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**S. Papagiannidis;F. Li. Skills Brokerage: A new model for business start-ups in the networked economy. *European Management Journal* 2005, 23(4), 471-482.**

doi:10.1016/j.emj.2005.06.002

## **Skills Brokerage:**

### **A New Business Model for Start-ups in the Networked Economy**

#### **Abstract**

This paper presents a new business model based on skill brokerage, aiming to facilitate business start-ups and enhance their chance of survival in the context of the networked economy. The model is based on the concept of an entrepreneur sharing the venture's returns or even ownership with a skills broker in exchange for skills. This exchange can significantly reduce barriers in network-oriented and information-driven markets, where skills are of critical importance. It can also significantly alleviate cash flow problems, typical of many new start ups and a main cause of business failure. The model is particularly relevant to information-intensive ventures, where the value of a service is often significantly higher than the actual cost incurred by the skills providers in providing the service. If the model can be made to work, it can not only significantly increase the number of business start-ups, but also enhances their chances of survival. In this paper, we will illustrate this new business model, by providing three case studies, and explore its implications for theory, practice and policy.

## **Skills Brokerage:**

### **A New Business Model for Start-ups in the Networked Economy**

#### **Introduction**

Lack of skills is a common component of underperformance in start-up companies. If this lack of skills could be addressed and the cost of acquiring skills could be minimized, then it follows that the chances of new ventures succeeding would be maximized.

This paper presents the skills brokerage business model, which aims not only to increase start-up rates, but also to help ventures survive and grow. The model is based on the concept of an entrepreneur sharing the venture's returns, or even ownership, with a skills broker in exchange for skills. The skills broker may just broke the skills required for the venture or actually provide them himself. In the context of this paper we consider the skills brokers as skills providers who independently negotiate the skills exchanges.

The exchange can significantly reduce barriers in network-oriented and information-driven markets, where skills are of critical importance. "Entrepreneurs or intrapreneurs who develop knowledge and skills than can be readily redeployed in other ventures can more safely enter into new markets, products or technologies." (Zahra & Dess, 2001).

The model can also significantly alleviate cash flow problems, typical of many new start ups and a main cause of business failure. The example of Digital Media Houses (DMH) is given in order to illustrate the key issues. Skill brokerage has a wide range of implications. We provide an outline for the main ones for entrepreneurs, policy makers, business incubators, venture capitalists and academics.

## **The skills brokerage business model**

According to Low (2001), although entrepreneurship is not a new research area it has become a popular topic in the last 15-20 years, mainly driven by fundamental changes in the business environment and the demands of the 'new economy'. *“The opportunity is to provide models and concepts to explain and facilitate commerce in the new economy, while the potential pitfall is that this task is too broad and unfocused to be achievable.”* (Low, 2001) The skills brokerage business model is such a model, aiming at facilitating venture creation by addressing one of the main reasons hindering companies performance: the lack of skills (Kakati, 2003). It can also reduce the amount of cash required by the new start up, especially during early stages of its operation, a major cause of new venture failure.

Start-up costs and lack of skills are two of the main challenges that entrepreneurs have to face when starting up new ventures. When it comes to e-business ventures, these costs usually translate to the cost for developing ICT systems and professional support services, i.e. services that are very skills-oriented. If these skills were to be provided by organisations or professionals in exchange for a share of the venture's returns or even a minority share of the venture, then the risks involved in starting up would be significantly reduced. Even in industries where skills play an indirect role, one could still find ways to reduce the venture's risks using skills (Sonfield & Lussier, 1997). Equally importantly, bringing skills in-house and locking them there for a period of time can help the venture survive and grow.

Skills brokerage is fundamentally different from normal business exchanges and transactions, in that the exchange involves direct access to the venture's returns and may

involve sharing part of the ownership. As a result, the exchange leads to a medium or long-term partnership. The venture does not just briefly benefit from an injection of skills and expertise. It gets to access these throughout the time of the agreement between the entrepreneur and the skills broker. From a skills provider's perspective, this is often an attractive option, because the actual costs incurred in providing a service are often significantly less than the market value of the service the new business venture seeks and acquires. This is especially so in information-intensive activities where the cost of information to the owner/provider is often significantly less than the value of the information to particular buyers.

Skills brokerage is not the same as outsourcing. If sufficient resources are available, outsourcing can help overcome skill gaps. Still the key management concern of how to undertake sourcing to improve operational efficiency or to enhance value-adding business capability remains (Chung, Yam, & Chan, 2004). Skills brokerage can address both the lack of resources and the value-adding concern as external skills are locked in for a certain time.

As a model of facilitating entrepreneurship, skills brokerage can be studied through two main 'lenses'; namely that of the venture and that of the skills broker.

In the first case the venture is the point of focus with the entrepreneur and the skills brokers placing themselves around it (Figure 1). Fundamentally, the entrepreneur does not differ from the rest of the skill brokers, in that he brings his own skill set to the project, including opportunity recognition (Park, 2005). In fact, we consider all skills brokers and investors, especially investors who get actively involved in the venture (Erikson & Sorheim), to be entrepreneurial in nature, otherwise they would not have the

propensity to act as brokers and take on risks. However, we distinguish the entrepreneur from the rest, because he is the one who will conceive the idea and lay the foundations for the project. Skills brokers are actually acting similarly to the entrepreneur, i.e. looking for opportunities (Landstrom, 1998). The only difference is that they invest their skills in an already identified opportunity and the venture established to exploit it.

