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Article

Distributed Ledger Technology (DLT): A Game Changer for MNEs in Emerging Markets

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Abstract: Global trade determines how we live. Technology determines the extent of the market and the ease of trade. The transportation revolution reduced costs and cut travel times. The communication revolution (ICT) improved the quality and quantity of information in the global market and cut the cost of global trade in goods and services, including labor. Global trade has become a B2B market wherein multinational enterprises (MNEs) are major players. While MNEs began as major companies in developed countries, their success in importing labor from the emerging market through production of consumer goods in the developed countries led to emerging MNE markets. In an earlier paper on MNEs in emerging markets, Agmon suggested that blockchains reduce the cost of using the global price mechanism, and both production and consumption decisions can be made by individuals in a global market. In this paper, we discuss the case of the multinational industry of venture capital-supported small start-ups, wherein individuals with ideas for better goods, production processes, and services approach capital markets in major countries for financing their ideas. The accompanying distributed ledger technology (DLT) takes global trade a step further by opening up the possibility of global trade among individuals and loosely organized, task-oriented groups of individuals located in both developed and emerging economies. In a DLT world with decentralized markets, no transaction costs, and perfect information, the key to global trade will lie in the capabilities of the individual, or a specific task-oriented, loosely organized group of individuals. Small countries are finding it increasingly difficult to compete in international markets. We seek to examine whether the conceptual framework of DLT, when implemented in a small country that chooses to export ideas rather than products, thereby eliminating the need for a complex supply chain, can be the first empirical example of the DLT concept as a “game changer”. The experience of the Israeli VC industry points to exciting potential through the application of the mindset and the unique legal and financial structures of the “start-up nation”, wherein an economy was created that relies on small and frequently changing high-tech firms. In a country where VC investment capital is entirely imported, there is more room for investment in DLT technologies. Such an economy is compatible with the DLT concept and provides a unique empirical example of the DLT technological change’s effect on the economy of a small country.

Keywords: blockchain technologies; distributed ledger technology; emerging markets; multinational enterprises; venture capital

JEL Classification: B12; F43; F65; G24



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1. Introduction

Value in economics is generated by exchange among those with differing abilities, wants, and preferences. In 1776, Adam Smith cited “*extent of the market*” and “*ease of trade*” as the most important factors in value generation. The larger the extent of the market and the easier the process of trade, the higher the economic value generated in the market. Smith’s initial economic model culminated in the neoclassical economic models,

i.e., [Arrow and Debreu's \(1954\)](#) competitive equilibrium model. Economic theory assumed a perfect market with complete information (see [Von Hayek 1937](#); [Nash 1950](#)) available to every trader therein. While decisions about trade were made by individuals, and it was assumed that the world operated on a person-to-person (P2P) basis, this was not the case in the actual market. The Industrial Revolution and the development of technology separated capital from labor; the advent of limited liability corporations favored the growth of companies with managers as decision makers. The change in technology manifested in economic theory as well.

Transaction cost economics replaced neoclassical economics, reflected by the change in global commerce from P2P to B2B. The assumption of a complete market with free and perfect information was replaced by an assumption of a world with monopolistic competition. Therein, multinational companies (MNEs) were major generators of trade; they increased the volume of trade and the “extent of the market”, as well as “ease of trade” via a combination of export, foreign direct investment (FDI), and global sourcing. Managers of multinational firms replaced individuals as traders.

Following the *dichotomy of approaching* proposed by [Helpman et al. \(2004\)](#), organizations now decide through managers how to approach trade, i.e., by export, foreign direct investment (FDI), or global sourcing. In a later paper, [Antras et al. \(2017\)](#) claimed that more efficient trade generates more efficient mapping between agents' abilities and real incomes, resulting in an overall increase in real income. The agents are MNEs, and the market is managed on a B2B basis. This development (also known as the “*second bundling*”, a term coined by [Baldwin 2016](#)) was induced by the reduction of transportation costs that brought on the first acceleration of globalization and the later development of ICT, which in turn led to the second acceleration of globalization. The shift from export through FDI to global sourcing led to the growth of MNEs in emerging markets, particularly in China and other Asian countries.

The evolving Distributed Ledger Technology (DLT), with its focus on decentralized markets and the role of individuals as decision makers, has the potential to be a game changer in a world of multinational enterprises and international business, particularly in emerging markets. The research proposition of this paper is that DLT's application will change the nature of MNEs in emerging markets, and of globalization in general. Using Baldwin's term in his 2016 book *The Great Convergence*, this is the beginning of the “*third unbundling*”, which Baldwin defines thus: “Thus globalization's third unbundling is likely to involve workers in one nation providing services in another nation, including services that today require physical presence . . . globalization's third unbundling is likely to allow labor services to be physically unbundled from laborers”. Baldwin's book was published in 2016, four years before the COVID-19 pandemic accelerated the digital transfer of workers' services from one country to another. The change is already evident in the increase in global trade in digital services and goods, particularly in emerging markets. Supporting evidence therefore can be found in the rapid increase of newcomers to the world of MNEs.

