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ДОПОМОГОЮ КРАУДФАНДИНГОВИХ ПЛАТФОРМ (НА ПРИКЛАДІ
КОМПАНІЇ «OURCROWD»)»**

**«IMPLEMENTATION OF TECHNOLOGICAL VENTURE PROJECTS USING
CROWDFUNDING PLATFORMS (CASE STUDY: «OURCROWD» VC
PLATFORM)»**

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Кузьменко Леонід Сергійович

Керівник: Мертенс О.В.

кандидат економічних наук, професор

Рецензент: Іванов О.М.

Кваліфікаційна робота захищена

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CONTENTS

ABSTRACT	3
KEYWORDS AND DEFINITIONS	4
INTRODUCTION	5
I. LITERATURE REVIEW ON CROWDFUNDING INDUSTRY AND ITS DEVELOPMENT	8
1.1 Crowdfunding and history of its development	8
1.2 Evolution of Legislation	12
II. METHODS AND MATERIALS	16
2.1 Crowdfunding regulation in Israel	17
2.2 Crowdfunding VC platform “OurCrowd”	18
2.3 Technological VC projects	21
III. RESULTS	24
CONCLUSIONS	32
REFERENCES	35

ABSTRACT

Scientific novelty of this qualification paper is in understanding of factors that are important for successful financing of technological projects on a crowdfunding platform. Technological business has offered a fertile ground for venture projects, which are predominantly represented by start-ups and early-stage companies developing a new product or new technology. This paper provides a desk research on implementation of technological venture projects using a crowdfunding VC platform. Crowdfunding platforms have started to play an important role in venture financing in recent years. Research based on a case study of «OurCrowd», and also highlights how crowdfunding VC platforms tackle challenges for the main actors (capital seekers, capital providers, and the platform) during the equity-based crowdfunding process. The financing of early-stage technological projects and ventures exposed to high levels of risk, uncertainty and information asymmetry. By definition, technological firms produce products and services with advanced technologies in highly uncertain and technical environments. This often means that the firms are specialized, high quality producers of products with short life cycles and specialized in niche markets scattered around the world. Taking into consideration the often-limited internal resources - reliance on external financial resources, including crowdfunding option, is the only opportunity for business to successfully enter a market.

Based on research, three main factors that are important for successful financing of technological projects on a crowdfunding platform were formulated as:

- Professional selection of the best-in-class projects by the specialists with a knowledge of startup subject;
- Right time and market for project to be launched;
- Professional investors, who involved and vetted by a crowdfunding platform with impeccable reputation.

KEYWORDS AND DEFINITIONS

Technological Venture project – an economic activity performed by a start-up company, early-stage company, or existing company developing a new product or new technology in the knowledge based industry.

Crowdfunding – according to Oxford dictionary is “the practice of funding a project or venture by raising money from a large number of people who each contribute a relatively small amount, typically via the internet” [21].

VC platform – formalized investment and post-investment support and services that VCs provide to their portfolio companies to help increase their chances of success and differentiate the VC firm.

Capital seekers – businesses, typically a start-up or early-stage company, which are looking for fund for development.

Capital providers – high net-worth individuals or institutions that amassed funds for the purpose of making investments and acquiring equity in companies.

INTRODUCTION

Entrepreneurs have important roles in creating new businesses that fuel progress in societies worldwide. Entrepreneurs often use a combination of innovation and technology to foster new, effective means of activity in all facets of life. Initially, venture capital was mostly interested by rich people, who later started to be called “Business Angels”. However, with the development of venture capital, this type of investing became an independent business and companies specialized in this field emerged. Such companies are engaged with venture capital, cover the shortcomings of traditional financing channels and prepare enough finances for venture, long term capital for new technologies. Crowdfunding model, which is a model for raising small amounts of money from many individuals over internet platforms, has become particularly popular in recent years.

Crowdfunding VC platform “OurCrowd” was started in 2013 in Israel. The idea behind this decision was that the business of building start-ups would do much better and grow quicker when the global “crowd” of retail capital providers gains access to VC-level investment opportunities. This idea was supported by changes in legislation in the USA, the biggest by far market of venture capital. One year before, on April 5, 2012, President Obama signed into law the Jumpstart Our Business Startups (JOBS) Act [14]. Main development was that the JOBS Act legalized crowdfunding for equity by removing different restrictions concerning the sale of securities and legislated an innovation in the market for early-stage finance with significant economic consequences. It was big departure from crowdfunding platforms that existed before when individuals raised funds as donations or in return for rewards like pre-sales of new products or services.

Israel was among the first countries which recognized a potential of the crowdfunding model in the end of 2015. However, actual activity was enabled only about two years later, when new regulations came into effect. New legislation provided

operative rules to crowdfunding activity and defined the conditions for receiving a license to operate a crowdfunding platform.

Today, “OurCrowd” is a global venture investing platform. It accredits individuals as well as institutions to invest and engage in emerging companies. ”OurCrowd” is the most active venture investor in Israel. It invests its capital and provides its global network with excellent access to “co-invest in vetted and selected companies and contribute connections, talent and deal flow” [12].



Figure 1. *Home-countries of investors, location of OurCrowd’s offices, companies’ headquarters’ locations.*

Source: OurCrowd official website [12]

“OurCrowd” builds value for its portfolio companies throughout their life cycles, “providing mentorship, recruiting industry advisors, navigating follow-on rounds and creating growth opportunities through its network of multinational partnerships” [12].

Scientific novelty of this qualification paper is primarily in understanding of factors that are important for successful financing of technological projects on a crowdfunding platform. Research also concentrates on understanding of how the implementation of technological venture projects, using crowdfunding platforms, can lead to the formation of new companies, the realization of new professional identities, and fundamentally impact the way people function economically and socially, as it changes how, why, and which products and services are brought into existence.