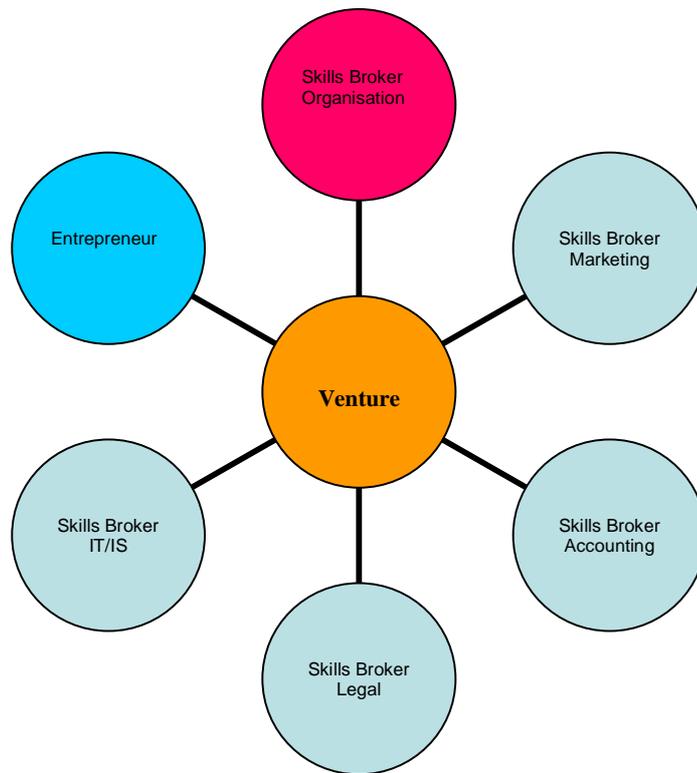
Of course, the idea itself is only part of the equation. The entrepreneur needs to have many developed skills. For example, Chen et al. (Chen, Greene, & Crick, 1998) suggest the following key skills areas: marketing, innovation, management, risk taking and financial control. If any of these areas are not developed enough, the skills gap can be covered by a skills broker.

In the second case the model can be viewed from the skill broker's point of view. The focus is on sharing the broker's skills among the projects with which he is involved, making skills brokerage his business model. The skills broker, as an entrepreneur, actively seeks opportunities to invest his skills, taking on risk in order to assume greater returns. He can also act as facilitator for skill sharing among the projects themselves, forming a link between them.

The interactions between the skills broker and the entrepreneur, as well as the interactions between the skills brokers themselves, will differ from venture to venture, as will the skills offered and the type of exchange that will take place. These will depend entirely on the negotiating agents. For example, an entrepreneur may offer 10% stake in a company in exchange for software development time or offer 25% of the profits for three years in exchange for marketing services. A combination of these exchanges can take place for each venture. Entrepreneurs and skill brokers could even auction their offerings

in order to attract better deals. For example, an entrepreneur may invite skills brokers to bid, on a specific service or skill, and then select the best offering.

Looking at the skills brokerage model as the broker's business model, one may initially question its viability, as the skills investments return may take time to reach the skills broker. One solution is for the skills-broker to negotiate immediate on-going payments at low rates that would still allow the venture to operate and ensure its viability. Such deals are up to the entrepreneur and the skills brokers to reach. One should also remember that money is not always the main motivation for entrepreneurs (Amit, MacCrimmon, Zietsma, & Oesch, 2001) and that investors are not always interested in short-term economic returns (Landstrom, 1998). Also, E-Business models do not have to generate profit immediately to be strategically important (Lam & Harrison-Walker, 2003). At the end of the day, if all businesses could break even from the very first day, then there would have been no challenges in the business world!



*Figure 1: The venture is the point of focus with the entrepreneur and the skills brokers placing themselves around it.*

In both cases mentioned above the model aims to address the main questions posed by Shane and Venkataraman's (2000) definition of entrepreneurship and framework.

Their definition focuses on the following issues:

- why, when and how opportunities for the creation of goods and services come into existence;
- why, when and how some people and not others discover and exploit these opportunities; and
- why, when and how different modes of action are used to exploit entrepreneurial opportunities.

By focusing on the opportunity and its exploitation Shane and Venkataraman focused more on the process that the entrepreneurs follow in order to create value and hence shift the interest away from “who” to “how”. This allows them to avoid the dead end of “trait research” (Davidsson, 2003). In the skills brokerage business model there are no assumptions on the characteristics and attributes of the entrepreneurs involved. They are only required to assume the risks of being involved in a venture. The model’s focal point is on how risks can be managed and minimised, providing an alternative way for facilitating venture creation and growth.

In addition, their definition does not pose any restriction on the type, age or ownership of the actor who will be perusing an opportunity, and hence their framework covers both new ventures and corporate entrepreneurship (Zahra, Kuratko, & Jennings, 1999). This is in contrast with other definitions that require the emergence of a new organisation as a requirement for entrepreneurship (Gartner, 1988).

This is of importance for our model as both the entrepreneur and the skills broker may be coming from an existing corporate environment, i.e. the model does not impose any limitations on the background or state of the entrepreneurs involved and hence does not exclude corporate venturing (Carland & Carland, 1988). In turbulent environments companies have to appreciate the importance of innovation, risk taking and proactive entrepreneurial behaviour if they are to survive (Zahra et al., 1999). Skill brokerage provides established organisations with a way to utilise existing knowledge, skills and resources in new innovative ways.