DLT's application to global trade will shift the focus from large MNEs that act in environments of monopolistic competition—often in cooperation with their local governments, particularly in emerging markets—to international business transactions among individuals and loosely organized small groups of individuals. MNEs' “*third unbundling*” will accordingly fit better the P2P neoclassical economic model of decentralized market and complete and free information than it will the monopolistic competition model. The experience of the Israeli VC industry shows that small countries with a core of highly skilled individuals and an appropriate support structure—foreign and local VC funds in Israel's case—can exploit the DLT's P2P base to develop a specific type of MNE that is based on a global P2P structure. As the Israeli experience shows, such specific MNEs may transform small countries' economic and social structures in the emerging markets.

From where does the recent demand for DLT derive (beyond the demand for cryptocurrencies)? Even before COVID-19, it was clear that supply chains had become too complex and not reliable enough ([Chang et al. 2018](#); [Blossey et al. 2019](#)).

The unprecedented difficulties in maintaining and restoring supply chains in 2020–2021 during and post pandemic created a demand for more reliable and more trustworthy supply chains (Lotfi et al. 2021). The question of trust in production processes also arose in more traditional industries, wherein the issue of trust has become an important issue in the past decade, as seen in the energy sector, carbon trading and construction (Lu et al. 2021), all of which demonstrate the need for an innovative technology when supervision is decentralized and remote.

In the financial services industry, the sector with the highest real demand for BCT is the relatively conservative sector of banking. This opportunity arose alongside the fear that the new technology has a destructive dimension. Therefore, large banking systems joined the demand for a solution that would integrate into the existing financial system, rather than revolutionize it (Kowalski et al. 2021; Pal et al. 2021).

2. Technology Changes and MNEs' Evolution in Emerging Markets: From Trading Production Services to Trading Ideas

For many years, MNEs in developed countries in the global north shaped global business. As shown by Agmon (2021), whereas production grew from 100 (indexed) in 1973 to 130 by 1997, the activities of MNEs measured by the growth of foreign direct investment (FDI) grew from 100 to 850 by 1997. Global FDI totaled \$835 trillion in 2020. The United States provided \$280 billion, China together with Hong Kong \$225 billion, Japan \$145 billion, and Germany \$138 billion. Together, these four industrial powers provided 94% of the net outflow of FDI¹. The rapid development of northern MNEs, increased outsourcing, and the reduction of transaction costs changed this, leading to the rise of south-based MNEs. Outsourcing by MNEs from developed countries made small countries (in the economic and business sense) larger, first by developing the industrial sector that supplied northern MNEs, and later by developing locally based MNEs. While China is a prime example of this, smaller countries like South Korea and Taiwan engaged in the process earlier, and other small countries in Asia and elsewhere are following suit. Starting at the end of the 20th century, southern countries' MNEs from emerging markets have increased in importance in global business. This process was a direct outcome of changes in technology. In *The Great Convergence*, Baldwin argued: "When transportation involved wind power by sea and animals by land, it made consumption a hostage of production". According to Baldwin, globalization is a reversal of this compelled bundling. Specifically, Baldwin claimed, the first unbundling—transportation—rendered global trade the most important economic activity, while the second unbundling, ICT (communication), was crucial in the creation and development of multinational enterprises. The upcoming third unbundling will separate the location of production from the location of the producer.

The ultimate unbundling will manifest in a complete and perfect market with no transaction costs or moral hazards. In such a world, all consumers maximize their inter-generation value. In Adam Smith's time, this model was a philosophical concept, and it remained so even in the time of Arrow and Debreu, who, two hundred years after Adam Smith, generated the most complete model of a perfect market with complete information, including foresight and no transaction costs, including moral hazard. Yet as technology developed, the actual world got closer to Adam Smith's model.

The knowledge economy has already transformed communication among firms and innovators. One development therein is the open platform, a new system of outsourcing. Therein, the outsourcing is multidirectional, and the basic mode of operation is relational contract. In some cases, traditional MNEs such as Intel are using open platforms as a mode of business development. In other cases, new knowledge economy MNEs are built on open platform principles. However, unlike traditional outsourcing, open platforms are less structured and directional, and the entire notion of a company is becoming much more nebulous. MNEs in the future will operate more as open platforms than as tightly controlled companies.