I. LITERATURE REVIEW ON CROWDFUNDING INDUSTRY AND ITS DEVELOPMENT

1.1 Crowdfunding and history of its development

Crowdfunding is a way of raising money to finance projects and businesses. It could be defined as an open call over the Internet for financial resources in the form of a monetary donation from many people, sometimes in exchange for a future product, service, or reward. Crowdfunding uses web technologies and existing online payment systems to establish relations between capital seekers and capital providers [6].

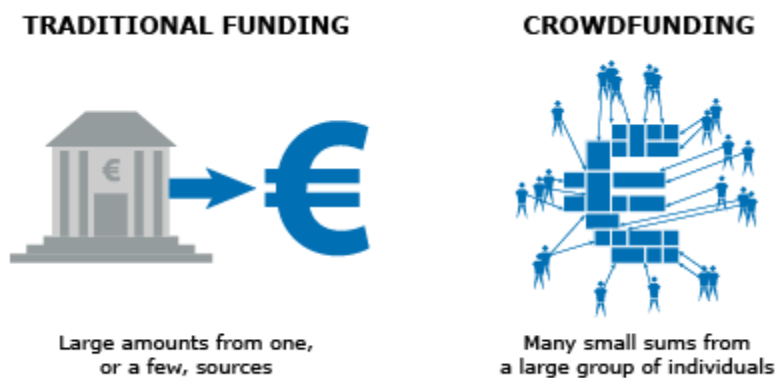


Figure 2. *Traditional funding versus crowdfunding.*

Source: European commission official website [11].

Crowdfunding was established primarily in the arts and creativity-based industries such as recorded music, film, video games. Crowdfunding has historically been dominated by a single platform mainly due to indirect network effects, when to capital seekers, the attractiveness of a platform grows with the number of capital providers, and to capital providers the attractiveness of a platform grows with the number of capital seekers and other capital providers. Similar effect is common to other online markets like eBay or Amazon for example. ArtistShare, founded in 2001, is widely recognized as the first internet's "fan-funding" platform. It was followed by Sellaband, Amsterdam based

music-only platform, founded in 2006. Later, in 2009, Kickstarter, based in New York, IndieGoGo, PledgeMusic and other broader creative projects platform followed the trend. Neither platform allows capital seekers to issue equity for funding. Only Sellaband proposed revenue sharing to capital providers during its first three years of operation that could be considered as some equivalent to equity [1].

Funding of companies through the crowd has been discussed intensively since 2010 and explored in practice and theory. In the last few years, crowdfunding has emerged and been developed as an alternative source of funding for various types of projects in the technological sector of industries. Crowdfunding is seen as a way to reduce the funding gap in the early stages of new ventures (early-stage gap) [3]. Funding from venture capitalists and banks is usually available only in the later development phases of start-ups [9]. In the early phases of a company's life cycle (pre-seed/seed stage), funding is typically provided by the founder himself, by his friends and family and, if possible, by business angels. If these funds are insufficient, the venture faces a funding gap [8].

Given that the term crowdfunding implies raising financial resources from many capital providers ("the crowd") without indicating the purpose of the funding, it makes sense to include description of all types of crowdfunding:

1. Peer-to-peer lending

In this case, capital providers supply money to a company to receive the money back with interest. It could be considered as a borrowing from a bank, but a company borrows from multiple investors.

2. Equity crowdfunding

Capital providers receive a share in a business in return for the money. This scheme resembles purchase of shares on a stock exchange, or traditional venture capital.

3. Rewards-based crowdfunding

It is the form of a monetary donation from many people in exchange for a non-financial reward such as future product or service at a later stage.

4. Donation-based crowdfunding

Usually, it is linked to a specific charitable project, when people donate small sums to collect the larger amount. No financial or material reward is expected.

5. Profit-sharing / revenue-sharing

Capital seekers can share future profits or revenues with the capital providers as a reward in return for funding.

6. Debt-securities crowdfunding

Capital providers invest in a debt security issued by the company, such as a bond.

7. Hybrid models

Usually, it is a combination of elements of more than one crowdfunding type[11].

Peer-to-peer, equity and rewards-based crowdfunding are the most used by start-ups and early stage companies types of crowdfunding.

Crowdfunding platforms are usually the businesses, created to make profit. Typically, it is a transaction fee revenue model for successful projects with 4-5% of the total funding amount. Logically, platform's objective is to maximize the number and size of successful projects. It could be achieved by attracting a large community of capital providers and capital seekers as well as designing the market to attract high-quality projects, reduce fraud, and establish efficient matching between ideas and capital, by increasing the degree of disclosure by the start-ups and allowing for effective search on the side of the capital providers. As a marketing strategy, crowdfunding platforms are also working hard to attract projects that can generate an excessive share of media attention. The purpose is to further increase network effects in order to expand the existing community of capital providers and to move the platform into new categories [1].

An all-or-nothing funding model is one of the most common models for the majority of platforms. This model requires capital seekers to reach their total targeted

amount. Only in this case the capital seekers can receive the money. In case, if targeted amount is not reached, capital providers receive their money back. This scheme protects from financial losses. Usage of an all-or-nothing model is a reliable signal to the capital providers that the capital seeker commits not to start the project if targeted amount is not raised. This signal reduces the risk to the capital providers from the one side, and from the other side requires the all-or-nothing capital seeking company to set higher goals, raise proper amount of money, and be more likely to reach stated goals [4].

Crowdfunding is an innovative alternative way of sourcing funding for startup companies or growing businesses. It can also be a way of building an online community around a company business, gaining useful market insights and acquiring new customers.