Similarly, their definition does not pose any requirements on the modes of action that will be used to exploit an opportunity like other definitions do. For example, Schumpeter (1934) identified five innovative strategic postures as indications of entrepreneurial behaviour, while Drucker (1985) postulated that innovation is a requirement for entrepreneurship. In such cases one is in the difficult situation of having to draw a line in an attempt to define the boundary of innovation. In fact, one wonders “whether the first entrant in an industry should be considered the entrepreneurial firm while all subsequent entrants would be small businesses” (Gartner, 1988). For the skills broker this is of interest as value can be generated by reapplying skills, information, experience and technology from previous projects. Reusing these, would dilute the importance of their value and would render any future use less important.

If one assumes that the use of skills can actually lower barriers, then it follows that more players may attempt to enter a market, which would lead to increased competition. Such competition boost would force all market players to become more innovative in an attempt to stay ahead of their competitors. As a result, skills brokerage could indirectly force all organisations in a market to become more competitive.

### **Information-driven markets**

Skills are of critical importance for information driven markets and businesses, like e-business, as they are usually the cornerstone of the firm’s offering. Information and technology can be reused at a very small cost or even at no cost at all, provided one owns the intellectual property rights. This allows the skill broker to offer his skills and services at costs that are much lower than their market value, reducing the risks involved for the skill provider.

For example, if an entrepreneur wanted to start an online shop he would have had to commission the technology to a developer. If a second entrepreneur also commissioned an online shop, the developer could have offered the technology he had already developed, in exchange for venture returns or even stakes in the venture. For the developer there is very little or no additional cost in reinstalling the software, while the entrepreneur can divert the capital that would have otherwise needed to invest in the technology for other activities, e.g. marketing, thereby easing the pressure for capital requirement and cash flows.

### **An example – Digital Media House (DMH)**

Digital media is a catch-all term for all forms of electronic communication. Digital Media House (DMH) sizes can range from micro-sized organisations, including sole-traders, to large organisations with significant numbers of developers.

We selected a high-technology sector because of its importance in both the local and global economies (Park, 2005), and its characteristics of high career mobility and new venture initiation (Amit et al., 2001). In addition high-technology firms usually work in truly extreme environments where “survival, let alone growth, is dependent on finding and exploiting a reliable innovation strategy quickly” (Park, 2005).

DMHs possess the tools for the creation of value on electronic media, such as the Internet. These tools are often applied to a wide range of marketplaces via their clients’ projects (e.g. a DMH may build a web site for a car manufacturer to promote their latest models and then create a B2B auction service). This is very similar to the software industry providing the enabling tools and infrastructure to IT professionals in virtually all other industries (Nowak & Grantham, 2000).

Traditionally, DMHs offer their services for a fee which is usually a reflection of the time required to implement the project's specification. In our model, instead of charging the customer for implementing the specification, the DMH becomes part of the project itself, by offering its skills. In return, the customer, who is then promoted to a partner, offers part of the venture's returns or even shares in the venture, locking the DMH to the project.

The decision as to whether a DMH will get involved in a project as a skills broker or not, will require assessment of the project itself. This means that skills that were not required in their market may be needed in order to make a judgement on the potential of a project. Normally, a DMH would implement a specification irrespective of whether this corresponded to a good business model. In a skills brokerage scenario a decision to get involved in a project will rely on the DMH assessing the business plan and deciding whether the project can justify the risks involved.

The primary argument against such an approach is that working on many projects simultaneously will dilute the DMH's attention and will jeopardise the success of all the projects involved, including the viability of the DMH itself. This is a challenge that investors with big portfolios may face (Kanniainen & Keuschnigg, 2004).

On the other hand, such an approach could provide:

1. Higher returns for successful projects. Projects do not generate one-off revenues, but continuous returns.
2. Resilience. If the core activity of an organisation is threatened the viability of the organisation is also threatened. Multiple activities will mean that no single activity/project can bring an organisation to a halt.

3. Utilisation of resources that may have otherwise not been used, for example unused development time between projects.
4. Networking and access to resources. The skills broker's network can spread to a much wider extent, as it will also be utilising the partners' networks.

From the partners point of view utilising the skills offered by a skill broker means that that he has a platform from which he can launch projects that otherwise he would not start, due to the start-up costs. In the skill broker's case these costs will translate to the time required for the DMH to complete a project, with the final 'real' cost usually being a fraction of what the customer would have been required to pay.

The skills brokerage business model is also favoured by the fact that most digital media projects are small-scale projects with short timetables. As such, the involvement of a DMH in a project will not require extended commitment. Once the project is deployed, the partners will look over the project, freeing the skill broker to undertake a new project. Still, the DMH will have to monitor the partner's activities, which raises questions about the organisation's structure and the administration practices that have to be adopted.

The skills brokerage business model has another attraction for a DMH. A major challenge for new media companies is valuating their work. A project is usually valued based on many parameters, such as the time required to complete the project, the resources needed, the perceived value of the project, the financial status of the client and so on. Still, the final price may not necessarily translate to the value of the project or to what the customer may have been willing to pay. "As markets set prices on known technology not new methods, that may be discovered in the future, prices do not reflect

the relative benefits of different innovations if they would be introduced in the future.” (Eckhardt & Shane, 2003) In addition, in most cases the customer tries to minimise the fees involved by taking advantage of the many DMHs that will bid for a project. Even worse for the DMH, the globalisation that the Internet resulted in means that inexpensive DMH markets, such as India, can often offer more competitive prices for a project. In a skills brokerage scenario, pricing is replaced by the valuation of what the skills are worth in the context of the project. This prevents commoditisation of the services they provide by using a risk-assumptive market-based proactive and flexible approach to pricing and valuing of their work; what Shindehutte and Morris (2001) refer to as entrepreneurial pricing.