The development of Distributed Ledger Technology (DLT) is the first stage of establishing a new technology, which as [Mandaroux et al. \(2021\)](#) explained, provides a model wherein DLT can be a real game changer. DLT reflects classical and neoclassical economic models and adapts them to a mathematical model based on the concept of blockchain, as applied to economics and other fields in our computer-driven world. Economic activity in a DLT world will be based on P2P activities in a decentralized market with complete and free information. This differs wildly—perhaps even to the point of contradiction—from the common economic literature on MNEs, which has them anchored in monopolistic competition among a few large companies. Yet we are far from having several DLT-based MNEs. It is likely that the adaptation of DLT to global trade will not begin with a design of DLT-based P2P MNEs, but rather, following the path of global trade involving new technologies in the past, DLT's introduction into the global market will begin with services.

In another study by the IMF ([Loungani et al. 2017](#)) a team of researchers constructed a new dataset for global trade in services. The study's main conclusion was:

“Services constitute one fourth of world trade and [are] an increasing component of world production . . . export of services are [sic] not only gaining strong momentum and catching up with export of goods in many countries, but . . . could also trigger a new wave of globalization.”

The share of export of services out of total exports rose from 9% in 1970 to 20% in 2014. The increase in global export of services was particularly evident in what the IMF defines as “modern services” (computing, information, business, intellectual property, and financial services). Modern services do not have physical dimensions (as does transportation), and are ICT enabled. The value of total export in modern services in 2014 was estimated at \$650 billion. Middle-income countries (MIC) and lower-income countries (LIC) grew faster in the share of modern services export. This is consistent with changes in MNEs' locations and nature in general, and with MNEs that either export or import modern services.

The potential of the new DLT and the blockchain to generate new avenues for P2P-based MNEs is very broad, as is the field of DLT's applications in the global market, and it is hard to say today in what fields P2P decentralized global trade organizations will develop. Studies by [Zhou et al. \(2022\)](#), [Anthony \(2022\)](#), and [Li et al. \(2019\)](#) point to various applications, all of them in early stages. An exception is the case of the Israeli venture capital industry, which is an exception because it does not use DLT as a springboard. Indeed, it is based on importing high-risk capital from large countries, primarily from institutional investors in the US, and exporting innovative potential ideas for new goods, services, and processes. It is a special case, as it exemplifies a highly competitive multinational industry based on a small group of people, i.e., start-ups, trying to sell their ideas from a small country to large MNEs and other major firms in large countries. In the next section, we discuss the Israeli VC industry as a P2P industry from a small economy that is competing successfully in the world market.

3. Flexible P2P MNE: When the Product Is an Idea

The Israeli VCF-Backed Sector

The Israeli VC sector does not rely on DLT. Israel's small size, along with the modest number of employees, employers, and entrepreneurs that form its VC sector, enable communication and trust to be built on personal relations and communication. In this section, we present and discuss the Israeli VC industry as an example of a global P2P export industry. In 1999 for the first time, venture capital investment reached \$1 billion. The total gross investment in Israel's industrial sector reached \$4.7 billion, so VC funding accounted for roughly 21% of the total gross investment by 2021, a devastating year for international investment. With COVID-19 impairing international trade, total investment in the industrial sector grew to \$26.6B, of which 68%, or \$18.2B, was earned by venture capital funds.

This is a very large share to be invested in high-risk projects, in a high-risk country ([Gompers and Lerner 2001a, 2001b](#)). Israel can maintain such a high proportion of invest-

ment in high-risk new ideas only because it is financed by foreign investors. Even during catastrophic years for international trade or global financial markets such as 2002, 2008, and 2021, the flow of investments to Israel exhibited an upward slope.

Venture Capital (VC) is a type of equity financing that gives entrepreneurial small companies the ability to raise funds before they have begun operations or started earning revenues or profits. Venture Capital Funds (VCFs) are private equity investment vehicles that seek to invest in firms with high-risk and high-return profiles, based on a company’s size, assets, and stage of product development.

In this sense, venture capital funds are financial instruments for financing ideas rather than products or production processes. Venture capital funds have become the most practical financial tool for realizing the model of a decentralized economy. A team of individuals with a high-risk technological idea, located in a remote country, without means of production, transportation, or access to local capital, can gain access to all of these through imported venture capital (Figures 1–3).

