Problemy Zarządzania, vol. 13, nr 4 (56): 177–194
ISSN 1644-9584, © Wydział Zarządzania UW
DOI 10.7172/1644-9584.56.11

How New Is Crowdfunding? The Venture Capital Evolution without Revolution – Discourse on Risk Capital Themes and their Relevance to Poland

Submitted: 19.06.15 | Accepted: 03.09.15

Denis Frydrych*, **Tony Kinder****

This conceptual paper discourses the emergence and development of crowdfunding as a step of the broader risk capital evolution. In doing so, we call for a more careful discussion about whether crowdfunding is the *next big thing* in risk capital mechanisms or a continuity of risk capital instruments, which matches technological regime changes and aligns to economic and social development. Based on a historical overview of types of funding, we elaborate that the risk capital market follows an evolutionary rather than revolutionary progression, where crowdfunding developed as a continuity of business angel, venture capital and microfinance mechanisms. This paper also provides policy implications by discoursing the risk capital evolution and highlights the importance of diversification in risk capital institutions to drive entrepreneurial activity.

Keywords: crowdfunding, risk capital, venture capital, entrepreneurship.

Jak nowe jest zjawisko finansowana społecznościowego? Ewolucja kapitału wysokiego ryzyka bez rewolucji – rozważania o zagadnieniach kapitału podwyższonego ryzyka i ich znaczeniu dla Polski

Nadesłany: 19.06.15 | Zaakceptowany do druku: 03.09.15

W artykule omówiono powstanie i rozwój zjawiska finansowania społecznościowego jako etapu szerszej pojętej ewolucji kapitału podwyższonego ryzyka. Rozważając tę problematykę, autorzy postulują dokładniejsze przedyskutowanie kwestii, czy finansowanie to jest kolejnym kamieniem milowym w rozwoju mechanizmów kapitału podwyższonego ryzyka czy też stanowi kontynuację tego rodzaju instrumentów, która jest zgodna ze zmianami w reżimie technologicznym i zbieżna z rozwojem społeczno-gospodarczym. Na podstawie historycznego przeglądu rodzajów finansowania stwierdzono, że rynek kapitału podwyższonego ryzyka ulega zmianom ewolucyjnym, a nie rewolucyjnym, a finansowanie społecznościowe było kontynuacją takich mechanizmów jak aniołowie biznesu, kapitał wysokiego ryzyka i mikrofinanse. W artykule przedstawiono także konsekwencje dla polityki oraz wskazano znaczenie dywersyfikacji instytucji dostarczających taki kapitał w stymulowaniu przedsiębiorczości.

Słowa kluczowe: finansowanie społecznościowe, kapitał podwyższonego ryzyka, kapitał wysokiego ryzyka, przedsiębiorczość.

JEL: G24, L26, M13, N24, O30

* **Denis Frydrych** – PhD Candidate, University of Edinburgh Business School.
** **Tony Kinder** – Dr, Senior Lecturer in Entrepreneurship, University of Edinburgh Business School.

Adres do korespondencji: University of Edinburgh Business School, 29 Buccleuch Place, Edinburgh, EH8 9JS, UK; e-mail: D.Frydrych@ed.ac.uk; Tony.Kinder@ed.ac.uk.

1. Introduction

In recent years crowdfunding, a form of crowdsourced venture capital, has developed into an attractive entrepreneurial risk capital assembly mechanism (European Commission 2013a; Harrison 2013). The current narrative in academia and the business field celebrates crowdfunding as a disruptive innovative venture capital mechanism that is democratising capital access (Lehner 2013; Macht and Weatherstone 2014; Rossi 2014). Entrepreneurial ventures have started to exploit various crowdfunding models and the industry rapidly grew to over 1,200 crowdfunding platforms worldwide, accumulating a global investment volume of $16.2bn in 2014 (Massolution 2015).

Our paper considers the nature and operation of crowdfunding, arguing that instead of being the 'next big thing' in the evolution of risk capital, it joins the panoply of risk capital sources (including venture capital, angel funds, some banking activity, friends and family capital and some peer-to-peer lending). This paper argues that in venture capital research the continuity of risk capital mechanism is in practice and academia understated, while the discontinuity in the risk capital industry appears to be often overstated as 'revolutionary new'. Throughout history, specific developments and innovation in financing have extended accessibility to opportunities for societies. At various times, historical venture capital (VC), business angel (BA) funding and recently crowdfunding (CF) have been heralded as the 'next big thing' in terms of entrepreneurial resource marshalling. However, it appears that the fundamental idea of CF has deep conceptual links to historical finance concepts. Although we experience increasing academic interest on CF, our understanding of its distinctive innovative features and its evolutionary position within the VC market is limited. Therefore, the purpose of this conceptual paper is to address some important themes on risk capital to discourse whether CF provides a paradigm change or rather an evolutionary progress for VC financing. We provide an overview of types of funding and aim to illustrate evidence from (a) evolution of funding types and (b) discoursing CF as part of the VC market, that the often as *new* heralded risk capital mechanisms become less innovative and more risk averse as they mature.

We relate our arguments to the present position in Poland using three thematic issues we derive from entrepreneurship literature: (a) do Polish institutions support risk capital; (b) are Polish new ventures likely to internationalise; and (c) are entrepreneurs created by entrepreneurship policy?

2. Risk Capital Evolution

Schumpeter's (1942) argument that economic progress is the result of creative waves of destruction is often reduced to Kondratieff's (1979) idea of technological long waves. This is a mistake (Aydin and Takay 2012;

 DOI 10.7172/1644-9584.56.11

Peneder and Resch 2015). Schumpeter continually refers to each wave being accompanied by social change. His idea that new modes of consumption accompany waves of creative destruction is the central idea of Regulation Theory (Boyer and Saillard 2001). Our interest, however, is in Schumpeter's notion that new forms of financing evolve as appropriate to new technologies and organisational forms. Work by evolutionary economists (Nelson and Winter 1982; Espring-Andersen 1996) aligns closely with Kuhn's (1962) view of evolutionary scientific progression.