Finally, the DMH could become a skills broker for their own ideas using their skills to start new ventures and utilising unused resources; namely free developing time and already-developed technology. An example of such approach is Friends Reunited, which started as a bedroom-based company before becoming a venture worth millions of pounds. The concept behind Friends Reunited was conceived by Julie Pankhurst who did not have the skills to build the site. Fortunately for her, her husband Stephen did! Acting as a skills broker he wrote the technology to bring the idea to life, without making any significant financial investment.

### **Case studies**

Identifying case studies has proven to be a major challenge as it is not always clear or even possible to know the relationships among the venture’s stakeholders. To address this issue social mapping techniques could be employed to map entrepreneurial networks in

an attempt to find out whether brokerage relationships exist and to what extent. Then, these could be supplemented by interviews with the stakeholders of each venture.

In this section we present three mini-case studies of North East of England based companies that employed the skills brokerage model. Two of these cases are based on the experiences of one of the authors, while the third is based on an interview with the stakeholders of the venture.

### **Gaia Fulfilment Ltd**

Gaia Fulfilment (<http://www.gaia-fulfilment.co.uk>) is a leading company in Collateral Fulfilment - that is the delivery of high quality printed marketing and technical collateral world wide for next day delivery via the web. Gaia delivers products and services to organisation that recognize the value and power of quality, accurate and timely business documents, by offering a diverse product set of printing solutions. Gaia's customers can order anything from a business card and business brochures to fully branded documents, e.g. for direct mail campaigns. The minimum order quantity is one document, something which Gaia achieved by employing digital printing devices, as traditional lithographic printing is not economically viable for very short print jobs. Its founders were Andy Bex and Ian Scanlan. Andy Bex, a managing director of two other IT companies, brought his technical and managerial skills to the project, while Ian Scanlan, who had worked for 15 years in sales for a large corporate, brought his marketing and sales skills.

When Gaia decided to extend their product portfolio, they recruited Savvas Papagiannidis to develop part of the technology. Initially, the relationship was based on a traditional outsourcing model. However it was soon realised that this was not a viable

model as the amount of development time required would have stretched the company's cash flow. The two sides agreed to work on a profit sharing basis which was then converted into equity as Savvas Papagiannidis became an integral part of the project.

As a result, the company managed to survive four years of development and came out of the development process with seven products. Gaia's software solutions gained national recognition for e-business innovation by being one of a handful of finalist at the 2004 eCommerce Awards organised by the UK Department of Trade and Industry. If Gaia had not employed the model and simply outsourced development, the company would have had to divert its cash resources to the development affecting the rest of the business development. Moreover, by bringing skills in house and employing the skills brokerage model, Gaia ensured that Savvas Papagiannidis' interest in the business was maintained, which translated not only to contributions to the technical development, but to the business development as well.

From the skills broker's point of view being involved in a promising venture justified lowering the short-term return expectations. Innovation and the excitement of being involved in a brand new technology were of more value compared to short term monetary returns (Amit et al., 2001; Landstrom, 1998). Such entrepreneurial approach though was at times very stressful, as the skills broker had to generate his survival income through other projects. Also, although in this case the Gaia management team saw the benefits of bringing skills in-house, there is no guarantee that the broker will eventually see through the long term benefits. This is of particular importance for projects in which the skills broker was not involved from the very beginning. Hence, trust is of critical significance, especially in cases where there are implicit verbal agreements instead of contractual ones.

Gaia's forecasted license sales alone for 2006 are £150k, in addition to ongoing printing revenue. As the licenses are growing and are renewable it gives the business a significant book value giving a significant return to the skill brokers who invested in the company. As with most business models a skill broker must be capable of seeing a proportionate return on their skill investment, in this case where the work was over a long period and quite intensive the return must also be great. Unlike many business models where growth can be stilted by being limited to key people, Gaia has the benefit of potentially growing exponentially being a global technology-based organisation.

### **Official Player Sites Ltd**

Official Player Sites (<http://www.officialplayersites.com>) is an example of a venture that was established when two skills brokers came up with the business idea. The company was incorporated in 2002, bringing together the technical skills and access to IT infrastructure of Savvas Papagiannidis and the journalistic skills and industry contacts of Andrew Burns. The idea was to build official sites for professional footballers. The site hosted more than 15 official sites and also provided links and mini-profiles for many hundreds of professional football players. Each site was updated regularly by both the player and the editorial staff, with the sole intention of giving visitors unparalleled access to the latest news, views and opinions of their favourite players. All these sites together resulted in a football portal that used the players' as the journalists.

In early 2005 the site had on average a quarter of a million unique visits a year. Still, this level of traffic was not deemed sufficient for advertisers in the sport market to invest in the project, and as a result the company had problems generating sufficient revenue. Eventually the company filed for a voluntary striking-off from the Companies House

register in order to minimise the administration that was required for the project. Still, the web site remains operational and is updated regularly.

In Official Players Sites case skills were paramount in the entrepreneurs' decision to establish the venture. It was a natural progression from their previously established businesses, which when brought together resulted in Official Players Sites. Although the company did not make any substantial sales, by having all skills in house, it managed to have almost no expenses which allowed it to operate for a long time.

Such an approach to business venturing can be considered a powerful market research tool as the business idea is tested for real in the market. If the market responds, then the entrepreneurs and skills brokers can take the venture to the next level by committing more time and resources to it. On the other hand, such an approach may work against the venture's success as there is no 'pressure' to succeed.

