises? *Business Strategy & Development* 2: 349-357.
- Lee M, Adbi A and Singh J (2020) Categorical cognition and outcome efficiency in impact investing decisions. *Strategic Management Journal* 41: 86-107.

- López-Arceiz FJ, Bellostas AJ and Rivera-Torres P (2017) Social investment in Spain: How do solidarity mutual funds decide the allocation of solidarity funding between social economy organizations? *Annals of Public and Cooperative Economics* 88: 519-542.
- Lyon F and Owen R (2019) Financing social enterprises and the demand for social investment. *Strategic Change* 28: 47-57.
- Mayer J and Scheck B (2018) Social investing: What matters from the perspective of social enterprises? *Nonprofit and Voluntary Sector Quarterly* 47: 493-513.
- McWade W (2012) The role for social enterprises and social investors in the development struggle. *Journal of Social Entrepreneurship* 3: 96-112.
- Mersland R, Nyarko SA and Sirisena AB (2020) A hybrid approach to international market selection: The case of impact investing organizations. *International Business Review* 29: 1-12.
- Michelucci FV (2017) Social impact investments: Does an alternative to the Anglo-Saxon paradigm exist? *Voluntas* 28: 2683-2706.
- Miller TL and Wesley CL (2010) Assessing mission and resources for social change: An organizational identity perspective on social venture capitalists' decision criteria. *Entrepreneurship: Theory and Practice* 34: 705-733.
- Milligan K and Schöning M (2011) Taking a realistic approach to impact investing: Observations from the World Economic Forum's global agenda council on social innovation. *Innovations: Technology, Governance, Globalization* 6: 155-166.
- Mudaliar A, Bass R, Dithrich H, et al. (2019) Annual impact investor survey 2019. New York: Global Impact Investing Network.
- Nicholls A (2010) The institutionalization of social investment: The interplay of investment logics and investor rationalities. *Journal of Social Entrepreneurship* 1: 70-100.

- O'Donohoe N, Leijonhufvud C, Saltuk Y, et al. (2010) Impact investments: An emerging asset class. New York: J.P. Morgan.
- OECD (2019) Social impact investment 2019: The impact imperative for sustainable development. Paris: OECD.
- OECD (2020) The territorial impact of COVID-19: Managing the crisis across levels of government. Paris: OECD.
- Phillips SD and Johnson B (2021) Inching to impact: The demand side of social impact investing. *Journal of Business Ethics* 168: 615-629.
- Pineiro A, Dithrich H and Dhar A (2018) Financing the Sustainable Development Goals: Impact investing in action. New York: Global Impact Investing Network.
- Pohle G and Chapman M (2006) IBM's global CEO report 2006: Business model innovation matters. *Strategy & Leadership* 34: 34-40.
- Rajan AT, Koserwal P, Keerthana S, et al. (2014) The global epicenter of impact investing: An analysis of social venture investments in India. *Journal of Private Equity* 17: 37-50.
- Rajgopal S (2020) Integrating practice into accounting research. *Management Science* in press: 1-26.
- Reeder N, Colantonio A, Loder J, et al. (2015) Measuring impact in impact investing: An analysis of the predominant strength that is also its greatest weakness. *Journal of Sustainable Finance and Investment* 5: 136-154.
- Roundy P (2020) Regional differences in impact investment: A theory of impact investing ecosystems. *Social Responsibility Journal* 16: 467-485.
- Salamon LM and Haddock MA (2015) SDGs and NPIs: Private nonprofit institutions The foot soldiers for the UN Sustainable Development Goals. *Center for Civil Society Studies Working Paper Series* 25: 1-18.

- Schrötgens J and Boenigk S (2017) Social impact investment behavior in the nonprofit sector: First insights from an online survey experiment. *Voluntas* 28: 2658-2682.
- Serrano-Cinca C and Gutiérrez-Nieto B (2013) A decision support system for financial and social investment. *Applied Economics* 45: 4060-4070.
- Sobir R (2018) Micro-, Small and Medium-sized Enterprises (MSMEs) and their role in achieving the Sustainable Development Goals. New York: United Nations.
- Tekula R and Andersen K (2019) The role of government, nonprofit, and private facilitation of the impact investing marketplace. *Public Performance and Management Review* 42: 142-161.
- United Nations (2020a) Financing for Sustainable Development Report 2020. New York: United Nations.
- United Nations (2020b) The Sustainable Development Goals Report 2020. New York: United Nations.
- Urban B and George J (2018) An empirical study on measures relating to impact investing in South Africa. *International Journal of Sustainable Economy* 10: 61-77.
- Viviani JL and Maurel C (2019) Performance of impact investing: A value creation approach. *Research in International Business and Finance* 47: 31-39.