However, crowdfunding could also create some disincentives for capital seekers. The greatest of these is the disclosure requirement. Start-ups always try to protect their innovation ideas from competitors before the actual start of business and release of their product or service. At the same time there is a requirement, for capital seekers, to disclose their innovations to capital providers. Technological projects could suffer the most, because they are vulnerable to imitation. The most dangerous period for them is between raising capital and launching product. This is when the difference between crowdfunding and other sources of capital in terms of disclosure risk is most notable.

In case of capital providers, there are three primary disincentives: capital seekers low professional level, usual fraud, and risk related to unsuccessful idea of project. Each of them escalated by the extraordinary high degree of information asymmetry related to equity-based crowdfunding when capital providers have much less information than capital seekers. Minimal regulations play here main role.

It should be mentioned that because of nature of crowdfunding business, when both sides are private companies and individuals, all information usually is strictly confidential. This situation creates lack of scientific and business literature, especially with quantitative research. All existing platforms, capital providers and capital seekers

also are quite reluctant to provide any information about their success factors and real results in order to keep their know-how and competitive advantages.

1.2 Evolution of Legislation

The USA has the biggest by far in the world market of venture capital and consequently its crowdfunding VC segment has a leading world position too.

Crowdfunding in the USA is under regulation of the SEC rules. The SEC sets that all transactions should take place only through SEC-registered mediators. Company can raise in one year up to \$5 million through crowdfunding. The amount of non-accredited capital providers is also restricted by SEC. Certain disclosures of information is also demanded [15].

The Jumpstart Our Business Startups (JOBS) Act is a part of the U.S. legislation that was signed into law by President Barack Obama on April 5, 2012. It decreased requirements of the Securities and Exchange Commission (SEC) on small businesses. Reporting and disclosure requirements for companies with less than \$1 billion in revenue were significantly reduced. Advertising of securities offerings was permitted also. Greater access to crowdfunding was granted for much bigger number of companies, which can offer equity without going through SEC registration. The goal of this act was to make it easier for startups and early-stage companies to access capital in order for them to grow and hire more workers. It is common that most small businesses start and grow in the early stages either through personal savings, money from small banks, or money from family and friends. However, situation is different during financial crisis, when many of the small community banks despair and help from families restricted by their small savings.

The JOBS Act aims to democratize access to capital and increase efficiency by providing new and easy ways to access money. The Internet opened an opportunity for small banks to reach capital providers in a way that only large corporations had before.

New technologies also helped in implementation, of the JOBS Act. As the result, the regulations which made it difficult for start-ups and early-stage companies to access capital were removed or adjusted.

Key points:

- The JOBS Act reduces requirements on reporting, oversight, and advertising for capital seeking companies.
- The companies with under \$1 billion in revenue could disclose less information to capital providers.
- Non-accredited capital providers got permission to invest in startups through crowdfunding.
- On the one hand, deregulation under the JOBS Act helps capital seekers access money, however on the other hand it exposes capital providers to the risk of fraud.
- The JOBS Act makes it easier for startups to raise capital and at the same time it allows retail investors to invest in startups.
- The JOBS Act created the new category of "emerging growth companies," which the SEC defines "as a company that is issuing stock with total annual gross revenues of less than \$1 billion during its most recently completed fiscal year" [13].

Before the JOBS Act, in most cases, only accredited capital providers were allowed to invest in start-ups.

There are two ways how capital providers can invest in startups now. First, start-ups can raise up to \$1 million via crowdfunding and it is a different way, if compared to crowdfunding websites such as Kickstarter, where crowd donates money without receiving stock for their money. Second, JOBS Act significantly increases a category under a rule called "Regulation A". It allows companies to offer equity without registration with the SEC. The expanded Regulation A, often called Reg A+, gives permission to companies to offer up to \$50 million in equity each year without meeting normal registration requirements. Retail capital providers can invest up to certain amounts

through both methods. JOBS Act is giving them a way to the relatively risky venture-capital investments. Another Reg CF as a part of the JOBS Act gives permission to private companies to raise up to \$5 million from any American citizen, contrary to practice that existed before, when private companies could only raise capital from accredited capital providers [14].

The primary benefit of the JOBS Act is that it removed regulatory hurdles for start-ups and early stage companies, allowing them to advertise their businesses and use the Internet to contact thousands of potential capital providers without geographical restrictions. The same advantages relate to capital providers as well. It opens an opportunity for capital providers to access more potential investments without geographical restraints.

The main risk comes from the advantage. Less regulation means that the potential for fraud is greatly increased for capital providers. This risk includes both purposeful fraud and an accidental fraud, when less experienced capital seekers may wrongly evaluate their business opportunities [13].

Key points:

- All transactions under Regulation Crowdfunding should take place online only through an SEC-registered agent, either a broker-dealer or a crowdfunding platform
- A company is allowed to raise a maximum total amount of \$5 million using crowdfunding in a 12-month period
- There is a limit for quantity of individual non-accredited capital providers who can invest across all crowdfunding offerings in a 12-month period
- Disclosure of information must be submitted to the Commission and should be provided to capital providers and the agent, involved in the offering.

Financial instruments purchased in a crowdfunding transaction generally cannot be resold for one year. Regulation Crowdfunding offerings are subject to "bad actor" disqualification provisions [14].

II. METHODS AND MATERIALS

Previously, “crowdfunding research has primarily been the purview of economists and management scholars. Economists study consumer behavior and how consumers continually make choices among products and services. They examine advantages of crowdfunding such as practicing menu pricing and extracting a larger share of the consumer surplus, and disadvantages of crowdfunding such as constraining the choices of prices to attract a large number of funders. Management scholars find crowdfunding eliminates the effects of distance from funders whom creators did not previously know” [6].