Also, although the advertising space was not sold to sponsors it was used for other projects that they two founders were involved, hence benefiting them by generating traffic. This kind of resource sharing among projects can help reduce costs even further and boost the development and growth of existing and future projects.

### **Bundles & Arjuna**

Bundles is a company created by three directors to implement an idea developed early in 2004. Two of the directors, Robert Cole (ex-HP) and Glenn Morrill, created Silvaager in 2002 and Glenn's chance re-acquaintance with John Gibson, a business colleague from the 80's at Northern Rock, spawned the business idea. Arjuna Technologies (<http://www.arjuna.com/>) is an independent supplier of distributed transaction processing and messaging software, helping companies guarantee business

process reliability and safeguard mission-critical data. Arjuna Technologies was formed from the former Hewlett-Packard Arjuna Lab, HP's centre of excellence for transactioning and related technologies.

Bundles approached Arjuna looking for an IT partner to develop a solution for the financial industry (details about the project were not disclosed as it was under development when the interview was conducted). The model used for their collaboration was based on a mixture of skills brokerage and development fees. For Bundles outsourcing the development of the technology was the preferred approach due to better utilisation of resources.

The challenge though was to find someone who would have had similar values, as they considered them of critical importance to the technical and business development. Bundles looked at their business network and approached Arjuna with the idea. If Bundles had to look for partners outside their network, then perhaps the skill brokerage model may not have been a viable alternative. As one of their directors said: *“To be honest, if we had looked around for partners, there would have been an awful lot of tension”*. Even so, they did approach a number of technical organisations, only to conclude that they did not have anywhere close to the skills set that was required for the project; skills set that matched Arjuna's technical profile. Public networking organisations did not appeal to them either, when it came to finding a partner, as they can not guarantee the quality of the recommended services. Such organisations can not afford to be seen as making subjective recommendations. A skills brokerage database could have helped business support organisations overcome such issues.

Another important point for Bundles was the strategic selection of partners. Although there were other areas that could have been brokered, they did not believe it would have been in their interest to do so: *“we need to be careful not to allow equity to drift away”*.

When it came to raising funds early in the project, venture capital was not an approach that the company wanted to employ. Raising funds is a job in itself and would have required a substantial effort to be put into it: *“What you find is that early-start funding is not as attainable as it is made out”*. Still this is an open front for the project, which should now be more attractive for investors, as it brings forward the combined skills and knowledge of the two working groups. In this case the skills brokerage model has played a double role; it helped the venture get off the ground and also brought it closer to a point in which external funding will be easier to be raised.

In the skills brokerage model the incentives need to be big enough to justify the broker’s involvement. Development fees in this case ensured that Arjuna was compensated for their work, but at the same time their equity stake helped maintain their long term interest in the venture.

### **Extending the model**

In the previous section we examined how the skills brokerage business model could benefit DMHs, by fully utilising their IT skills. The rest of the skills required to start a new venture, like financial, legal and marketing (Gartner, 1988) can be invested by other skill brokers.

A number of skills brokers could come together, forming a one-stop skills service: ‘a skills capitalist’. Skills brokers would then act similarly to venture capitalists by assessing the potential of business plans in order to make a decision whether to invest or

not. Such a model could lead to virtual organisations sharing skills and resources and using them only when required. Scale of skills and resources usage among the organisations could provide a significant competitive advantage, as entrepreneurs could focus on development of their start-ups.

The 'skill capitalist' business model is different from incubators offering business support services (Lyons, 2000), as the incubator's service provision is undertaken on a provider-client basis, instead of an investing basis. Another difference is that ventures in which a 'skills capitalist' has invested have higher chance of synergy, as they share the same investor. Strategically selected ventures can allow the 'skill capitalist' to create a number of ventures in a market of interest, giving the investor a bigger share and potentially market control and higher returns. Business incubators can facilitate networking, this can take time and does not guarantee the establishing of any significant relationships.

### **Implications**

The skills brokerage model can either work independently of existing venture creation processes or it can complement them. Either way, it can have profound implications when it comes to establishing new ventures and sustaining them. Some of the implications for entrepreneurs, policy makers, business incubators, venture capitalists and academics are outlined below.

### **Entrepreneurs**

As entrepreneurs can often be very protective of their 'creations', one could be led to the conclusion that sharing part of the venture may not be an attractive proposition for the entrepreneur. Although this is true, one has to remember that entrepreneurs do share their

ventures in order to raise capital. In fact, entrepreneurs with less financial means are likely to surrender more control to capital investors (Hellmann, 1998). If there is one key investor then this could cause a management dipole, with the entrepreneur and the investor at each end, which could potentially create a lot of tension; even force the entrepreneur out of the venture he started. (Hellmann, 1998; Oakey, 2003). In the skills brokerage business model, instead of cash a venture receives skills by private skill investors who would have less bargaining power compared to venture capitalists. Skills brokerage can also be a better alternative to venture capital when venture capital is primarily aimed to skill-oriented services, as the cost of renting or buying skills will be higher.

Skills brokerage may also be attractive proposition for serial entrepreneurs, who do not necessarily lack capital resources, and would not mind co-sharing a number of ventures. It may also be attractive for entrepreneurs of failed ventures: “an entrepreneur who believed that a weakness in marketing was the key to the failure of a past venture may be more likely to develop contacts or form a management team that overcomes that skills gap” (Hoang & Antoncic, 2003).

In any way, the model could also be based on a fraction of future returns, rather than equity, so this should not be a detrimental barrier to the success of the business.