Innovation study has evolved Dosi's (1982) work on technological paradigms (the early Schumpeterian position) toward a wider Schumpeter-2, insisting as Freeman and Soete (1987) do that social and economic factors must align. This work gave rise to Freeman and Perez's (1988) idea of systems of innovation at a national level (Rosenberg 1992; Nelson 1993; Carlsson and Stankiewicz 1995; Castells 1997). Later developments of the idea include work on regional systems of innovation (Cooke, Uranga, and Etxebarria 1997; Barnes and Gertler 1999; MacLeod 2001) and sectorial systems level (Malerba and Orsenigo 1997; Geels 2004). Recently these ideas are linked to work on entrepreneurial clusters (Glaeser, Kerr, and Ponzetto 2010) and ecosystems to explain the regional and sectorial production of knowledge-based start-ups (Spigel 2015).

The point of these institutional perspectives is that as technologies and markets change, so too must forms of capital availability and access align. Put simply, the car plant can borrow working or investment capital secured against assets from banks, or raise equity based on a record of profit-making. However, such opportunities are not available to knowledge-based ventures without physical assets in their early stages; part of the Stinchcombe's (1965) *liability of newness* is that without legitimacy it is difficult to assemble resources and without resources it is difficult to create venture legitimacy. As Bell and McNamara (1991) classically argue, the new knowledge-based venture seeks to raise risk capital in exchange for an opportunity to share future earnings.

The evolution of risk capital and its modalities (e.g. VC, BA and CF) is inextricably linked to the closing gap between science and technology and the associated growth of more knowledge- and service-based products from less asset-rich ventures. For example, 'Airbnb' is the largest guest accommodation provider without owning any of the offered assets. A brief look at the birth of venture capital illustrates these points. There has always been venturesome capital (e.g. Vasco da Gama's sea voyage around Africa to India in 1497 was funded by Prince John and Prince Manuel and returned them 3,000 times their investment (Thatcher 1907), Alexander Pope's translation of Homer's Iliad adventures was funded by 750 individuals in 1713 (River Campus Libraries 2015)). Although the MacMillan-Gap was identified as a supply-side shortage of risk capital for new ventures in 1924 (Stamp 1931), only in 1946 the French émigré Georges Doriot established the first

$3.5 million VC firm (American R&D Corporation) to encourage investment in private sectors. In 1958, the US allowed capital gains tax breaks and in 1959 relaxed the Prudent Man rule (allowing portfolio rather than individual investment evaluation). Burgeoning information and communications technology (ICT) start-ups around Silicon Valley gave birth to VC as we know it today (Castells 1994). Whilst large companies were always able to fund risk-laded long-term projects, only in the 1960s were VCs able to raise significant funds for private equity investment. To thrive, VC need institutions such as exit markets (trade sales, IPOs or alternative investment markets for private equity) and tax concessions to make returns commensurate with risk over a portfolio (Sahlman 1990; Gompers and Lerner 2001).

However, as VC matures there is a tendency towards risk-aversion, *id est* moving away from start-ups and often towards sectorial specialisation with larger investments in later stages (Bygrave and Timmons 1992). This development creates a funding gap for ventures that seek seed- or early-stage investments. Conversely, at the same time provides opportunities for new modalities of risk capital to enter the early-stage market segment, although, the nature of risk capital remains unaltered: unsecured investment in return for a share of future profit.

For instance, business angel investors defined as 'high net worth individuals' who operate in networks to collectivise investments for entrepreneurial ventures developed to serve the seed- and early-stage risk capital market (Ramadani 2009); they are often geographically narrow and prone to sectors in which members have expertise and can enjoy being 'hands-on.' Similar to VC firms they assess and improve business plans and after due diligence help construct management teams; similarly, their income whilst including fees and dividends, is from capital gain at exit (Mason, Harrison and Bothelho 2015).

VCs and BAs are for-profit investors, unlike some emerging crowd-funders, who may be reward-based or civic in intentions, *id est* veering towards collective social entrepreneurship. Equity crowd-funders too seek capital gains, an emergent area of CF activity, facing the difficulty of agreeing terms between numerous investors. As Frydrych *et al* (2014) show, successful CF pitches interact closely with investors, allowing them to adjust business plans, management teams and exit routes.

CF claims to democratise capital assembly (Koning and Model 2013; Kim and Hann 2013) and may result in a wider investor footprint than BA networks (BANs) or VCs and allow high levels of interactivity between investor and investee. Another form of risk capital is peer-to-peer (P2P) lending where private lenders offer credits through online marketplaces such as 'Lending Club' and 'Prosper' in the US, and 'Zopa', 'Ratesetter' and 'Funding Circle' in the UK. This mechanism further democratise capital assembly using online shadow banking platforms as an alternative to more risk-averse physical banks that ration credit (Stiglitz and Weiss 1981), seek

 DOI 10.7172/1644-9584.56.11

collateral (Bester 1994) and insist on asymmetric information (Stiglitz 2000). Online social lending is an electronic version of 'lending marketplaces' and is a mixture of return and social capital markets and is particularly appropriate to un-bankable micro-finance projects (Roodman 2012a, 2012b). P2P lending disintermediates banks (Hulme and Wright 2006), and may grow to become 10% of global lending (Gartner 2008). However, market participants may subscribe to new intermediary services (Chircu and Kauffman 2000), which could lead to greater not less intermediation (Sen and Kin 2003). Thus, with the opportunities derived from ICT, traditional intermediates are taken online or alternative service platforms emerge that take over the tasks from offline entities; however, do not disrupt processes but rather provide continuity innovation in a digitalised context.

3. The Birth and Rise of Crowdfunding

We provide a brief historical overview of some CF antecedents in order to discourse the evolutionary process of CF as part of the risk capital market.

3.1. Crowdfunding Antecedents

Extending our perspective beyond online CF activities and the online ecosystem which was established in recent years (Massolution 2015), we recognise that the phenomenon which is described as CF has strong links and origins to the broader field of traditional microfinance (Marom 2013; Bruton et al 2015). However, extend research on CF falls short in illustrating these historical links. For example, the Irish Loan Bank initiated an early version of modern microfinance in the 18th century (Hollis and Sweetman 2001), by supporting low-income families in rural regions with loans: democratising capital access and distribution to groups that were excluded from bank finance due to the traditional institutional capital market requirements. In the 19th century, over 300 different funds existed that served around 20% of all Irish households (Hollis and Sweetman 1997).