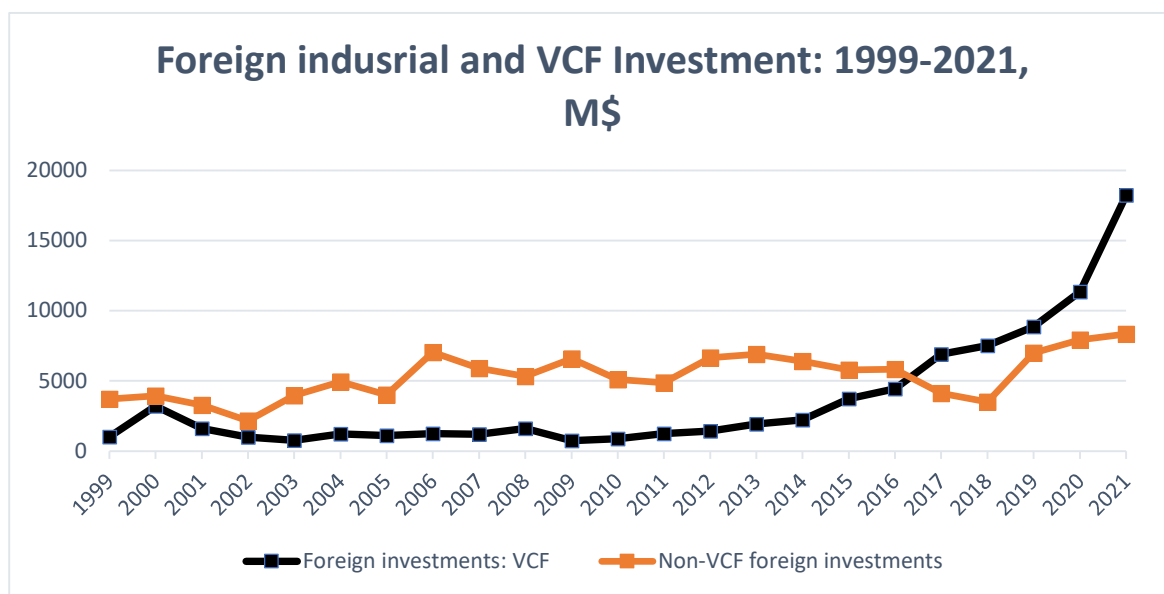


Figure 1. Foreign investment in the industrial sector and VC investment, 1999–2021. Source: authors’ analysis of Bank of Israel reports 2000–2022.

Usually, significant international investment occurs where labor is cheap and/or where there are local natural resources. Another cumulative condition is the ability to transport the product internationally. It is difficult to think of a place less suitable for international investments than Israel, and indeed for many years Israel had difficulties importing capital. Eventually another model was adopted: Individuals with knowledge and a technological idea that is not economically applicable locally, began seeking sources of capital abroad. This happened just as US investment funds began looking for investments in ideas outside the USA.

Thus VCFs (venture capital funds) became the harbingers of Distributed Ledger Technology, as they enable the transfer of capital directly into the hands of individuals, with minimal involvement of the financial system, which usually entails substantial capital import transactions. In exchange for their invested capital, VCFs mainly receive rights to IP, in many cases even without the legal protection of a patent. Even if the IP translates into future income, it is a highly volatile and risky cash flow. This is a good example of the application of the Arrow–Debreu (Arrow and Debreu 1954) model: an individual with knowledge and an idea can realize it into a financial asset almost directly, without financial mediators.