One could argue that the skills brokerage business model would be more attractive to small and medium enterprises as:

1. SMEs are more flexible and adaptable to changes.
2. SMEs are more willing to take risks in order to gain higher returns.

3. SMEs need to be more innovative in order to survive and prosper in the demanding information-driven market places.

Large firms may have an abundance of knowledge and technology they are not always the best vehicle to recognise the opportunities of the future (Park, 2005). Even so, they could still use the model as a 'platform' for future investments by allocating resources to create the skills broker. The corporate skill broker would then invest in the venture as normal, limiting the risk for the parent company within certain boundaries.

There could also be tax benefits for all parties involved since there is no money changing hands, until the venture is successful.

### **Policy Makers and Business Support Organisations**

Support services often focus on generic skills and services in an effort to accommodate clients with different requirements. Although this is valuable when it comes to developing enterprising attitudes, it is not necessarily beneficial for entrepreneurship: "one size does not fit all" (Lyons, 2000). In such a case highly specialized knowledge and actions are often required if a project is to be successful. According to Davidsson and Honig (2003) the value of all forms of standard recipe is likely to be very limited, and the real needs are often beyond the capacity of a generalist advisor. "The implications are that individuals are taught to engage in activities that are not necessarily productively linked toward successful outcomes." (Davidsson & Honig, 2003)

This explains why business support services often subsidise specialised services. The challenge is though that they can only support a limited number of ventures, as they have

limited funds. The skills brokerage business model can replace (or work in parallel to) subsidized services and grant provisions by bringing together service providers and entrepreneurs.

The research by Davidsson and Honig also suggests that national and regional governments should consider “developing business centres that focus on the facilitation of community and networking activities, thereby increasing each nascent entrepreneur’s probability of finding the idiosyncratic inputs s/he needs”. Again, the focus is on the individual needs rather than generic business activities, and as a result a more specialised approach is required.

In addition, skills brokerage can form an alternative mode of employment which promotes entrepreneurial freelancing. This could be used to tackle unemployment by actively encouraging, through policy, new ventures that are based on this model. Offering grants to such projects could provide them with an incentive to start skills brokerage-based ventures, especially when it comes to community venturing and non-profit organisations or when the aim is to boost start-up rates and employment in under-developed regions.

Such initiatives, especially new, high technology-based firms, have become major policy objectives of virtually every developed nation. This is probably a result of the “realisation that the failure of the European economy to create jobs is not in the traditional manufacturing or public sector jobs, but in the services and the ‘new economy’, where job creation is more in the hands of small entrepreneurs than in the hand of large corporations” (Fonseca, Lopez-Garcia, & Pissarides, 2001). Models such as

skills brokerage could play pivotal roles in economic growth, by encouraging start-ups and job creation.

### **Business Incubators**

Davidsson and Honig's business centres could also be extended to incubators. Favourable rents for space and equipment are important, but "incubators should focus more on the development of business networks that would help companies survive in the long run". (Bollingtoft & Ulhoi, 2005) These networks could consist of traditional networks or skills brokerage networks. Incubators may subsidise or even offer free incubation services in exchange for access to the venture. The returns could be much higher, with the incubator being transformed from an accommodation provider to a skills broker and an investor. This is what Allen and Rahman (1985) looked into with their study: "an incubator becomes more than just a physical arrangement with a specific geographical location where a new venture can minimize start-up costs by accessing affordable space, shared services, and business assistance". The incubator can provide the space and business services and the skills brokers the business assistance.

### **Venture Capitalists**

The skills brokerage business model can benefit entrepreneurs looking for venture capital for activities that can not be provided through skills, e.g. buying of equipment, as it can increase the chances of a project attracting funding. First of all, by bringing skills in-house, the entrepreneur minimises the requirements for capital, which would require smaller scale finance. More importantly, the in-house skills and the broker's networks and experience can significantly raise the venture's credibility, increasing the chances of getting funded.

In fact, venture capitalists often provide skills, experience, networks and credibility to a new venture as part of the funding process (Davila, Foster, & Gupta, 2003), in an effort to shape the future in ways that improve the outcome of their investment (von Burg & Kenney, 2000). “Given the often limited business competence of the founding entrepreneur, venture capital advice, in building business relations, hiring the right personnel and marketing product etc., becomes a key complementary expertise to entrepreneurial efforts.” (Kanniainen & Keuschnigg, 2004) Hence, from the venture capitalists’ perspective, skills brokerage can not only reduce the funding requirements of new ventures, but also increase their chances of survival. Still, “in spite of initial scale effects, a venture capital investor should avoid advising too many companies as its supporting role might subsequently deteriorate” (Kanniainen & Keuschnigg, 2004).

Another important issue is that high-tech SMEs can find it difficult to attract capital compared to their larger competitors. In the UK where technology represents over a quarter of the total investment by the venture capital industry, for the 1997-1999 period, formal venture capital only represented 1.3% of external finance to new high tech SME’s (Lockett, Murray, & Wright, 2002). In the US the National Survey of Small Business Finances (NSSBF) indicated that only 1/3 of the 4% of the corporations that attempted to raise private equity from new outside investors over a three year period were successful (Fenn & Liang, 1998). The above statistics clearly demonstrate that SMEs need to come up with alternative ways of funding or ways of making themselves more attractive to venture capitalists.