During the 1970s and 1980s, we experienced the institutionalisation of the micro-credit market with the establishment of the Grameen Bank in Bangladesh. The Bank's business model is similar to the Irish Loan Bank's: distributing micro-credits to individuals with no asset security background to serve traditionally excluded demographics. Over 30,000 women in rural areas received micro-credits and often provided seed- and early-stage capital that enabled them to pursue entrepreneurial activities (Morduch 1999).

3.2. Crowdfunding

The term 'crowdfunding' is coined by Michael Sullivan, founder of fundavlog.com an online social platform for video-blog projects that incorporated simple funding features for listed projects and aimed to operate as an incubator for video-blog related projects in 2006 (Villani 2013). Sullivan

used the term crowdfunding to explain the key idea behind his social platform's business model: "many things are important factors [to initiate and develop a project], but funding from the 'crowd' is the base of which all else depends on and is built on." (Villani 2013:2).

However, it took until 2008 to experience an increase in popularity and adaptation of CF as we know it today. Literature often argues that the recent large-scale economic uncertainty has facilitated the development of novel, semi-formalised mechanism for financing new ventures. Additionally, web-enabled social networking has led to novel approaches to seek for prospective stakeholders and to persuade them to become part of an entrepreneurial endeavour (Brabham 2008; Kleemann et al. 2008). CF is often characterised as a subset of the general concept of crowdsourcing (Belleflamme, Lambert and Schwienbacher 2014), which is defined as "the act of outsourcing a task to a "crowd", rather than to a designated "agent" in the form of an open call" (Afuah and Tucci 2012:355). Scholars argue that the idea to utilise the "crowd" rather than professional "agents" link both models. Belleflamme, Lambert and Schwienbacher (2014:588) define crowdfunding as "an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes".

We argue that the term 'crowdfunding' has not emerged due to a revolutionary approach to raise risk capital, but rather provides a new taxonomy for an old capital assembly process: raising capital through a distributed heterogeneous group of small or large capital suppliers (who can be investors, customers or supporters). In its central conception, CF as a taxonomy describes the process of individuals or organisations to assemble financial capital through the exploitation of an affinity based social-network group. Specialised online-based crowdfunding platforms (CFPs) are an important intermediate that enables CF to thrive for entrepreneurial risk capital assembly. While the often as 'revolutionary' characterised element of CF is narrowed down to the use of online infrastructure, the entrepreneurial process of raising socially-embedded capital rather than approaching institutional risk capital providers is evidenced in history (refer to examples in Section 2). Therefore, arguing that CF thrives because of the risk-aversion of risk capital institutions that leads to a funding gap falls short in explaining the development of CF. It is important to include a broader socio-economic perspective (Schumpeter-2) to comprehend the position of crowdfunding as an evolutionary continuity of risk capital.

3.3. Rise of Crowdfunding

Risk capital literature too often focuses on traditional finance mechanisms such as VC (Yong and Zahra 2012; Landström and Mason 2012), BA (Harrison et al. 2010; Gregson 2014) and bank finance instruments

 DOI 10.7172/1644-9584.56.11

(Colombo and Grilli 2006; Huyghebaert and Van de Gucht 2007). In practice, however, entrepreneurs more recently approach risk capital sources that are less 'traditional' and more 'alternative'; highlighting that early-stage funding is often acquired from 'non-traditional' institutional risk capital sources (Eckhardt, Shane and Delmar 2006). For instance, entrepreneurial activities more frequently take place online. Entrepreneurs can create 'virtual corporations' (Tower-Pierce, Gillies and Krolik 2009) that are "based on pooling […] attention and efforts (as opposed to capital), with the goal of enabling the contributors to collectively own their joint work product" (Johnson 2008). The development of such new organisational forms aligns with Schumpeter's notion that organisations develop in alignment with social and technological change. Entrepreneurs exploit online approaches to create, develop and internationalise their ventures aside of 'traditional' risk capital markets (Witt and Brachtendorf 2006). Various finance mechanisms emerged that use online infrastructures to provide tailored instruments for entrepreneurs to monetise upon their knowledge- and service-based products (e.g. different CF modalities). These alternative finance mechanisms aim to exploit opportunities provided by economic, social and technological changes, and form a growing industry that is denoted as Financial Technology (Fintech) (Baek, Collins and Zhang 2014). While Fintech firms initially served niches in finance (e.g. social and civic projects), they now offer different finance instruments for the whole spectrum in the risk capital market.

Similar as with the VC market during its early developments since 1950s, we experience recently that the CF market matures with the development of standardised online CFPs. The foundation of several web-enabled CFPs in 2008 (e.g. Indiegogo.com) and 2009 (e.g. Kickstarter.com) provide entrepreneurs specific online social-networking platforms, where individuals with similar interest and motivations created an affinity network group. Ingram et al. (2014:4556) argue that those platforms are at "the heart of crowdfunding" and "drive the implementation of the crowdfunding model by building and deploying [those] platforms". CFPs establish an entrepreneurial eco-system that aims to standardise entrepreneurial risk capital activities. Thus, CFPs create "internet-enabled markets" for risk capital "that enable buyers and sellers to exchange information, transact, and perform other activities related to the transaction before, during, and after the transaction via an information infrastructure network and devices connected to the network based on Internet protocol" (Varadarajan, Yadav and Shankar 2008:296). Therefore, CFPs increasingly take the role of financial intermediates (Lehner 2013) and the role of institutional actors within the risk capital market as they "initiate changes that contribute to transforming existing, or creating new, institutions" (Ingram et al. 2014:4556). However, these developments do not align with Freeman, Clark and Soete (1982) definition of disruptive innovation that revolutionises the risk capital market.

It is important to reflect on historical risk capital assembly approaches when discussing the 'newness' and 'innovativeness' of risk capital assembly through CF. While the entrepreneurial processes might have been altered due to the online mediated context (e.g. visual business pitches and use of social media tools to promote investment opportunities), the conceptual idea to assemble capital from network agents for potential future return on investment is historically rooted. Yet, CF is considered by scholars and practitioners to challenge the 'old' institutionalised risk capital market as it aligns better with current technological (e.g. web-enabled networking), socio-cultural (e.g. sharing and DIY culture), and broader financial (e.g. social and impact investment) developments (Schumpeter-2). Having said that, we experience more continuity between traditional VC and CF as the CF market matures. For example, the investment distribution in CF appears bi-modally dispersed reducing the democratising capital effect of CF (Mollick 2014, Frydrych, Bock and Kinder 2015).