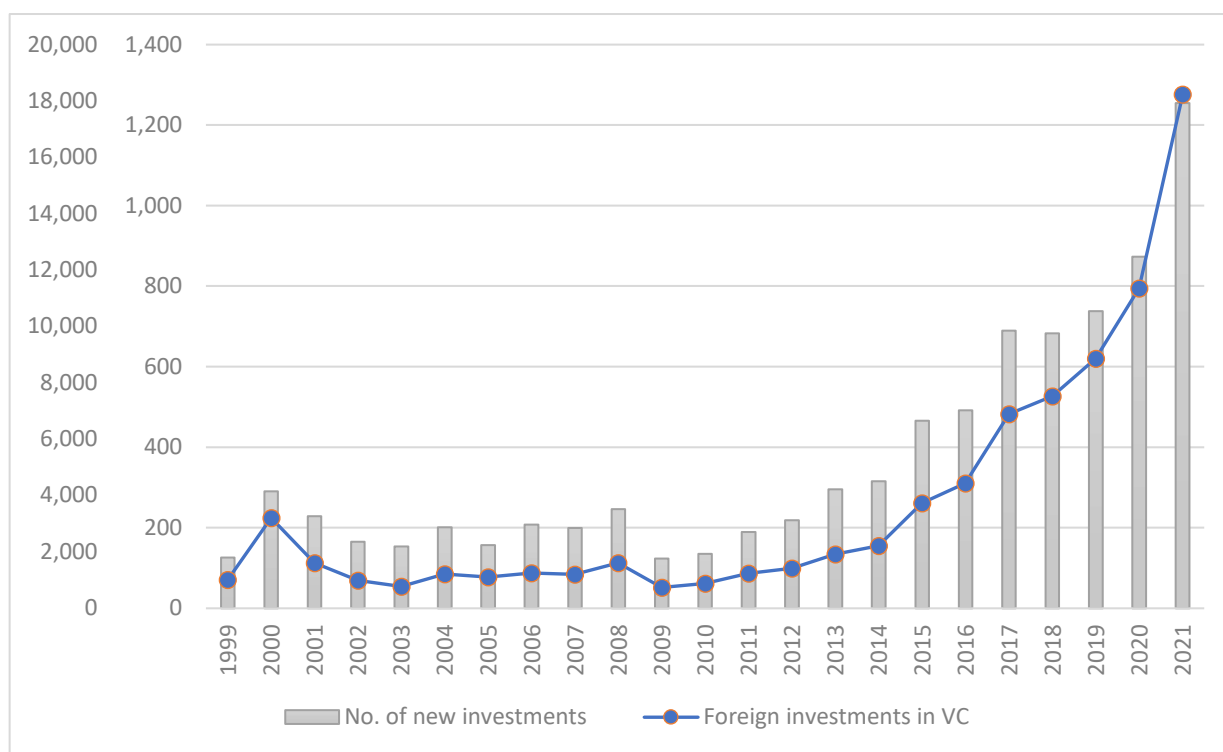


Figure 2. VC investment in M\$ and new VC-backed investment rounds: 1999–2021. Source: authors’ analysis of the IVC and MoneyTree reports 2000–2022.

The main resource required by the start-ups themselves is a unique and costly workforce. Start-up employees are recruited solely based on skills, while the start-ups are willing to accept employees with differing cultural backgrounds, the possibility of remote work, and/or reliance on digital nomadism and other non-standard work arrangements that are part of the P2P revolution. This process has had a dramatic effect not only on the size of investments, but also on the number of new companies established.

Israel is an exception even relative to other small, developed countries that were the focus of the global VC industry in the first decade of the 21st century. Is the process unique to Israel? The answer is apparently affirmative. We compared Israel to other OECD countries that do not have their own capital markets, and whose venture capital investments reached at least \$500 million in 2020. Countries such as Denmark, Sweden, and Ireland attracted significant VCF in the early 2000s. This is not surprising given these countries’ high level of education, their own investment in R&D, and their commercial and social connections with the USA, which was and remains the main source of VC capital. What might be surprising is the growing role of high-risk capital. In 2005, Israel attracted 19% of the total VCF invested in small countries. By 2020, Israel’s share rose to 57%. Figure 3 shows the changes in international VC funding between 2005 and 2020.

Why only in Israel has venture capital become such a large component of investments, while in other developed countries it has not succeeded? This is a question worthy of a dedicated study. What is evident from the data is that in Israel, venture capital funds and their investments have an extraordinary impact, worthy of a unique measurement.