For the scientific purpose of this paper, a review of foreign literature has been conducted along with the analysis of secondary research results on the nature and importance of technological ventures and crowdfunding VC platforms in the modern economy. Much attention has been drawn to the concept and the characteristics of those phenomena. The following methods were used: defining, comparing, attribute analysis, case study. The empirical part of the paper is an attempt to indicate the role of crowdfunding platform and external environment in implementation of technological venture projects. For this purpose, a case-study method on the example of a crowdfunding VC platform company was used. The subject of the research is crowdfunding VC platform «OurCrowd». The purposeful selection of “OurCrowd” VC platform resulted from the pragmatic criterion of availability of data, clarity of the explained phenomenon of crowdfunding platform.

Case study:

The exploratory research was designed to identify the phenomenon of crowdfunding in business practice. The empirical method makes use of a case study involving the analysis of processes implemented in the selected crowdfunding VC platform «OurCrowd».

Originally, the combination of quantitative and qualitative methods was planned to be used to strengthen the research design.

Qualitative data was planned to be obtained from interviews conducted with the employees of “OurCrowd”, who were contacted during author’s work. An interview questionnaire was prepared. Semi-structured interview guide contained The Concept of Crowdfunding platform:

- general questions about the company and its organizational structure;
- questions about all innovation products and projects;
- questions about idea generation, idea selection and project development.

Questionnaire was prepared to be sent in electronic form. Also, in order to verify the gathered information, further telephone conversation with the manager of the company was planned to be conducted.

However, due to the pause in operations in Ukraine from the 24th of February, the entire database on the company “OurCrowd” and materials for analysis were obtained from the available secondary sources. This included the analysis of the company website and LinkedIn page, other websites, publications, and customers' opinions. Desk research was conducted with purpose to answer question about which factors are important for successful financing of technological projects on a crowdfunding platform. Research was concentrated on areas of crowdfunding legislation in Israel, phenomenon of technological VC projects and business activity of “OurCrowd” company.

2.1 Crowdfunding regulation in Israel

Israel is one of the world’s centers of technological and innovative developments, with thousands of different start-ups, created recently. Huge demand for financing of new companies resulted in a highly developed Venture Capital segment, including crowdfunding platforms.

In Israel, capital seekers on crowdfunding platform are not bind to publish a brochure, as long as they were incorporated in Israel and are not bind to disclose

information to the public under Israeli securities laws, in case if “the offering is happening through a properly licensed company to operate the crowdfunding platform- an “Offering Coordinator” [10].

With an eye to receive license and operate such a platform, the Offering Coordinator should prove to the Israel Securities Authority that it possesses adequate technical know-how to operate the platform. Business of Offering Coordinator also should be properly insured. It also should issue a deposit of ILS 100,000 on top of paying all fees. Various procedures in its business also required to be adopted

To mitigate and control the risk to capital providers, limits were established to the maximum investment that a capital provider can dedicate to a single investment and to the total number of investments per year. This number is unique to each capital provider, depending on the size of his or her annual income. Limits are also established on the amount that may be raised through an Offering Coordinator. Capital seeking company may raise capital or debt solely through an issue of shares or bonds at a volume of up to ILS 4 million per year. However, under certain conditions, amount could be increased to up to ILS 6 million per year [10].

2.2 Crowdfunding VC platform “OurCrowd”

Crowdfunding VC platform “OurCrowd” is the most active venture investor in Israel. To achieve its highly selective deal flow, “OurCrowd”’s team of investment specialists verify hundreds and hundreds of companies each year. Only selected management teams have meetings with ”OurCrowd”’s professionals. Only less than 2% from original list of companies will be proposed to the capital providers after an in-depth due diligence process. Company has a strong belief that reputation and trust are particularly important in the crowdfunding market. By using its extensive network, “OurCrowd” can proactively identify and pursue companies, gaining access to investment rounds that are closed to other new investors. It is a rule that “OurCrowd” invests its own

money also in every venture. As a leading disruptor in the venture capital asset class, “OurCrowd” provides unprecedented access to individual startup investment opportunities with its equity crowdfunding model. “OurCrowd” invests its own capital in every startup on the platform, inviting its members to invest alongside venture and institutional co-investors at the same terms. With direct access to pre-negotiated investment opportunities, members exercise complete discretion by selecting companies to add to their portfolio.

“OurCrowd” investors can invest in startups on a deal-by-deal basis in two ways: by creating a Portfolio Reserve investment account with the benefits of preferred allocation and reduced administrative paperwork, or by deploying capital for each new investment. After creating an “OurCrowd” account and onboarding with accreditation and KYC materials, investors gain access to the full deal materials for all currently funding startups on the platform. Investors who wish to participate in a specific investment opportunity do so by reserving an allocation through the “I’m Interested” button. This begins the commitment process whereby investors receive relevant subscription documents and wiring details. Post-investment, investors receive regular updates about portfolio performance through email notifications and a personalized account dashboard.

As a common practice, “OurCrowd” supports its portfolio of companies with extensive business development and access to its well-connected global investment community. “OurCrowd”’s global network consist of multinational corporations, start-ups, capital providers, venture capitalists, and global institutions. ”OurCrowd Innovate!” is a corporate innovation program designed to help corporations support, cooperate and participate in early stage financing. Innovate! members “play a positive role in the development of startups, across stages and sectors - from sourcing and funding, to collaborating post-investment on strategic partnerships” [12].