Finally, it is interesting to note that raising the venture capital fund itself is also based significantly on skills: “Not only it is difficult to raise a new venture capital fund without

tract record, but the skills needed for successful venture capital investing are difficult and time-consuming to acquire” (Kanniainen & Keuschnigg, 2004). One could argue that when the entrepreneurs seeks external funding, what he actually seeks is proven fund raising skills: “with the venture capitalist the entrepreneur recruits an active investor who will assist in the construction process”(von Burg & Kenney, 2000).

### **Academics**

Although a great deal of research has been undertaken in the area of entrepreneurship there are still many open questions. First of all there exists no distinct theory of entrepreneurship; nor a widely accepted definition for entrepreneurship. This has complicated interpretation of the entrepreneurship-related literature, as each analysis depends on the author’s interpretation (Alvarez & Barney, 2004; Carland & Carland, 1988; Davidsson, 2003; Gartner, 1988; Low, 2001; Low & MacMillan, 1988; Shane, Locke, & Collins, 2003; Shook, Priem, & McGee, 2003). These approaches “have led to a selection of samples of entrepreneurs that are hardly homogeneous” (Gartner, 1988). Instead of focusing on who the entrepreneur is and why entrepreneurs start new ventures, the skills brokerage business model is focused on how activities that lead to a venture starting-up and surviving can be facilitated.

In addition, “the bulk of research, which comprises much of our knowledge of entrepreneurship, suffers from selection bias, the result of sampling only successful emergent entrepreneurs or enterprises” (Davidsson & Honig, 2003; Krueger, Reilly, & Carsrud, 2000). This is of greater importance when it comes to markets where association with unsuccessful projects is avoided at all cost in order to avoid the stigma of failure: “the popular business press, in general, is far more interested in the route to success,

however difficult this may have been, than in the unsuccessful entrepreneur” (Dodd, 2002). The skills brokerage business model will allow studying the skill brokers’ decision-making process and their criteria to invest or not. In doing so, and by monitoring a venture’s progress with or without skills investment our research could help establish a relationship on the value of skills in newly created ventures.

The skills brokerage business model can also provide a unique insight into the start-up process following entrepreneurs from the very early stages. Most importantly it can do so in real time (Gartner, 1988). This is of importance as most of the data about entrepreneurs and their ventures is collected retrospectively, giving rise to “a potential bias due to memory decay and hindsight bias, or rationalization after the fact” (Amit et al., 2001; Davidsson & Honig, 2003; Landstrom, 1998; Shook et al., 2003)

Another interesting point is that the above can be done in the context of multiple projects. As a skill broker can invest in multiple ventures, it should be possible to deduce the effect that the project itself may have on the broker.

In addition, the model could allow researchers to study conditions in which potential entrepreneurs actively search for opportunities and draw comparisons with conditions in which potential entrepreneurs discover opportunities without actively searching. (Shook et al., 2003) It could also allow studying the role of networks in facilitating entrepreneurship and their effects on venture performance (Hoang & Antoncic, 2003).

Finally, the skills brokerage business model can contribute to empirical entrepreneurship research by studying induced entrepreneurial situations and experiments and simulations (Davidsson, 2003). In our case the entrepreneurial experiment is not just

a laboratory experiment, as it has been previously proposed (Shook et al., 2003), but real venture creation.

### **Future Research**

In the previous sections we outlined the implications that the skills brokerage business model can have for entrepreneurs, policy makers, business support organisations, incubators, venture capitalists and academics. Future research is needed to address these separately in other markets and environments.

More specifically, for entrepreneurs research is needed to establish the attractiveness of the model. This should be undertaken taking into consideration the different types of entrepreneurs, e.g. first-time entrepreneurs vs. serial entrepreneurs. The applicability of the model in different markets should also be researched, identifying the importance of skill sets in the context of the start-up process. Such research could also examine entrepreneurs' awareness of the limitations of existing skill sets (Lyons, 2000) and investigate the implications, especially when it comes to venture growth.

For business support organisations and business incubators, action research could be used to test the model in a real environment. Skills can be brought together to help entrepreneurs start their ventures. Such action research would also provide a unique insight into the start-up process, resolving many of the methodological issues mentioned in the previous section.

Furthermore, the model itself could be studied from many different angles. For example one could study the theoretical and practical implications that the skills brokerage approach could have on organisational design, contributing to literature on virtual and networked organisations. Skills brokerage could also be studied as a business

model from the skills broker's point of view and as a model for creating competitive advantages for existing firms, looking at the implications for corporate entrepreneurship.

Finally, social network analysis techniques could be employed to map the relationships between entrepreneurs in clusters. For example, in the North East of England there exist a very vivid digital media cluster and a number of networking organisations. Social network analysis could examine the relationships and network dynamics within these organisations. In doing so it could potentially reveal whether skills brokerage is taking place and if yes to what extend.

## **Conclusion**

This paper presented the skills brokerage business model which could facilitate business start-ups and enhance their chance of survival in the context of the networked economy. The model is based on the concept of an entrepreneur sharing the venture's returns or even ownership with a skills broker in exchange for skills. This exchange can significantly reduce barriers in network-oriented and information-driven markets where skills are of critical importance. It can also significantly alleviate the cash flow problems which are typical of many new start-ups and are a main cause of business failure. The model is particularly relevant to information intensive ventures, where the value of a service is often significantly higher than the actual cost incurred by the skills providers in providing the service. If the model can be made to work, it can not only significantly increase the number of business start-ups, but also enhance their chances of survival. In this paper, we illustrated this new business model and explored its implications for theory, practice and policy.