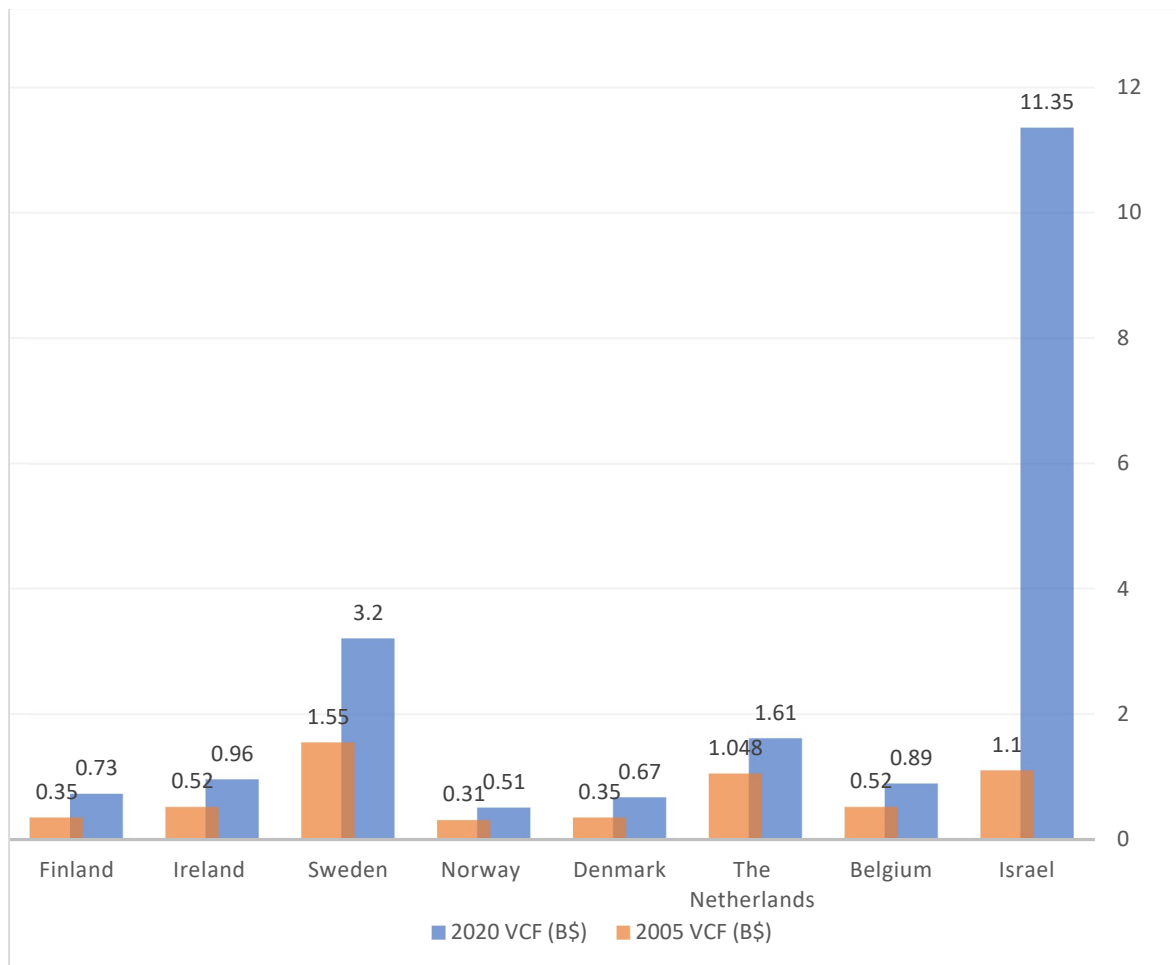


Figure 3. Small developed countries’ VCF in 2020 vs. 2005, in \$US billions. Source: authors’ analysis of European Commission data on venture capital 2006 and 2021 reports.

4. VCF Investment in Blockchain Technology (BCT)

The concept presented so far shows that the financial-technological concept of DLT and the changes in MNEs’ requirements for better supply chains has prepared the ground for the entry of innovative technologies and products based on applied DLT, i.e., blockchain technologies (BCT).

Fintech is a broad term for any technological development related to the financial services sector. Venture capital funds report on investments by sector. While this division may be artificial, we adopt it for the purpose of analyzing the reported data. Investments in BCT are reported as part of fintech investments.

On the surface, blockchain technology (BCT) and distributed ledger technology (DLT) appear to be the same. Although these terms have been used interchangeably over the past few years, it is essential to distinguish them from one another.

The most important difference to remember is that blockchain is just one type of distributed ledger. Although blockchain is a sequence of blocks, distributed ledgers do not require such a chain. Furthermore, distributed ledgers do not need proof of work, and offer (theoretically) better scaling options. Removing the intermediary party from the equation is what makes the concept of distributed ledger technology so appealing. Unlike blockchain, a distributed ledger’s data structure does not necessarily need to be in block form. A distributed ledger is merely a type of database spread across multiple sites, regions, or participants.

In this section, we examine whether the concept that we present indeed shows signs of empirical realization. As substantial investments of VC funds in the field of blockchains only began in 2019, our empirical analysis is limited. On the other hand, it is completely updated, up to and including the data of Q3 2022, including the slowdown in investments that occurred in Q2 2022.

While the analysis that we present for the possibilities inherent in a flexibly structured economy for financial projects involving BCT does not include standard empirical proof, this is the price of academic engagement with innovative financial phenomena. This section is based on analysis of several sources of information on VCF investment activities. The data are not always consistent with definitions of what VC activity is. The sources are cited below.

First, we performed an analysis of all countries with populations of less than 20 million, wherein there is significant VC activity, i.e., an investment of over \$2 billion by VC funds during 2021. In Table 1, we show absolute and per capita investment. Israel and Singapore are exceptional in VC activity per capita, both among small countries and in absolute terms.

Table 1. Absolute and per-capita VCF activities in selected countries.

| Per-Capita Funding | Population, Millions | Local: Public Sector | Local: Private Sector | International | 2021 VCF B\$ | |
|--------------------|----------------------|----------------------|-----------------------|---------------|--------------|-----------------|
| \$2056 | 8.9 | 0.94% | 6% | 93% | 18.3 | Israel |
| \$2690 | 5.8 | 30.16% | 40.64% | 29% | 15.6 | Singapore |
| \$926 | 10.2 | 48.37% | 32% | 19% | 9.45 | Sweden |
| \$423 | 17.2 | 38.15% | 37.55% | 24.30% | 7.27 | The Netherlands |
| \$436 | 8.7 | 20.60% | 67% | 12.40% | 3.79 | Switzerland |
| \$479 | 5.8 | 44.30% | 31.50% | 24.20% | 2.78 | Finland |
| \$438 | 5.6 | 44.70% | 27.50% | 27.80% | 2.45 | Denmark |

Source: authors’ analysis.

Next, we examine what percentage of the funding came from internal capital sources:

- A. Venture capital funds owned by the state or financed by the state in which the VCF operates.
- B. Pension funds and other investors in the country where the VCF operates.

