

Influential Article Review - Propagation of Companies and Start-up Network Tools

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This paper examines entrepreneurship. We present insights from a highly influential paper. Here are the highlights from this paper: The focus in this paper is to study whether business incubation can provide entrepreneurial start-ups with critical network resources. We make a distinction between incubator-provided network resources and start-ups' "own" external network resources that are unrelated to the incubator context. Although there has been an increasing number of studies examining incubated entrepreneurs' network resources, to our knowledge, this is the first study that explicitly compares incubator-provided network resources and start-ups' own external network resources. Analyzing the results from qualitative interviews with start-up tenants at a technology incubator in Bergen, Norway, we find that network resources acquired by the start-ups' own efforts (rather than network resources facilitated by an incubator) were most critical in all phases of enterprise development. They played a crucial role in terms of idiosyncratic (non-generic) knowledge generation as drivers of innovation, catalysts for financial contributors, and to organizational reputation and market access. Nevertheless, internal networking with other incubator firms and external network resources facilitated by the incubator were also helpful and complementary, but they were more generic in nature and provided limited idiosyncratic resources. We also found that incubator network resources tend to have traits like those of identity-based network resources because they are not mainly governed by economic interests, but at the same time, they are not path-dependent. Inter-tenant network resources, therefore, can have non binding weak-ties properties and provide non-redundant information. For our overseas readers, we then present the insights from this paper in Spanish, French, Portuguese, and German.

Keywords: Start-ups, Network resources, Business incubation, Entrepreneurship

SUMMARY

- As described above, most networks that ensured critical resources in the different phases of the life cycle of start-ups were external «private» networks that were not related to the incubator milieu. In addition, the start-ups actively sought new network resources and used their own networks acquired before incubation. The entrepreneurs only to a limited degree relied on the incubator and its extended network to acquire the critical network resources. Several factors may explain these findings.
- One possible reason is that the venture idea typically had its origins in previous work or R&D experience before the firms entered the incubator. The majority of the start-ups had extensive

networks to draw on when establishing the venture, and searched their preexisting, path-dependent networks, which led to a path-dependent form of evolution that according to Hite and Hesterly is quite common for entrepreneurs. At the early stage of establishing an entrepreneurial team, the start-ups mainly drew upon identity-based networks, such as fellow students, researchers, or job colleagues. In the technology development phase, the firms relied on a mix of networks, both identity-based and more calculative and intentionally managed networks. On the other hand, we would expect that the incubator milieu could foster knowledge, innovation, and technology networks. Some of the tenants had in fact used other tenants to assist them in specific development tasks, but these contributions were not perceived as critical for the firms. Except for the case that contributed to an incubator spinoff, tenants did not engage in extensive knowledge, innovation, and technology-related networking with other tenants.

- Even though some start-ups had certain commonalities with respect to technology or market segments, they were nevertheless highly specialized. Tenants therefore experienced difficulties in finding potential collaboration partners within the incubator. Thus, because the firms were heterogeneous and highly specialized, it was difficult for the incubator management to facilitate relevant internal networks. Hence, the firms needed a larger pool of firms and contacts to search for relevant networks and network resources. Consistent with our findings, Sá and Lee concluded that start-ups' networking strategies were only to some extent fostered by networks promoted by an incubator. Some incubator firms feared that engaging in collaboration in fundamental technology and other firm assets would reveal essential business secrets and put the competitive advantage of the firm at risk. With respect to their own networks related to parties such as customers and investors, some emphasized the rivalry dimension and the risk of losing out in competition with others. Previous studies on incubators also refer to these issues. Sá and Lee observed conflicts around collaborative aspirations among tenants and obligations to protect their intellectual property. Furthermore, the tenants they studied were concerned about competition because there were overlapping business interests and limited resources, partners, and clients. This is especially the case for shared investor resources, which are scarce in Bergen. Cooper et al. found that a lack of trust among tenants and the fear that information would not be treated confidentially were a barrier to collaboration and a sharing culture. Oakey noted that entrepreneurs were reluctant to discuss their new product ideas with other entrepreneurs for fear that their intellectual property would be copied.

HIGHLY INFLUENTIAL ARTICLE

We used the following article as a basis of our evaluation:

Pettersen, I. B., Aarstad, J., Høvig, Ø. S., & Tobiassen, A. E. (2015). Business incubation and the network resources of start-ups. *Journal of Innovation and Entrepreneurship*, 5(1), 1–17.

This is the link to the publisher's website:

<https://innovation-entrepreneurship.springeropen.com/articles/10.1186/s13731-016-0038-8>

INTRODUCTION

The focus in this paper is to study whether business incubation can provide entrepreneurial start-ups with critical network resources. A business incubator is defined as a formalized entity with an infrastructure intended to nurture incubated start-ups with critical resources in the pursuit of survival and growth (partly derived from Allen and Rahman 1985). Business incubation can provide the start-ups with resources such as office space, counseling, and other basic services, but their purpose is also to stimulate internal networking and exchange of knowledge between entrepreneurial start-up firms (Hansen et al. 2000; Hughes et al. 2007; Sá and Lee 2012; Kitagawa and Robertson 2012). Furthermore, business incubators should help

tenants to build networks with external companies, organizations, and other individuals (Hansen et al. 2000). All in all, one can argue that business incubators may foster network resources, which we define as a firm's access to information, knowledge, reputation, and input factors from a variety of sources such as customers, suppliers, competitors, R&D institutions, and governmental bodies (partly derived from Spithoven and Teirlinck 2015). The importance of entrepreneurial start-ups' network resources is clearly recognized in the scholarly literature (Hite and Hesterly 2001; Coviello 2006; Pettersen and Tobiassen 2012; Aarstad et al. 2010). Entrepreneurs can use network resources to generate or test ideas, develop new technology, identify market opportunities (Chen and Wang 2008; Sullivan and Marvel 2011), obtain access to financial funding, and gain legitimacy (Pettersen and Tobiassen 2012), to mention a few benefits.