Data source	Data type	Contributions to empirical findings
Demand for imp	pact investments	
Abaca	 The following data were manually collected regarding the impact-driven, finance-seeking companies listed on Abaca's platform: Names and operating countries of these companies Operational sectors of these companies Stages of business of these companies 	 Understanding the demand for impact investments across geographic regions Understanding the demand for impact investments across sectors Understanding the demand for impact investments across stages of business
Company website and/or social media pages	 The following data were manually collected regarding the finance-seeking companies listed on Abaca's platform: Product/service offerings and mission/vision of these companies Operating countries of these companies Operational sectors of these companies Stages of business of these companies 	 Providing deeper insights into the context of the demand for impact investments Cross-validating data collected from Abaca's platform

Table 1. A summary of data collection and their contributions to empirical findings

Supply of impact investments

Global Impact	The following data were manually collected:	
Investing Network	 Percentage of the allocation of impact investing capital across geographic regions Percentage of the allocation of impact investing capital across sectors Percentage of the allocation of impact investing capital across stages of business 	 Understanding the supply of impact investments across geographic regions Understanding the supply of impact investments across sectors Understanding the supply of impact investments across stages of business

Notes: Table 1 presents information about sample composition and data sources.

Name of geographic region	Examples of countries	Demand (%)	Supply (%)	Demand level	Supply level	Match or mismatch	Potential explanation	
Developed economies		(,,,)			10101		Potential reasons for an upward	
East Asia	Japan, China, South Korea	0.0%	5.0%	Lower	Lower	Match (downward)	match and/or an oversupply of investments	
Oceania	Australia, New Zealand	0.3%	5.0%	Lower	Lower	Match (downward)	• Presence of a well-functioning impact investing ecosystem in the	
United States and Canada (US & Canada)	United States, Canada	44.9%	30.0%	Higher	Higher	Match (upward)	specific regions (e.g., active government support, the	
Western, Northern, and Southern Europe (WNS Europe)	United Kingdom, Germany, Spain, France, Sweden, Italy	3.4%	15.0%	Higher	Higher	Match (upward) catalyzing role of large foundations, a higher level of deliberate engagement of vario	foundations, a higher level of deliberate engagement of various	
Emerging economies							actors to support each other, and	
Eastern Europe, Russia, and Central Asia (EECA)	Russia, Bulgaria, Hungary, Croatia, Slovenia, Poland	0.0%	6.0%	Lower	Higher	Mismatch (oversupply)	non-platform-based financing	
Latin America, the Caribbean, and Mexico (LAC)	Brazil, Argentina, Chile, Mexico, Peru, Ecuador	6.8%	12.0%	Higher	Higher	Match (upward)	arrangements).	
Middle East and North Africa (MENA)	Saudi Arabia, Egypt, Jordan, Iraq, Iran, Libya	3.1%	2.0%	Lower	Lower	Match (downward)	match and/or an undersupply of	
Southeast Asia (SE Asia)	Thailand, Malaysia, Philippines, Indonesia	0.7%	3.0%	Lower	Lower	Match (downward)	 Absence of a well-functioning immediate account in the 	
South Asia	India, Bangladesh, Pakistan, Sri Lanka, Nepal, Bhutan	11.3%	6.0%	Higher	Higher	Match (upward)	atch ward) atch ward) atch ward) atch ward) atch	
Sub-Saharan Africa (SSA)	South Africa, Nigeria, Uganda, Ghana, Zambia	29.5%	11.0%	Higher	Higher	Match (upward)		

Table 2. The demand and supply of impact investments across different geographic regions

Notes: Table 2 presents the demand and supply of impact investments across geographic regions. Demand and supply are categorized as Higher if they are greater than or equal to the sample median (which is 3.25% for demand and 6.00% for supply) and Lower otherwise. Here, i) regions with both higher demand and supply of investments were labeled "match (upward)"; ii) regions with both lower demand and supply of investments were labeled as "match (downward)"; iii) regions with a higher demand but a lower supply of investments were labeled as "mismatch (undersupply)"; and iv) regions with a lower demand but a higher supply of investments were labeled as "mismatch (oversupply)".