4. Themes and Relevance to Poland

Growth of risk capital is closely associated to the emergence of knowledge-intensive businesses, their associated value propositions, business models and exit routes. Invariably, outside of the largest economies, value propositions, business models and exit routes have internationalisation dimensions, since most national markets are too small to provide the returns required to make risk capital investment viable. Often the originator of the business model is not the beneficiary, since ideas are easily imitated. For example, the Chinese (natural language) Tencent and Alibaba are akin to Amazon and eBay. KD (Kuaidi Dache) and Tencent's DD (Didi Dache) ubiquitously call private taxis in Chinese cities, not Uber. An example from Poland is Allegro which is akin to eBay. The local adaptation of international successful business models is an interesting theme that often is linked to the concept of imitators (Shenkar 2010; Luo, Sun and Lu Wang 2011). While imitators are able to serve the national market, it is difficult to internationally growth as these ventures are based on international upscale business models that are adapted to the down-market national context. Nonetheless, internationalisation is inherent in many risk capital backed ventures. The global and the local interact (Castells 1997): new ventures may be firmly grounded in local markets and sources of risk capital: successful ventures use these roots as a base from which to enter (often digital) global markets.

Three big themes emerge from our review of the evolution of risk capital: (a) risk capital institutions, (b) internationalisation, and (c) the centrality of entrepreneurial activity. Having argued that CF is a stage in the evolution of risk capital, rather than the 'next big thing,' there is little reason to suppose that further evolution will not occur. From a Polish perspective,

 DOI 10.7172/1644-9584.56.11

promoting all modalities of risk capital seems important. In the following, we will comment on institutions, entrepreneurial internationalisation and Polish policy on entrepreneurship (as opposed to supporting entrepreneurs).

4.1. Polish Risk Capital Market

Policymakers and economist around the world highlight that a critical component for entrepreneurial activities (e.g. innovation, venture creation, internationalisation and exit) is based on a supportive risk capital framework. On the international stage, the development of a VC industry enabled new intermediates to enter the risk capital market and supported emerging knowledge-based ventures. The OECD (2014) recommends and encourages countries to develop strategies to enable capital access for knowledge-based ventures. In Poland, traditionally, risk capital is provided by the government or government-supported institutions, and informally by private investors who usually are linked to the entrepreneur. While globally the VC industry developed, Poland experienced an economic boom in the 1990s and the capital market was able to endure and develop without differentiated instruments such as VC funds. Yet, in other markets the introduction of new intermediates, standardised and formalised risk capital, leading to the introduction of institutions that serve the risk capital market such as the NASDAQ in the US, the secondary market for technology-based ventures that allowed VC firms to exit their investments.

However, since 2007, Poland experiences a revitalisation of the risk capital market, with increasing support from the European Union and Polish government to implement supportive risk capital framework to foster the Polish entrepreneurial industry. The EU provided €67bn out of its €278bn "structural fund budget" into Poland to "narrow the development disparities among Member States" (Europa 2015). €10bn were allocated to support the development of the Polish entrepreneurial industry. However, not all of the implemented initiatives had a positive impact on the nation's entrepreneurial eco-system and climate. The Polish Agency for Enterprise Development, for instance, provided grants from €5,000–€170,000 without following a standardised due diligence practice resulting in flooding the market with capital for entrepreneurial activities. While institutions were in place to foster entrepreneurship policy (e.g. capital access), the implemented programmes missed to develop entrepreneurial activities (e.g. innovation and R&D).

Although the Polish risk capital market remains strongly supported by the government, the investment amounts might appear small in international comparison and the related 'red tape' hinders or prevents entrepreneurial action. The venture capital market in the Central Eastern European (CEE) region is small. The EVCA (2013) reports VC investments in 154 companies totalling an investment volume of €66m in 2013. It means in effect that VC activity in CEE represents 1.9% of the European venture capital market.

One reason for the low investment activity is the level of innovation in the CEE region. The European Commission, for example, defines Poland as a 'moderate innovative region', which has innovation performances below some of its neighbouring economies and is marginally higher than Bulgaria and Romania (Innovation Union Scoreboard 2015).

In terms of BA activity, Poland can be organised in ten regional BANs, in which around 15,000 BAs are active (2011). Although these numbers sound large, the Polish BA market is still young and only since 2006 experienced development due to the accession to the EU. The creation of a BAN structure in Poland was financed by EU funds and supported the creation of the Association of Business Angels Networks (ABAN) in Poland with the aim to support regional cooperation across Poland. Although the BA market in Poland appears to have established a similar structure to other well-developed BA markets such as in the UK, the main issue is that there is low awareness of investment opportunities in private companies. Another boundary for BA activity is that there is a lack of fiscal incentives for risk capital investments (e.g. no tax breaks). However, the government counteracts this issue by substantially co-finance Polish BA activities. The investment volume per deal varies between 50,000zł and 5 million zł (CSES 2012).

However, due to the support to foster entrepreneurial risk capital institutions, Krakow and Warsaw developed into two central entrepreneurial hubs in Poland, where additional private risk capital firms established strong market presence. In particular, incubators and BANs are strongly established in these regions, enabling entrepreneurs to access seed-funding from €10,000-€20,000. The entrepreneurial community grows in these cities and spreads to other regions, including Wrocław, Poznań and Gdańsk, evidenced through the emergence of Accelerators, co-working spaces and entrepreneurial events: all necessary factors to foster an entrepreneurial risk capital market. However, while it appears that the Polish entrepreneurial eco-system (risk capital institutions) is developing, we identify that not all the required parts are in place to compete internationally. For example, the capital market in Poland lacks the necessary diversity of risk capital forms that enables to turn the strong Polish funding support (e.g. EU-funds) into routes that transform startups into 'gazelles' through growth and internationalisation. Therefore, while institutions exist, they are thin and need to be thickened. In addition, like in all other markets, diversity of risk capital mechanisms needs to be strengthened in Poland in order to serve the national and international market. The emergence of institutions such as incubators and accelerators are good signs for more diversity and detach entrepreneurs from the available EU-funds and traditional finance approaches. However, like in other economies too, alternative finance instruments play an increasing important role in international markets, including the development of CF (Wardrop et al. 2015).