“OurCrowd” concentrates its activity on Cyber security, Communication, FoodTech, Marketplace, Enterprise software, Healthcare, Enterprise hardware, Mobility, FinTech and Energy sectors [12]:

Investment Opportunities Show: **All** Funds Companies

View all of our Funded Portfolio >>








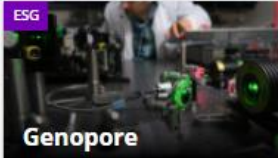







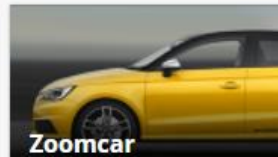
 <p>Convizit</p> <p>Enterprise Software • FUNDING NOW!</p> <p>AI-driven Digital Experience Data Platform revolutionizing how website user behavior data is collected, enriched and delivered to critical bus systems.</p>	 <p>Kini</p> <p>FinTech • FUNDING NOW!</p> <p>On-demand payroll and financial tools for employees of companies in SE Asia with limited access to traditional banks and lines of credit.</p>	 <p>ProFuse</p> <p>FoodTech • FUNDING NOW!</p> <p>Accelerating the production of lab-grown meat, making it economically viable, using proprietary muscle-generation technology.</p>	 <p>Flash Coffee</p> <p>Marketplace • FUNDING NOW!</p> <p>Hyper-scalable tech-enabled coffee chain with grab-and-go model brings specialty coffee at affordable prices to Asia's rising middle class</p>
 <p>The EVERY Company</p> <p>FoodTech • FUNDING NOW!</p> <p>Produces high quality egg protein without chickens, using precision fermentation, accelerating the global transition to animal-free protein.</p>	 <p>Sotero</p> <p>Enterprise Software • FUNDING NOW!</p> <p>Superior data security wherever data is being stored, transmitted, or used, providing the ability to easily and securely share data with third parties, all with a single interface.</p>	 <p>Connected Energy</p> <p>Energy • FUNDING NOW!</p> <p>Converting used electric vehicle batteries at the end of their automotive useful life to provide renewable energy storage systems for utilities.</p>	 <p>Genopore</p> <p>Healthcare • FUNDING NOW!</p> <p>Biotech company developing a highly advanced, cost-effective protein identification system using chip-based technology for early detection of cancer and other diseases</p>
 <p>Materials Zone</p> <p>Enterprise Software • FUNDED</p> <p>AI/ML platform to speed up and optimize the discovery of new materials, enabling a quicker path to new product discovery in a fast-growing sector.</p>	 <p>Airobotics</p> <p>Enterprise Hardware • FUNDED</p> <p>Automated industrial drone platform to monitor complex industrial environments and relay real-time data.</p>	 <p>Foretellix</p> <p>Mobility • FUNDED</p> <p>Establishing industry standard platform for safety testing of autonomous vehicles adopted by leading automakers worldwide.</p>	 <p>Polaris Quantum Biotech</p> <p>Healthcare • FUNDED</p> <p>Polaris Quantum Biotech is revolutionizing the way new drugs are discovered by harnessing the power of quantum computing.</p>
 <p>MedAware</p> <p>Healthcare • FUNDED</p> <p>MedAware harnesses patterns from thousands of physicians treating millions of patients to identify and alert on prescription errors in real-time.</p>	 <p>CytoReason</p> <p>Healthcare • FUNDED</p> <p>CytoReason's AI model of the human body enables pharma and biotech companies to speed up drug development and cut multi-billion-dollar costs.</p>	 <p>data.world</p> <p>Enterprise Software • FUNDED</p> <p>Cloud platform providing companies with enterprise data, accelerating the flow of information between data producers and consumers.</p>	 <p>Zoomcar</p> <p>Mobility • FUNDED</p> <p>Zoomcar is an India-based growth-stage startup offering an alternative to vehicle ownership by providing short, medium, and long-term access to vehicles.</p>

Figure 3. Example of some of the companies that are open for investment on OurCrowd

Source: OurCrowd official website [12]

2.3 Technological VC projects

Technological companies in the modern economy are more important than ever. The top ten companies in the world are all technological companies. They used to be car companies, banks, real estate, oil and gas, but no more. They are all technological companies.

Venture project means an economic activity performed by a start-up company, early-stage company, or existing company developing a new product or new technology.

“An important problem in the process of developing and increasing competitiveness of young companies is the level of technological innovativeness and uniqueness of products and services. In pursuing these objectives an important role can be played by the concept of technological entrepreneurship understood as a process involving greater practical usefulness of scientific research findings on modern technologies. An essential element of this process is effective cooperation between research institutions, research and development centers, capital market institutions, business-related spheres and enterprises in order to diffuse knowledge and scientific potential into commercial solutions regarding technological innovations” [5]. The basis for the development of technological entrepreneurship is formed, therefore, through interactions between science, technology, and business. All the activities of this phenomenon relate to “the identification of potential entrepreneurial opportunities arising from technological developments, and the exploitation of these opportunities through the successful commercialization of innovative products [5].