Name of sector	Demand (%)	Supply (%)	Demand level	Supply level	Match or mismatch	Potential explanation		
Arts and culture	0.0%	0.1%	Lower	Lower	Match (downward)	Potential reasons for an upward match and/or		
Education	9.9%	3.0%	Higher	Lower	Mismatch (undersupply)	an oversupply of investments		
Energy	4.8%	16.0%	Lower	Higher	Mismatch (oversupply)	• They are considered more developed sectors in terms of impact investment infrastructure availability, profitability, an accelebility. As a result, i) now market		
Financial services (excluding microfinance)	11.6%	12.0%	Higher	Higher	Match (upward)			
Food and agriculture	10.6%	9.0%	Higher	Higher	Match (upward)	participants often start investing in these		
Forestry and timber	0.3%	10.0%	Lower	Higher	Mismatch (oversupply)	sectors, and ii) existing market participants		
Healthcare	24.0%	7.0%	Higher	Higher	Match (upward)	continue to invest in these sectors to enjoy		
Housing	1.4%	8.0%	Lower	Higher	Mismatch (oversupply)	(e.g., guaranteed minimum returns).		
Information and communication	17.8%	3.0%	Higher	Lower	Mismatch (undersupply)	Potential reasons for a downward match		
Infrastructure	6.2%	4.0%	Higher	Lower	Mismatch (undersupply)	and/or an undersupply of investments		
	0.270	4.0%		Lower	Wisinaten (undersuppry)	• The specific sectors may not be investment		
Manufacturing	9.6%	3.0%	Higher	Lower	Mismatch (undersupply)	ready (e.g., potential investee companies in		
Microfinance	1.0%	8.0%	Lower	Higher	Mismatch (oversupply)	these sectors may not have viable and		
Water, sanitation, and hygiene (WASH)	2.7%	6%	Lower	Lower	Match (downward)	 scalable business models as preferred by impact investors). The lack of awareness and expertise of impact investors and intermediaries regarding investment opportunities existing in the specific sectors, which are regarded as non-mainstream sectors. 		

Table 3. The demand and supply of impact investments across different sectors

Notes: Table 3 presents the demand and supply of impact investments across sectors. Demand and supply are categorized as Higher if they are greater than or equal to the sample median (which is 6.16% for demand and 7.00% for supply) and Lower otherwise. Here, i) sectors with both higher demand and supply of investments were labeled "match (upward)"; ii) sectors with both lower demand and supply of investments were labeled as "match (undersupply)"; and iv) sectors with a lower demand but a higher supply of investments were labeled as "mismatch (oversupply)".

Stage of business	Demand (%)	Supply (%)	Demand level	Supply level	Match or mismatch	Potential explanation
Early stage (seed/startup/venture)	41.8%	7.0%	Higher	Lower	Mismatch (undersupply)	 Potential reasons for an upward match and/or an oversupply of investments These companies often have stable business models, solid history of revenue/profit making, and high-profile management teams, providing more confidence to impact investors about realizing their
Growth stage	49.0%	28.0%	Higher	Higher	Match (upward)	 investments' full potential. These companies can absorb a large amount of investment deals and generate attractive financial returns in a short period, making them lucrative investment targets.
Mature stage	9.2%	65.0%	Lower	Higher	Mismatch (oversupply)	 These companies may be considered too risky due to their unproven business models and immature organizational structure. These companies often cannot absorb a large amount of investment deals that would generate larger profit in a short period, making them less attractive investment targets. These companies may not have a skilled management team to develop an effective and attractive business plan and organizational strategy, making them less appealing to impact investors.

Table 4. The demand and supply of impact investments across different stages of business

Notes: Table 4 presents demand and supply across stages of business. Demand and supply are categorized as Higher if they are greater than or equal to the sample median (which is 41.78% for demand and 28.00% for supply) and Lower otherwise. Here, i) stages of business with both higher demand and supply of investments were labeled "match (upward)"; ii) stages of business with both lower demand and supply of investments were labeled as "match (downward)"; iii) stages of business with a higher demand but a lower supply of investments were labeled as "mismatch (undersupply)"; and iv) stages of business with a higher supply of investments were labeled as "mismatch (oversupply)".