 DOI 10.7172/1644-9584.56.11

Several CFPs are operating in Poland, from which the largest are Polakpotrafi.pl, beesfund.pl, and wspieram.to (Król 2015). However, the CF phenomenon is still in its beginnings in Poland. While the required online intermediates exist (CFPs), it appears that necessary regulation and legislation changes are impeding the development of CF as a risk capital instrument for entrepreneurs (like in other countries too). Further, it is important to educate market participants (e.g. entrepreneurs and investors) in order to develop the current entrepreneurial culture in Poland to a more collaborative and transparent ecosystem that accepts alternative finance instruments as opportunities rather than threats. It is important that government bodies and relevant institutions (e.g. research centres and academic institutions) educate about the value and stimulate the use of alternative finance mechanisms for advancing innovation performance. This would allow Poland to be on the forefront in implementing new mechanism to attract entrepreneurs and international awareness as well through secondary markets, international partnerships and entrepreneurial activities.

4.2. Internationalisation of New Ventures

It is important for risk capital markets to illustrate the ability that national entrepreneurial ventures can scale internationally in order to demonstrate that start-up or later-stage investment can return a multiple of the invested capital. Thus, a key question is whether new ventures are likely to internationalise and therefore offer opportunities to scale the business.

Some of the obstacles for internationalising the Polish entrepreneurial industry are the low degree of national and international collaboration between science and business (European Commission 2014). Strengthening the collaboration between key stakeholders in the innovation area (e.g. universities, R&D centres) and broader business field (e.g. financial institutions) would enable to foster the exploitation of national innovations (Woodward, Wojnicka and Pander 2012). This would enable to reduce the implementation of imitating foreign innovation to the Polish market, which makes it difficult to compete in terms of new venture on an international stage. The lack of internationalisation opportunities for new ventures also hinders the creation of legitimacy of the Polish risk capital market to the global audience. The absence of regular large international investment exists of national entrepreneurial ventures places the Polish risk capital market in the shadow of its western neighbours (EVCA 2013).

Crowdfunding might provide Polish entrepreneurs an alternative way to internationalise their business operations and to gain international awareness. For example, 113 projects from Poland sought to raise risk capital on Kickstarter, a leading US-based reward-based CFP (Kickstarter 2015), from which the most funded project raised over $250,000. The entrepreneurial

exploitation of CF enables Polish entrepreneurs to gain international exposure and build a global customer-base. However, we observe a predominant presence of Polish video game ventures that are raising capital through CF, representing the well-developed video game development industry in Poland. Yet, a more diverse composition of entrepreneurial ventures from different industries are required to attract international capital inflow and to stimulate entrepreneurial activity.

4.3. Centrality of Entrepreneurial Activities

The entrepreneurial climate in Poland is ranked in the lower places among the EU25 member states (Eurobarometer 2012). Similar to other post-soviet countries, the image of entrepreneurs and entrepreneurial activities is predominately a negative one. Furthermore, a high failure rate of ventures challenges the stimulation of entrepreneurial activities, particularly because entrepreneurs who fail are often not given a second chance. Nevertheless, in recent years the national government supported the supply side for entrepreneurs through entrepreneurship policy (e.g. EU-funds and capital institutions) and as such created a positive perception about the availability of risk capital channels in Poland. Yet, it is crucial to build up the demand side and to foster entrepreneurial activities in order to unlock greater employment growth and economic competitiveness (European Commission 1998).

GEM (2013) reports that entrepreneurship and entrepreneurial activities in Poland have changed positively in the last few years. The negative perception of entrepreneurship dilutes, however, a key challenge is to increase the quality of entrepreneurial activities. According to GEM (2013), one-third of entrepreneurial activities are necessity driven and only around 50% were opportunity-driven activities. The expansion of digital commerce provides great opportunities to facilitate national and international entrepreneurial activities. For example, CF provides entrepreneurs a setting to validate nascent business ideas and to internationalise without requirements of large up-front investments to move physically. Further, CF can provide a setting for educating potential entrepreneurs. In fact, developing business plans and testing them through crowdfunding pitches is integrated in the curriculum of several international business schools as part of entrepreneurship education. To stimulate entrepreneurial activity rather than entrepreneurship it is necessary to encourage an entrepreneurial culture that is based on innovation and risk-taking. Access to finance creates a critical role to support these principles; however, fostering social and cultural aspects to encourage entrepreneurial ambition is important too. The underdevelopment of a diversity in risk capital leads to barriers for knowledge-based entrepreneurial ventures to enter the market and develop internationally. Therefore, while it is expected that more alternative finance mechanisms will continue to enter international markets, it is significant to

 DOI 10.7172/1644-9584.56.11

target the national risk capital market and encourage the development of entrepreneurs rather than entrepreneurship policy (European Commission 2013b).

5. Conclusion

By discussing the risk capital evolution through a Schumpeterian evolutionary perspective, we argue that crowdfunding is not the next "big thing" in risk capital supply, but the emergence and development is rather a continuity of the capital market development that aligns with economic, social and technological changes as exemplified with different examples in this paper. We call for a more careful discussion about the 'newness' of crowdfunding among practitioners and scholars. Second, we expect that historically embedded risk capital instruments will continue to evolve to align to macro- and micro-economic developments. Third, with reference to Schumpeter's (1942) notion that new financing forms develop as appropriate to new technologies and organisational forms we expect more diversity of risk capital supply. A progress that is evidenced in recent years through the growing introduction of alternative finance mechanisms and Fintech firms. The critical factor for a successful national risk capital market composition is that private and governmental capital supply are complementing each other and do not address different investment groups or stages (e.g. BANs supply start-ups, VC supply later-stage ventures, and government supplies SME). Interaction between 'traditional' risk capital providers and alternative capital supply instruments are important to foster an overall entrepreneurial finance market that stimulates entrepreneurial activities and innovation creation.