Typology	Technology Behind the Opportunity	Key Activities in the Process	Access to Resources and Funding
Technology Entrepreneurship	New products based on breakthroughs in research; science-based advances through specific knowledge in an academic field Example: Graphene	Technology proof of concept; first customer validation; activate a global but niche market (Clarysse et al., 2011)	Public research grants and other soft money sources Venture capital attracted by promising intellectual property (Audretsch et al., 2012; Giones & Miralles, 2015)
Digital Technology Entrepreneurship	New products based on ICT technologies only; making smart devices using the possibilities of Internet of Things Example: Smartphone	Use of existing technologies; market validation, traction, and growth, scalability	Business angels; seed and venture capital; stock market Crowdfunding; reward and equity (Gedda et al., 2016)
Digital Entrepreneurship	New products and services based on the Internet. Services running only in the cloud; using big data or artificial intelligence. Example: Snapchat	Technology as an input factor; high growth ambitions (Wallin et al., 2016); stay ahead of competitors; be the dominant player in the category	Business angels; seed and venture capital; stock market Equity crowdfunding (Tomczak & Brem, 2013)

Figure 4. *Digital technology entrepreneurship*

Source: [7]

The process of creating technological entrepreneurship is conditioned largely by the qualifications and expertise of employees and their ability to implement innovative solutions into business practice. A significant impact on the development of technological entrepreneurship is also made by the business ecosystem covering a wide spectrum of cooperation with business environment institutions

The concept of technological entrepreneurship incorporates four main sets of activities relating to (i) creating new technologies or identifying existing technologies (but previously undeveloped), (ii) the recognition and matching of opportunities arising from the application of these technologies to emerging market needs, (iii) technology development/application and (iv) business creation [5]. Technological start-up is a project

that collects group of people and assets, related to advances in scientific and technological knowledge, with the main target to create and capture value for a company [2]. “What distinguishes technology entrepreneurship from other entrepreneurship types is the cooperative experimentation and production of new products, assets, and their attributes, which are related to advances in scientific and technological knowledge and the firm’s asset ownership rights” [2].

Scientific novelty of this qualification paper is in understanding of factors that are important for successful financing of technological projects on a crowdfunding platform.

It is also important to understand how implementation of technological venture projects, using a crowdfunding platforms, can lead to the formation of new companies, the realization of new professional identities, and fundamentally impact how people function economically and socially as it changes how, why, and which products and services are brought into existence. Crowdfunding is “a departure from the previous expectation towards the "public hand" as a "sprinkling system" for money.” As it was mentioned on the blog www.crowdfunding-deutschland.de, there are three basic rules of crowdfunding: Discuss - Connect – Act.

III. RESULTS

Results of the research of “OurCrowd” company provide understanding of which factors are important for successful financing of technological projects on a crowdfunding platform.

“OurCrowd”, founded in 2013, is a global venture investing platform that raised more than \$1.8 bn for 280 portfolio companies and includes more than 100 thousands investors from more than 190 countries. Starting from 2017, “OurCrowd” is the biggest by far VC in Israel in terms of deal count. Capital providers get access to emerging startups, using the platform, without any geographical limitations and on the same VC conditions that “OurCrowd” has. “OurCrowd” provides more than ten open investment options anytime. Individual deals usually dominate in proposition, and allows capital providers to participate in early stage financing of startups with great growth potential with minimum investment of a \$10,000.

Every month, “OurCrowd”’s team contacts over 100 startups to find new opportunities. “OurCrowd” practices a five-step checking procedure to find the deals that make it to the platform:

1. **Initial Contact:** “OurCrowd” examines 150 to 200 companies per month. According to its website, “OurCrowd” only accepts 1-2% of companies to list on its platform after all steps, giving capital providers access to the best of a class capital seekers.
2. **Meetings:** Startups, which are considered having potential, provide presentations on a meeting with “OurCrowd”.
3. **Due Diligence:** In order for “OurCrowd” to complete its due diligence, the series of additional meetings are taking place.
4. **Investing Committee:** A final presentation occurs for “OurCrowd”’s senior investing committee.
5. **Fundraising:** “Term sheets are signed and closing typically happens 45 to 60 days from launch” [16].

Significant factor of “OurCrowd” success is coming from practice that startups come from different sectors. Sectors vary from healthcare to blockchain technology, and from technological projects to food.

Some examples of companies on “OurCrowd” :

- “EduNav” develops Software as a Service product with purpose to improve student experience in order to reduce dropout rates.
- “Lightico” provides enterprise software solution that helps companies onboard customers more seamlessly.
- “CoreMap” develops technology that helps to treat atrial fibrillation and other conditions by mapping heart arrhythmias.
- “Taranis”: Software as a Service with AI elements for businesses in agriculture.

Even though the main way to invest on “OurCrowd” is to invest in individual startups, the platform also has several funds in case investors want to diversify their portfolio with multiple companies.

There are “three funds that investors can invest in:

- “OurCrowd” Cyber security Fund: Invests in 15 to 20 cybersecurity-related companies; \$50,000 minimum investment.
- “OurCrowd” Continuity Fund III: Invests in 12 to 20 of the most promising companies “OurCrowd”’s team identifies; \$50,000 minimum.
- Proof III: A Pro Rata Opportunity Fund that invests in unfilled pro-rata rights of small-cap VCs that don't have the capital to invest in more funding rounds for their investments; requires being a qualified purchaser, which means having at least \$5 million in investments” [16].

Funds provide all needed information to help with due diligence the same way like for the individual deals. Fund terms are usually 10 years but can be extended [16].

As it was mentioned before, “OurCrowd”’s portfolio includes startups, that are carefully selected and vetted. However, the main difference between “OurCrowd” and many VC-style investing platforms is that “OurCrowd” uses its own money to buy stock in the companies which it is running and also takes a more active role in helping these

companies grow. “OurCrowd” employs wide range of different tools, starting with mentorship, provided by its board members to companies’ managements, and continuing with recruitment of industry advisors and help to companies its lists to establish possible connections with other companies. The main purpose of all those practices is to make the possible capital providers to experience higher level of security in their investment and feel more confident about success of the startups, they are investing for. “OurCrowd” supplies a lot of information to help capital providers with due diligence. Capital providers have in their disposal all presentation of capital seekers, deal summary, valuation and targeted amount of money to raise. “OurCrowd” also explains capital providers the reasons for investing in a selected start-up. Potential capital providers can also investigate information about the executive teams of star-ups, start-ups financial statements, and various risk factors. However, even with all that measures startup investing still should be considered as the most risky types of investing. Returns on investments are never guaranteed. There is also risk that private companies can go bankrupt or come short of original attractive valuation targets for a number of reasons. “OurCrowd” in its risk statements also issues a warning to potential capital providers that VC-style investing is not a liquid investment. And there is no secondary marketplace where capital providers can sell their shares if they want to exit. All investments with “OurCrowd” should be considered as a long-term investment. It is for sure, that each investor should consider his/her/it risk tolerance before signing up.