Table 1 shows how the VC funds are financed in various countries, an area wherein Israel is exceptional: Nearly all financing for VC activity in Israel is imported, and the small portion that originates locally is private capital. In Singapore and the Netherlands, there is investment by private local funds, mainly pension funds, as well as government activity. In Sweden, it is mainly a funding activity of the government, and likewise in other countries, whereas the Israeli government transferred all its direct financial support to basic and applied R&D, while support for VC activity comes only through other channels, such as tax benefits and concessions on IP export issues (Kallir and Agmon 2022). VC activity in the BCT sector became significant only in 2019. Figure 4 shows the BCT start-ups’ activity supported by VC funds in the 19 quarters Q1 2018–Q3 2022.

BCT technology is the most prominent example of DLT’s application in practice. The line represents the *deal value* in fintech in total, while the bars represent the deal value in BCT as part of the fintech activity. Although not all of the investments in the BCT firms are necessarily in the fintech sector, the conventional definition in the VC industry is to include all BCT deals as part of the fintech deal flow.

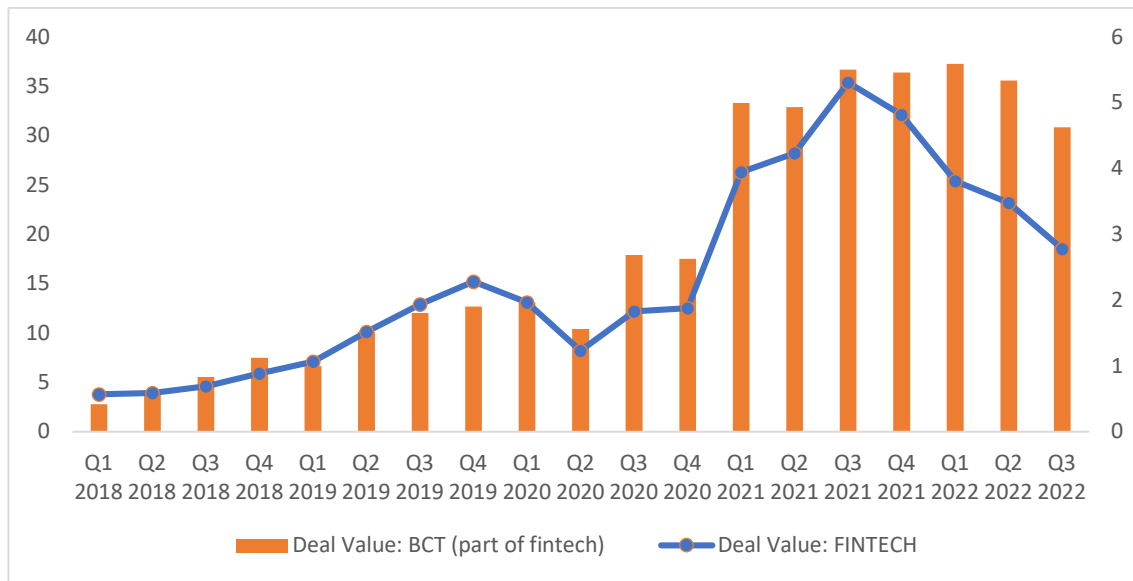


Figure 4. VCF activity in fintech and BCT: 2018–2022. Source: authors’ analysis.

The data in Figure 4 shows that the investment activity in BCT is more stable than the total investment activity in fintech. Even in difficult quarters such as Q2 2020, which was strongly affected by the pandemic, or Q3 2022, which is still in the wake of global recession, start-ups that have significant technological development in BCT manage to obtain financing on better terms, relatively, even in less favorable times.

Next, we show the distribution of VCF investments in early-stage BCT companies across those countries that we analyzed in Table 1.

In Table 2, we show the relationship between the percentage of foreign-sourced funds and investment in BCT technologies.

Table 2. VCF deal value 2021 vs. 2019.

| BCT Deal Value | | FINTECH Deal Value | | Total VC Deal Value | | In B\$ |
|----------------|------|--------------------|------|---------------------|-------|-----------------|
| 2021 | 2019 | 2021 | 2019 | 2021 | 2019 | Year |
| 0.88 | 0.07 | 2.98 | 0.92 | 18.3 | 8.8 | Israel |
| 0.75 | 0.17 | 4.68 | 1.56 | 15.6 | 6.8 | Singapore |
| 0.32 | 0.13 | 2.11 | 0.97 | 9.45 | 5.4 | Sweden |
| 0.32 | 0.1 | 1.77 | 0.78 | 7.27 | 3.9 | The Netherlands |
| 0.16 | 0.08 | 1.17 | 0.68 | 3.79 | 2.4 | Switzerland |
| 0.1 | 0.02 | 0.53 | 0.27 | 2.78 | 1.95 | Finland |
| 0.09 | 0.02 | 0.43 | 0.32 | 2.45 | 1.7 | Denmark |
| 2.62 | 0.6 | 13.68 | 5.52 | 59.64 | 30.95 | Total |

Source: authors’ analysis.