Our paper also has contributions for entrepreneurship policy. Risk capital institutions must carefully investigate the opportunities of ICT enabled approaches to leverage the digitalisation process for weakening uneven sectoral and regional capital supply. Further, risk capital institutions must be thickened. In other words, the traditional risk capital market is often not accessible for nascent entrepreneurs due to time and cost intensive due diligence procedures and the requirement to provide secured financial backing for investment. Thus, high level of BA and VC investments are required to foster entrepreneurial activities. To foster a sophisticated 'informal' risk capital market it is crucial to put instruments in place that build and sustain trust among all stakeholders (e.g. government, investors and entrepreneurs). A functional risk capital market will only flourish when (a) all instruments are in place to enable diversity of risk capital, (b) the national economy fosters innovation and the international commercialisation of innovation, and (c) the government stimulates entrepreneurial activity to build up the capital demand side (create entrepreneurs), and not limit its activities on building up the capital supply side through entrepreneurship policy.

References

Afuah, A. & Tucci, C.L. (2012). Crowdsourcing As a Solution to Distant Search. *Academy of Management Review*, *37* (3), 355–375.

Aydin, D.G. & Takay, B.A. (2012). Schumpeterian Business Cycles: Innovations, Bubbles and Global Crises. *International Journal of Humanities and Social Science*, *2* (7), 123–128.

Baeck, P., Collins, L. & Zhang, B. (2014). Understanding Alternative Finance. The UK Alternative Finance Industry Report 2014. *Nesta* [Online]. Available at: https://www.nesta.org.uk/sites/default/files/understanding-alternative-finance-2014.pdf (Accessed: 5 June 2015).

Barnes, T. & Gertler, M. (1999). *The New Industrial Geography: Regions, Regulations and Institutions*. London: Routledge.

Bell, C.G. & McNamara, J.E. (1991). *High-Tech Ventures: The Guide for Entrepreneurial Success*. New York: Perseus Books Publishing.

Belleflamme, P., Lambert, T. & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, *29* (5), 585–609.

Bester, H. (1994). The Role of Collateral in a Model of Debt Renegotiation. *Journal of Money, Credit and Banking*, *26* (1), 72–86.

Boyler, R. & Saillard, Y. (2001). *Régulation Theory: The State of the Art*. Paris: Routledge.

Brabham, D.C. (2008). Crowdsourcing as a Model for problem Solving: An Introduction and Cases. *Covergence*, *14* (1), 75–90.

Bruton, G., Khavul, S., Siegel, D. &Wright, M. (2014). New Financial Alternatives in Seeding Entrepreneurship: Microfinance, Crowdfunding, and Peer-to-Peer Innovations. *Entrepreneurship Theory and Practice*, *39* (1), 9–26.

Bygrave, W.D. & Timmons, J.A. (1992). *Venture Capital at the Crosscroads*. Boston: Harvard Business Review Press.

Carlsson, B. & Stankiewicz, R. (1995). On the Nature, Function and Composition of Technological Systems. In B. Carlsson (ed.), *Technological systems and economic performance: the case of factory automation*. Boston: Kluwer Academic Publishers.

Castells, M. (1994). *Technopoles of the World: The Making of 21st Century Industrial Complexes*. London: Routledge.

Castells, M. (1997). *The Power of Identity: The Information Age: Economy, Society and Culture*. Oxford: Blackwell.

Chircu, A.M. & Kauffman, R.J. (2000). Limits to Value in Electronic Commerce-Related IT Investments. *Journal of Management Information Systems*, *17* (2), 59–80.

Colombo, M.G. & Grilli, L. (2006). Funding Gaps? Access To Bank Loans By High-Tech Start-Ups. *Small Business Economics*, *29* (1–2), 25–46.

Cooke, P., Uranga, M.G. & Etxebarria, G. (1997). Regional innovation systems: Institutional and organisational dimensions. *Research Policy*, *26* (4–5), 475–491.

CSES (2012). Evaluation of EU Member States' Business Angel Markets and Policies – Final Report [Online]. Available at: http://ec.europa.eu/enterprise/dg/files/ba-rep_en.pdf (Accessed: 18 April 2015)

Dosi, G. (1982). Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change. *Research Policy*, *11* (3), 147–162.

Eckhardt, J.T., Shane, S. & Delmar, F. (2006). Multistage selection and the financing of new ventures. *Management Science*, *52* (2), 220–232.

Espring-Andersen, G. (1996). *Welfare States in Transition: National Adaptations in Global Economies*. London: Sage.

Eurobarometer (2012). Entrepreneurship in the EU and Beyond. *Flash Eurobarometer 354* [Online]. Available at: http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf (Accessed: 12 April 2015)

Europa (2015). "Summaries of EU legislation – Glossary." [Online]. http://europa.eu/legislation_summaries/glossary/structural_cohesion_fund_en.htm

 DOI 10.7172/1644-9584.56.11

European Commission (1998). Fostering Entrepreneurship in Europe: Priorities for the Future [Online]. Available at: http://ec.europa.eu/enterprise/policies/sme/files/support_measures/docs/fostering-98_en.pdf (Accessed: 12 April 2015)

European Commission (2013a). Crowdfunding in the EU – Exploring the added value of potential EU action. [Online]. Available at: http://ec.europa.eu/internal_market/consultations/2013/crowdfunding/docs/consultation-document_en.pdf (Accessed 14 October 2014).

European Commission (2013b). Entrepreneurship 2020 Action Plan: Reigniting the entrepreneurial spirit in Europe [Online]. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF (Accessed: 14 October 2014).

European Commission (2014). Research and Innovation Performance in the EU: Innovation Union progress at country level [Online]. Available at: http://ec.europa.eu/research/innovation-union/pdf/state-of-the-union/2014/iuc_progress_report_2014.pdf (Accessed: 27 August 2015).

EVCA (2013). Central and Eastern Europe Statistics 2013. *European Private Equity & Venture Capital Association* [Online]. Available at: http://www.evca.eu/media/259990/_evca_bro_sp_cee2013.pdf (Accessed: 20 November 2014).

Freeman, C. & Perez, C. (1988). Structural Crises of Adjustment, Business Cycles and Investment Behaviour. In G.Dosi, C. Freeman, R. Nelson, G. Silverberg & L. Soete (eds.), *Technical Change and Economic Theory*, 38–66. London: Fancis Pinter.

Freeman, C. & Soete, L. (1987). *Technical Change and Full Employment*. Oxford: Blackwell.

Freeman, C., Clark, J. & Soete, L. (1982). *Unemployment and Technical Innovation: A Study of Long Waves and Economic Development*. London: Continuum International Publishing.