On the other hand, investors who join the platform are also vetted and have to meet some requirements. To invest with “OurCrowd”, investor must be an accredited. There are two main ways to achieve accreditation:

- Prove to have a net capital of at least \$1 million.
- Have “an annual income of \$200,000 (or \$300,000 with a spouse) for the last two years and have a similar income expectation for the current year” [12].

All those rules are imposed to protect inexperienced investors from investing in riskier alternative asset classes like startups. However, it also means that “OurCrowd” won't be an option for investors with an average net worth or income.

However, this also gives the layer of security and confidence to the startups, that don't have to look for investment themselves, but rather are "thrown" into the room full of big investors. By vetting all the members of the platform on both sides, "OurCrowd" creates a unique environment based on confidence, which is supported by the platform's reputation.

"OurCrowd" is for-profit organization and it charges certain management fees for its individual deals and funds.

Investors, who invested in individual startups, should pay:

Management Fees: 2% annually for four years;

Administration Fees: 4% one-time fee, capped until exit;

Carried Interest: 20% on profits up to 5 times of the amount invested, then 25% on profits.

Investors, who invested in Funds, should pay:

Management Fees: 1.5% to 2.5% for fund term;

Administration Fees: Uncapped direct reimbursement of fund expenses;

Carried Interest: Typically 20% to 25%.

Capital providers get a breakdown of the fees when they look through deal terms in order to make a fee structure as transparent as possible. It is a big plus, that "OurCrowd" caps management fees for individual deals.

It should be clearly stated that the fees of "OurCrowd" are higher than what capital providers can find with many alternative investing platforms. However, capital providers "are paying for the vetting process, deal structuring, and opportunity to invest alongside VCs" [16].

The platform was founded by the entrepreneur and investor Jonathan Medved, who was named by the Washington Post as "one of Israel's leading high tech venture capitalists" [19].

Jonathan himself has backed more than 400 startups including ones in the "OurCrowd"'s portfolio and in nine years managed to build one of the biggest crowdfunding platforms in the world.

In order to answer our main question which is “how to implement a successful technological venture project” we may look into one of the interviews which Mr. Medved gave to Think and Grow in September of 2021 [19].

Jonathan suggests that there are three main points essential for the startup to grow the business, which includes finding the right people and keeping them, growing investments, and entering the right market at the right time. Let’s go through these points more precisely.

As the first and most important part of growing a startup, Mr. Medved is emphasizing on the need to find the right people – talented and committed. However, even more it is even more vital not only to find and hire them, but also to keep them in company, making them want to stay in your startup by treating the talented people respectfully. Jonathan outlines few main ways to that.

First of all, it is simply a good salary. The more talented the person is and the more value he or she brings to the company - the more money he or she should get. It should not be forgotten, that having a bright team member, you constantly compete with other companies who want to get him or her, so the payment should be competitive. Another point given on how to obtain and keep great people in the company is to give them a fair share of that company. As the article says: “Make them buy into your dream because they are investors too, they're investing their time and their life, which is much more limited and important to them” [19].

A point that Jonathan finds important especially for the younger people is an impact that is made by the company. Younger generation is more interested in projects that they know have an influence on the big picture, like ecology, society, its wellbeing etc. Through its operation the company should give something more to the society.

It is also needed for employees to have a chance to improve their skills and to be able to grow in the company respectively. At the same time, to succeed the company should be ready and able to fight for its employees through better offer when they are being invited by other companies. In case the employee leaves the company, it is still important to be in good terms with the employee, value their impact and eventually build a community consisting of both – current and ex-employees.

The second most important part of implementing a technological (or in this case any) project, of building a successful startup is financial growth. One component of this part is facing your competition by being able to raise funds in a steady and fast manner.

The other component is the way the money is used – Mr. Medved suggests that the most important part of execution is velocity. It means that to implement a successful project, the investments should be directed to team enlargement, marketing, and performance.

Finally, the third part is preparation and readiness to enter international markets. Interestingly, one of the first things that Mr. Medved considers to be hugely important before moving to a new market – is simply English skills – the lack of language barrier. This way you get some information about market before entering it, find partners and maybe even few clients.

As a very recent development, “OurCrowd” becomes the first Israeli VC to start operations in the Gulf state. “OurCrowd” was licensed through the Abu Dhabi Global Market (ADGM) – an international financial center and free zone, located on Al Maryah Island in the United Arab Emirates’ capital Abu Dhabi [18].

OurCrowd Arabia will operate as a fund manager regulated by the Financial Services Regulatory Authority.

According to “OurCrowd” CEO Jon Medved, “this historic development, a fruit of the Abraham Accords, will not only allow OurCrowd to raise funds in the UAE, but also promote local Emirati and regional startups to our 160,000 global investors,” [18].

“OurCrowd Arabia” will focus initially on the agricultural, financial and medical technology sectors investments.

Start of operations in MENA (Middle East & North Africa) follows an acquisition of \$25 million equity stake in “OurCrowd” by Tokyo-based VC SoftBank through “OurCrowd”’s Vision Fund 2, announced in October.