## References

- Allen, D. N., & Rahman, S. (1985). Small business incubators a positive environment for entrepreneurship. *Journal of Small Business Management*, 23(3), 12-22.
- Alvarez, S. A., & Barney, J. B. (2004). Organizing rent generation and appropriation: toward a theory of the entrepreneurial firm. *Journal of Business Venturing*, 19(5), 621-635.
- Amit, R., MacCrimmon, K. R., Zietsma, C., & Oesch, J. M. (2001). Does money matter?: Wealth attainment as the motive for initiating growth-oriented technology ventures. *Journal of Business Venturing*, 16(2), 119-143.
- Bollingtoft, A., & Ulhoi, J. P. (2005). The networked business incubator--leveraging entrepreneurial agency? *Journal of Business Venturing*, 20(2), 265-290.
- Carland, J. W., & Carland, J. A. C. (1988). "Who is the entrepreneur?" Is a question worth asking. *American Journal of Small Business*, 4(12), 33-39.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.
- Chung, W. W. C., Yam, A. Y. K., & Chan, M. F. S. (2004). Networked enterprise: A new business model for global sourcing. *International Journal of Production Economics*, 87(3), 267-280.
- Davidsson, P. (2003). The domain of entrepreneurship research: some suggestions. In J. Katz & S. S. (Eds.), *Advances in entrepreneurship, firm emergence and growth* (Vol. 6, pp. 315-372). Oxford, UK: Elsevier/JAI Press.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301-331.
- Davila, A., Foster, G., & Gupta, M. (2003). Venture capital financing and the growth of startup firms. *Journal of Business Venturing*, 18(6), 689-708.
- Dodd, S. D. (2002). Metaphors and meaning: A grounded cultural model of us entrepreneurship. *Journal of Business Venturing*, 17(5), 519-535.
- Drucker, P. (1985). *Innovation and Entrepreneurship, Practice and Principles*. London: Heinemann.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and Entrepreneurship. *Journal of Management*, 29(3), 333-349.

- Erikson, T., & Sorheim, R. 'Technology angels' and other informal investors. *Technovation, In Press, Corrected Proof*.
- Fenn, G. W., & Liang, N. (1998). New resources and new ideas: Private equity for small businesses. *Journal of Banking & Finance*, 22(6-8), 1077-1084.
- Fonseca, R., Lopez-Garcia, P., & Pissarides, C. A. (2001). Entrepreneurship, start-up costs and employment. *European Economic Review*, 45(4-6), 692-705.
- Gartner, W. B. (1988). "Who is an Entrepreneur?" Is the wrong question. *American Journal of Small Business*, 12(4), 11-22.
- Hellmann, T. (1998). The allocation of control rights in venture capital contracts. *RAND Journal of Economics*, 29(Spring98), 57-76.
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165-187.
- Kakati, M. (2003). Success criteria in high-tech new ventures. *Technovation*, 23(5), 447-457.
- Kanniainen, V., & Keuschnigg, C. (2004). Start-up investment with scarce venture capital support. *Journal of Banking & Finance*, 28(8), 1935-1959.
- Krueger, N. F. J., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411-432.
- Lam, L. W., & Harrison-Walker, L. J. (2003). Toward an objective-based typology of e-business models. *Business Horizons*, 46(6), 17-26.
- Landstrom, H. (1998). Informal investors as entrepreneurs. *Technovation*, 18(5), 321-333.
- Lockett, A., Murray, G., & Wright, M. (2002). Do UK venture capitalists still have a bias against investment in new technology firms. *Research Policy*, 31(6), 1009-1030.
- Low, M. B. (2001). The adolescence of entrepreneurship research: specification of purpose. *Entrepreneurship: Theory & Practice*, 25(4), 17-25.
- Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139-161.
- Lyons, T. S. (2000). *Building Social Capital for Sustainable Enterprise Development in Country Towns and Regions: Successful Practices from the United States*. Paper presented at the Future of Australia's Country Towns, La Trobe University Bendigo.

- Nowak, M. J., & Grantham, C. E. (2000). The virtual incubator: managing human capital in the software industry. *Research Policy*, 29(2), 125-134.
- Oakey, R. P. (2003). Technical entrepreneurship in high technology small firms: some observations on the implications for management. *Technovation*, 23(8), 679-688.
- Park, J. S. (2005). Opportunity recognition and product innovation in entrepreneurial hi-tech start-ups: a new perspective and supporting case study. *Technovation*, 25(7), 739-752.
- Schindehutte, M., & Morris, M. H. (2001). Pricing as entrepreneurial behaviour. *Business Horizons*, 44(4), 41-48.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press.
- Shane, S. A., Locke, E. A., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resource Management Review*, 13(2), 257-279.
- Shane, S. A., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
- Shook, C. L., Priem, R. L., & McGee, J. E. (2003). Venture Creation and the Enterprising Individual: A Review and Synthesis. *Journal of Management*, 29(3), 379-399.
- Sonfield, M. C., & Lussier, R. N. (1997). The entrepreneurial strategy matrix: A model for new and ongoing ventures. *Business Horizons*, 40(3), 73-77.
- von Burg, U., & Kenney, M. (2000). Venture capital and the birth of the local area networking industry. *Research Policy*, 29(9), 1135-1155.
- Zahra, S., & Dess, G. G. (2001). Entrepreneurship as a field of research: encouraging dialogue and debate. *Academy of Management Review*, 26(1), 8-20.
- Zahra, S., Kuratko, D. F., & Jennings, D. F. (1999). Guest editorial: Entrepreneurship and the acquisition of dynamic organizational capabilities. *Entrepreneurship: Theory & Practice*, 23(Spring99), 5-10.