Frydrych, D. Bock, A.J. Kinder T. & Koeck, B. (2014). Exploring entrepreneurial legitimacy in reward-based crowdfunding. *Venture Capital: An International Journal of Entrepreneurial Finance, 16* (3), 247–269.

Frydrych, D., Bock, A.J. & Kinder, T. (2015). Creating Project Legitimacy – The Role of Entrepreneurial Narrative in Reward-Based Crowdfunding. In J. Brabet, I. Maque & J. Méric (eds.), *The International Research Handbook of Crowdfunding*. London: Emerald.

Gartner (2008). Gartner Says Social Banking Platforms Threaten Traditional Banks for Control of Financial Relationships. *Gartner Newsroom* [Online]. Available at: http://www.gartner.com/newsroom/id/597907 (Accessed: 20 February 2014).

Geels, F.W. (2004). From sectoral systems of innovation to socio-technical systems: insights about dynamics and change from sociology and institutional theory. *Research Policy*, *33* (6–7), 897–920.

GEM (2013). GEM Poland 2013 [Online]. Available at: http://www.gemconsortium.org/report/49065 (Accessed: 29 August 2015).

Glaeser, E.L., Kerr, W.R. & Ponzetto, G.A.M. (2010). Clusters of entrepreneurship. *Journal of Urban Economics*, *67* (1), 150–168.

Gompers, P.A. & Lerner, J. (2001). The Venture Capital Revolution. *The Journal of Economic Perspectives*, *15* (2), 145–168.

Gregson, G. (2014). *Financing New Ventures: An Entrepreneur's Guide to Business Angel Investment*. New York: Business Expert Press.

Harrison, R.T. (2013). Crowdfunding and the Revitalisation of the Early Stage Risk Capital Market: Catalyst or Chimera? *Venture Capital: An International Journal of Entrepreneurial Finance, 15* (4), 283–287.

Harrison, R.T., Don, G., Johnston, K.G. & Greig, M. (2010). The early-stage risk capital market in Scotland since 2000: issues of scale, characteristics and market efficiency. *Venture Capital: An International Journal of Entrepreneurial Finance*, *12* (3), 211–239.

Hollis, A. & Sweetman, A. (1997). Complementarity, Competition and Institutional Development: The Irish Loan Funds Through Three Centuries. *University of Calgary Department of Economics Discussion Paper 97-06* [Online]. Available at: http://econwpa.repec.org/eps/eh/papers/9704/9704003.pdf (Accessed: 27 September 2014).

Hollis, A., & Sweetman, A. (2001). The life-cycle of a microfinance institution: the Irish loan funds. *Journal of Economic Behavior & Organization*, *46* (3), 291–311.

Hulme, M.K. & Wright, C. (2006). *Internet Based Social Lending: Past, Present and Future*. London: Social Futures Observatory.

Huyghebaert, N. & Van de Gucht, L.M. (2007). The Determinants of Financial Structure: New Insights from Business Start-ups. *European Financial Management*, *13* (1), 101–133.

Innovation Union Scoreboard (2015). Innovation Union Scoreboard 2015 [Online]. Available at: http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/files/ius-2015_en.pdf (Accessed: 29 August 2015).

Ingram, C., Teigland, R. & Vaast, E. (2014). Solving the Puzzle of Crowdfunding: Where Technology Affordances and Institutional Entrepreneurship Collide. *System Sciences (HICSS)* [Online]. Available at: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6759162 (Accessed: 25 January 2015).

Johnson, D.R. (2008). Virtual Companies. [Online]. Available at: http://www.slcapex.com/forums/topic/general/2005 (Accessed: 8 December 2014)

Kickstarter (2015). *Kickstarter* [Online]. Available at: https://www.kickstarter.com/ (Accessed: 4 June 2015).

Kim, K. & Hann, I-H. (2013). Does Crowdfunding Democratize Access to Capital? A Geographical Analysis. I*NFORMS Conference on Information Systems and Technology* [Online]. Available at: http://innovisops.com/papers/cist2013_submission_46.pdf (Accessed: 3 May 2014).

Kleemann, F., Voß, G.G. & Rieder, K. (2008). The Commercial Utilization of Consumer Work through Crowdsourcing. *Science, Technology & Innovation Studies*, *4* (1), 5–26.

Kondratieff, N.D. (1979). The Long Waves in Economic Life. *Review (Fernand Braudel Center)*, *2* (4), 519–562.

Koning, R. & Model, J. (2013). Social Influence Mechanisms in Crowdfunding Cascades: When Nothing is Better than Something. *Academy of Management Annual Meeting Conference Paper* [Online]. Available at SSRN: http://dx.doi.org/10.2139/ssrn.2308161 (Accessed: 9 May 2014).

Król, K. (2015). *Crowdfunding w Polsce* [Online]. Available at: http://crowdfunding.pl/crowdfunding-w-polsce/ (Accessed: 26 May 2015)

Kuhn, T. (1962). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Landström, H. & Mason, C. (2012). *Handbook of Research on Venture Capital: Volume 2. A Globalizing Industry*. Glos, UK: Edward Elgar Publishing Limited.

Lane, F.C. (1973). *Venice, A Maritime Republic*. London: John Hopkins University Press.

Lehner, O.M. (2013). Crowdfunding social ventures: a model and research agenda. *Venture Capital: An International Journal of Entrepreneurial Finance, 15* (4), 289–311.

Luo, Y., Sun, J. & Lu Wang, S. (2011). Emerging Economy Copycats: Capability, Environment, and Strategy. *Academy of Management Perspectives*, *25* (2), 37–56.

Macht, S.A. & Weatherston, S. (2014). The Benefits of Online Crowdfunding for Fund-Seeking Business Ventures. *Strategic Change, 23* (1–2), 1–14.

MacLeod, G. (2001). New Regionalism Reconsidered: Globalization and the Remaking of Political Economic Space. *International Journal of Urban and Regional Research*, *25* (4), 804–829.

Malerba, F. & Orsenigo, L. (1997). Technological Regimes and Sectoral Patterns of Innovative Activities. *Industrial and Corporate Change, 6* (1), 83–118.

 DOI 10.7172/1644-9584.56.11

Marom, D. (2013). Crowd-Empowered Microfinance. In J-P. Gueyie, R. Manos & J. Yaron (eds.), *Microfinance in Developing Countries: Issues, Policies and Performance Evaluation*, 127–151. Hampshire: Palgrave MacMillan.