The next “OurCrowd” Global Investor Summit will take place on February 15, 2023. It is expected that it will bring together the entire startup ecosystem. The Summit provides unique access for capital providers to private companies to invest in. It is safe to say that it is one of the premier events in the early-stage financing world and for sure, the

biggest investor event in the Middle East. Some 23,259 people were registered on similar event in 2020 and those people represented 183 countries from all over the world.

Based on research, three main factors that are important for successful financing of technological projects on a crowdfunding platform were formulated as:

- Professional selection of the best-in-class projects by the specialists with a knowledge of startup subject;
- Right time and market for project to be launched;
- Professional investors, who involved and vetted by a crowdfunding platform with impeccable reputation.

There are three main points essential for the technological venture project to grow the business, which includes finding the right people and keeping them, growing investments, and entering the right market at the right time. The basis of organizational culture at “OurCrowd” is the awareness of the importance of talent and commitment. Creating a culture based on knowledge, identifying employees with the company are key values of the analyzed organization. Knowledge management supports ability of startups effectively implement and commercialize the designed solutions and applications and vetting all the members of the platform on both sides creates a unique environment based on confidence, which is supported by the platform’s reputation.

The data analysis connecting with the examined phenomenon suggests that the concept of startups is based on increasing innovation, new assets, and competitiveness through more efficient use of research results leading to development of products and services, insightful market research before starting business, and possibility to get proper investments from reliable sources. Both endogenous factors and external environment undoubtedly play an important role in the process of successful technological venture project, associated with the basic pillars of knowledge economy, markets knowledge and proper financing. So, from point of view of external factors, it is vital to create an effective

system of support from new legislation and government's programs for entrepreneurship infrastructure development and technology transfer.

However, there is a need for conducting a quantitative, practice-oriented research confirming the importance of the listed endogenous and exogenous factors, and for better understanding of reality and to help all participants of this industry choose their own path. This case study could help recognize the phenomenon of implementation of technological venture projects, using crowdfunding platforms under real conditions, and its purpose has been the practical orientation of the concept of crowdfunding platforms.

CONCLUSIONS

Technological venture projects, which are predominantly represented by start-up and early-stage companies developing a new product or new technology, are more important than ever in the modern economy. At the same time, crowdfunding platforms have started to play an important role in venture financing in recent years, supported by implementation of new legislation in key developed countries [14].

It is an innovative way of financing technical VC projects. Previously, capital providers had two options to invest in early-stage start-ups either angel investing or VC. It was not easy for potential capital provider to source and vet the deal in order to find decent angel investment chance. On the other hand, to start working with a VC, capital providers need to have many millions of dollars that they are prepared to invest. Even in case, when capital providers do get into a VC fund, they do not have control over the specific start-ups in which their money is invested. The crowdfunding platforms uniquely combine the benefits of angel investing such as flexibility and amount of investment, with the strong sides of VC, which are vetted deals, on-going mentorship, and guidance for startups [17].

For the scientific purpose of this paper, a review of foreign literature has been conducted, which indicated that crowdfunding eliminates the effects of distance from funders whom creators of startups did not previously know [3].

The exploratory research was designed to identify the phenomenon of crowdfunding in business practice by using a case study of the selected crowdfunding VC platform «OurCrowd», an equity-based investment crowdfunding platform. It was founded in Israel, named as the “start-up nation”, because so many ventures coming out of this country. Founder of “OurCrowd” is an experienced venture capitalist and serial entrepreneur. The company now has offices in the U.S. as well as in other countries. It created a new way to invest in early-stage companies when accredited capital providers with net capital more than \$1 million can apply to join “OurCrowd”’s private platform.

Once accepted, capital providers receive access to the deals “OurCrowd”’s team has sourced. Capital providers then choose which startups they would like to invest in, at a minimum of \$10k. “OurCrowd”’s management team does heavy due diligence on each startup before it is added to the platform. “OurCrowd” does not provide free access to its platform. Potential capital providers can get only limited information on the start-ups in “OurCrowd” portfolio until capital provider actually is accredited by “OurCrowd”.

“OurCrowd” generates millions of dollars of value for start-ups, and capital providers. The platform gives an opportunity to capital providers, who otherwise would not have access to early-stage deals, to put their money in exciting early-stage ventures. In terms of value capture, it looks like “OurCrowd” is quite successful so far “by leveraging its experienced management team and choosing to start with early stage companies” [17].

Three main factors that are important for successful financing of technological projects on a crowdfunding platform could be identified as:

- Professional selection of the best-in-class projects by the specialists with a knowledge of startup subject;
- Right time and market for project to be launched;
- Professional investors, who involved and vetted by a crowdfunding platform with impeccable reputation.

However, to successfully compete on the global market the crowdfunding platforms should always have full pipeline of upcoming startups, break standards, avoid boilerplate solutions and undertake interesting challenges. It is vital externally, therefore, to create an effective system of support from new legislation and government’s programs for entrepreneurship infrastructure development and technology transfer.

It should also be mentioned, that Russia’s invasion of Ukraine has sent shockwaves around the world and created new challenges for investors. Ukraine is a hotspot for IT technology staff and home to more than 200,000 developers. It has the world’s largest

community of C++ developers and second largest concentration of JavaScript developers. When Russia invaded, many were forced to stop working. During last years, “Ukraine has become one of the world’s most critical offshore tech hubs. Nearly one in five Fortune 500 companies have used Ukrainian-outsourced IT services, and hundreds of startups from Israel to Silicon Valley have hired offshore Ukrainian developers and QA engineers. Technological companies around the world, already plagued by the global talent shortage, are likely to suffer even more” [12].

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