In 2019, investment in VC funds in the entire group of countries was \$30.95 billion. Within two years, this investment nearly doubled to \$59.64 billion. Fintech investment increased from 15.9% of the investment (\$6.07 billion) to 22.5% (\$14.08 billion). Israel’s share of the total investment was \$8.8 billion in 2019 and rose to \$18.3 billion, while maintaining its relative share (28.4% to 30.7%) in the VC market.

If we examine the market segment of investments in the fintech sector separately, an interesting picture emerges: The entire fintech sector grew slightly faster than all VC

investments, from \$5.52 billion (17.8%) to \$13.68 billion (22.93%) VC investment in fintech in all of the small countries together. In Israel, it is relatively underweight, as it is growing rapidly from \$0.92 billion to \$2.98 billion, thus tripling in two years, but still amounting to only 16.3% of total investment of VC funds. It can be seen (2021 data) that in countries where there is a substantial international finance sector, in particular Switzerland, Singapore, and the Netherlands, there is relatively higher investment in fintech: 31% in Switzerland, 30% in Singapore, and 24% in the Netherlands versus 22% in Sweden, 18% each in Denmark and Finland, and only 16% in Israel.

Regarding BCT-related investments, in 2019, VC investment in small countries amounted to no more than \$0.6 billion. Israel's share was also negligible: four investments totaling approximately \$0.07 billion (\$70 million). Within two years, the entire BCT market grew by a factor of 4.3, to \$2.61 billion, with the funds' investment in Israeli BCT companies increasing by a factor of 12 to \$0.88 billion, constituting 34% of total VCF investment in BCT in small countries. A total of 29.5% of fintech investments in Israel in 2021 were in BCT, compared to only 8% in 2019. In the same period, Singapore, the country with the most significant VC investments after Israel in its percentage of BCT investments out of fintech investments, only increased from 11% to 16%.

Why did investments in BCT grow 12-fold in Israel, while in the other countries they only grew between 2 and 4 times? And why, in none of the countries where the fintech sector was particularly significant in 2019 (Singapore, Switzerland, and the Netherlands) did we see a strong growth of investments in BCT?

We suggest that while fintech is aimed at the existing financial industry—and this can be seen through the direct acquisitions of fintech companies by banks and insurance companies—BCT-based products are developed for the P2P sector, as well as younger and less stable business sectors than the finance sector. Does producing a system that produces companies in the BCT sector require a technical environment that is not only advanced, but also managed differently? We suggest that it likely does. When the capital used for VC investments is controlled by local investment funds and the government, it is more difficult to react quickly, and it may render investing in technology that is perceived as disruptive more difficult.

This is an outcome of DLT's P2P nature; i.e., transactions are often made through personal connections where the contributors of capital and/or access to global markets make decisions based on their past experiences with those involved. This is particularly relevant where the technology is new and innovative and may appear counterintuitive.

5. Discussion

Like many other revolutionary technologies, there is a difference between what the initial developers had in mind, and the result (e.g., the inventors of the railway neither thought of nor aimed at transporting people). DLT is still in its infancy, and out of the very large number of attempts to apply it to various markets, the activity of multinational enterprises (MNEs) in emerging markets is a very important one, as the needs are great and there are no obvious solutions. The case of the Israeli VC industry demonstrates some relevant options for development that were in the market prior to DLT, but that may benefit from its application in other areas, such as export of services from emerging markets to the developed world. As in the EU, the increase in activity is more related to the DLT, specifically in the use of blockchains. The proximity between the evolving DLT and the economic models of optimal behavior in the market suggest that the early statement of the IMF team that DLT is life-changing may prove itself in the new generation of MNEs in emerging markets.

Our main point is that in small, highly developed countries with a strong R&D sector, there will always be a shortage of local capital for funding high-risk projects. Therefore, the main source of investment for high-tech and high-risk projects is imported capital. A DLT framework can that focus on P2P and thus views individuals rather than firms as

the beneficiaries of such funding can significantly benefit a country that imports high-risk capital and exports highly skilled labor services “produced” by local workers.

We emphasize that our conclusions are based on very partial data, including those of 2022, in which not only did the financial markets change direction, but there were also changes that are still difficult to analyze in the venture capital industry. The cryptographic currency sector has gone through several crises, and it is difficult to know what their effect on the pace of developments in the field will be². The main importance of this work is its innovation. The validity of the assumptions and the conclusions we present should be revisited and re-examined in a few years, based on other data, as well as a longer period of observation.

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Notes

¹ World Bank database, 2022: <https://data.worldbank.org/indicator/BM.KLT.DINV.CD.WD> (accessed on 1 November 2022)

² During Q4 of 2022, the FTX exchange announced bankruptcy. The CRYPTO 200 cryptocurrency index is trading at 75% lower from its 2021 peak. Several venture capital funds have announced the suspension of their continued investments in BCT.

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