Mason, C.M., Harrison, R.T. & Botelho, T. (2015). Business Angel Exits: Strategies and Processes. In J.G. Hussain & J.M. Scott (eds.), *International Research Handbook on Entrepreneurial Finance*. London: Edward Elgar. [Online] Available at SSRN: http://ssrn.com/abstract=2605912 (Accessed: 5 June 2015).

Massolution (2015). 2015CF –Crowdfunding Industry Report. *Massolution* [Online]. Available at: http://www.crowdsourcing.org/editorial/global-crowdfunding-market-to-reach-344b-in-2015-predicts-massolutions-2015cf-industry-report/45376 (Accessed: 20 May 2015).

Mollick, E. (2014). The Dynamics of Crowdfunding: An Explorative Study. *Journal of Business Venturing, 29* (1), 1–16.

Morduch, J. (1999). The Microfinance Promise. *Journal of Economic Literature*, *37* (4), 1569–1614.

Nelson, R.R. (1993). *National Innovation Systems: A Comparative Analysis*. Oxford: Oxford University Press.

Nelson, R.R. & Wintern, S.G. (1982). The Schumpeterian Tradeoff Revisited. *The American Economic Review*, *72* (1), 114–132.

OECD (2014). Entrepreneurship at a Glance 2014. *OECD Publishing* [Online]. Available at: http://dx.doi.org/10.1787/entrepreneur_aag-2014-en (Accessed: 6 June 2015).

Peneder, M. & Resch, A. (2015). Schumpeter and venture finance: radical theorist, broke investor, and enigmatic teacher. *Industrial and Corporate Change*, doi: 10.1093/icc/dtv004

Ramadani, V. (2009). Business angels: who they really are. *Strategic Change*, *18* (7–8), 249–258.

River Campus Libraries (2015). Collection Highlights: Pope. The Iliad of Homer [Online]. Available at: https://www.lib.rochester.edu/index.cfm?PAGE=3948 (Accessed: 3 June 2015).

Roodman, D. (2012a). *Due Diligence: An Impertinent Inquiry Into Microfinance*. Washington D.C.: Brookings Institution Press.

Roodman, D. (2012b). The Lessons of Microfinance History. *CGAP* [Online]. Available at: http://www.cgap.org/blog/lessons-microfinance-history (Accessed: 26 October 2014).

Rosenberg, N. (1992). Science and technology in the twentieth century. In G. Dosi, R. Giannetti & P.A. Toninelli (eds.), *Technology and Enterprise in Historical Perspective*, 63–96. Oxford: Clarendon Press.

Rossi, M. (2014). The New Ways to Raise Capital: An Exploratory Study of Crowdfunding. *International Journal of Financial Research, 5* (2), 8–18.

Sahlman, W.A. (1990). The structure and governance of venture-capital organizations. *Journal of Financial Economics*, *27* (2), 473–521.

Schumpeter, J.A. (1942). *Capitalism, Socialism and Democracy*. New York: Harper and Row.

Sen, R. & King, R.C. (2003). Revisit the Debate on Intermediation, Disintermediation and Reintermediation due to E-commerce. *Electronic Markets*, *13* (2), 153–162.

Shenkar, O. (2010). Copycats: how smart companies use imitation to gain a strategic edge. *Strategic Direction*, *26* (10), 3–5.

Spigel, B. (2015). The Cultural Governance of Entrepreneurial Ecosystems. In I. Bernhard (ed.), *Geography of Growth: The Frequency, Nature and Consequences of Entrepreneurship and Innovation in Regions of Varying Density: Uddevalla Symposium 2014*, pp. 767–786.

Stamp, J.C. (1931). The Report of the Macmillan Committee. *The Economic Journal*, *41* (163), 424–435.

Stiglitz, J.E. (2000). The Contributions of the Economics of Information to Twentieth Century Economics. *The Quarterly Journal of Economics*, *115* (4), 1441–1478.
Stiglitz, J.E. & Weiss, A. (1981). Credit Rationing in Markets with Imperfect Information. *The American Economic Review*, *71* (3), 393–410.
Stinchcombe, A.L. (1965). Social structure and organization. In J.G. March (ed.), *Handbook of Organizations*, 142-193. Chicago, IL: Rand-McNally.
Thatcher, O.J. (1907). The Library of Original Sources (Milwaukee: University Research Extension Co) [Online]. Available at: http://legacy.fordham.edu/halsall/mod/1497degama.asp (Accessed: 23 May 2015).
Tower-Pierce, J., Gillies, P. & Krolik, L. (2009). *Virtual Incorporation: A Lawyer's Guide to the Formation of Virtual Corporation*. Chicago: ABA Publishing.
Varadarajan, R., Yadav, M.S. & Shankar, V. (2008). First-mover advantage in an Internet-enabled market environment: conceptual framework and propositions. *Journal of the Academy of Marketing Science*, *36* (3), 293–308.
Villani, E. (2013). Crowdfunding. The new buzzword in Capital Formation. *Kevin M. McGovern Family Center for Venture Development in the Life Sciences* [Online]. Available at: http://www.mcgoverncenter.cornell.edu/docs/Crowdfunding%20%5BVillani%5D.pdf (Accessed: 19 February 2014).
Wardrop, R., Zhang, B., Rau, R. & Gray, M. (2015). *Moving Mainstream. The European Alternative Finance Benchmarking Report*. Cambridge: Wardour Drury House.
Witt, P. & Brachtendorf, G. (2006). Staged Financing of Start-ups. *Financial Markets and Portfolio Management*, *20* (2), 185–203.
Woodward, R., Wojnicka, E., & Pander, W. (2012). Innovation Systems and Knowledge-Intensive Entrepreneurship: a Country Case Study of Poland. *Case Network Studies and Analyses No. 446* [Online]. Available at: http://www.case-research.eu/sites/default/files/publications/CNSA_2012_446.pdf (Accessed: 29 August 2015).
Yong, L. & Zahra, S. (2012). Formal institutions, culture, and venture capital activity: A cross-country analysis. *Journal of Business Venturing*, *27* (1), 95–111.

 DOI 10.7172/1644-9584.56.11