To assess the potential benefits of business incubation, it is therefore critical to study network resources provided by incubators, which include both internal networks among tenants and external networks facilitated by the incubator. Yet to fully comprehend the genuine potential role of business incubation, it is also essential for investigators to compare start-ups' external networks that go beyond the incubator milieu and stem from the path-dependent trajectory of their own efforts and initiatives. In this paper, we therefore make a distinction between (1) incubator-provided network resources (internal and external) and (2) start-ups' "own" external network resources (which are unrelated to the incubator context). Accordingly, we emphasize a variety of factors that are expected to ensure critical network resources to leverage the start-ups' products and services and to enhance long-term growth.

The outline of the paper is as follows: First, we elaborate the concept of entrepreneurial start-ups' network resources, and next, we review studies that have examined incubated entrepreneurial start-ups' network resources. In the following section, we analyze and present the results from qualitative interviews with start-up tenants at a technology incubator in Bergen, the second largest city in Norway and located on the west coast. In the final section, we discuss our empirical findings considering the existing research literature, address the study's limitations, and suggest avenues for future research.

All in all, we argue that our contribution provides a nuanced picture of entrepreneurial start-ups' network resources residing within and beyond an incubator. Although there has been an increasing number of studies examining incubated entrepreneurs' network resources, to our knowledge, this is the first study that explicitly compares incubator-provided (internal and external) network resources and start-ups' own external network resources. We therefore argue that our study fills an important gap in the research literature on entrepreneurial start-ups in incubation.

CONCLUSION

Recently, an increasing number of studies have shown how business incubation can provide start-ups with network resources. Our study adds to this literature in that we have compared incubator-provided network resources, inter-tenant networking, and the tenants' "private" path-dependent trajectory of external network resources that are not related to the incubator milieu. To our knowledge, this is the first study intended to distinguish and systematize incubator firms' network resources according to these dimensions. Therefore, our research builds on prior studies, yet contributes to and advances scholarly research by providing a nuanced picture of network opportunities provided by incubators, and by distinguishing the types and nature of different network resources that reside within and beyond the incubator.

Overall, our data indicate that incubation can provide generic network resources but to a lesser extent offers idiosyncratic (non-generic) network resources. It can therefore be argued that incubator-provided networks can complement, but not substitute, tenants' external "private" networks, which appear to be crucial for access to idiosyncratic resources.

In addition to contributing to the scholarly literature, we argue that our study also has implications for policy makers and incubator managers. First and foremost, incubation in itself appears to be no "quick fix" for tenants to ensure the necessary network resources to develop and grow; nor does it appear that an incubator can serve solely as a catalyst for the provision of critical network resources. Notwithstanding these limitations, an incubator plays a crucial role in that it can provide necessary assistance in terms of generic network resources. Some of the tenants also report that social events can spur inspiration,

acquaintance, and a sense of “belonging” (“we are in this together”) in pursuit of leveraging their venture. It appears that physical proximity propels social acquaintances, which is also in line with studies cited above (Bøllingtoft 2012; Cooper et al. 2012).

Furthermore, it is interesting to learn that incubator network resources tend to have traits similar to those of identity-based network resources because they are not mainly governed by economic interests, but at the same time, they are not path-dependent. Inter-tenant network resources, therefore, can have a mix of nonbinding weak-ties (Granovetter 1973) properties that also provide non-redundant information from different perspectives (Burt 1992). These are topics for further investigation in future incubation research.

Future research should finally aim to gain further knowledge about our observation that entrepreneurs emerging from so-called “start-up communities” were able to share idiosyncratic resources, enabling the establishment of a spinoff. We need to know if these findings can be generalized beyond the two cases studied here. This may have implications on recruitment policy and the management of business incubators. To our knowledge, comparisons of different entrepreneurial styles have not been carried out with reference to incubation research.

Data were gathered from only a limited number of firms residing in one incubator. Thus, future researchers should aim to gather data from a larger pool of start-ups residing in a variety of incubators. Data were furthermore gathered retrospectively. Longitudinal studies are therefore warranted in future studies, in which the candidate firms are followed through the pre-founding and pre-incubation stages, the incubation stage, and preferably into the post-incubation stages. Comparative studies should also be conducted in which the networking patterns of incubated start-ups are compared longitudinally with non-incubated start-ups.

APPENDIX

TABLE 1
NETWORK RESOURCES AND THE INCUBATOR’S ROLE

	Network resources	
	Idiosyncratic (non-generic)	Generic
Internal inter-tenant incubator networks and external networks accessed through incubator management	Limited	Fairly abundant
External “private” networks not related to the incubator milieu	Fairly abundant	Variable

TABLE 2
DESCRIPTIVE SUMMARY OF THE INTERVIEWED TENANT FIRMS

Firm number (year established)	Product type	Target sector	Origin of venture idea	Founders' age	Relevant work experience	Previous entrepreneurial experience	Entrepreneurial stage	Network orientation
1 (2007)	Software	Oil and gas	R&D institution	Middle aged	Some	None	Early growth	Calculative
2 (2007)	Software	Oil and gas	Previous work experience	Middle aged	Limited	None	Early growth	Identity
3 (2009)	Hardware	Oil and gas	R&D institution	Young	Limited	None	Early growth	Calculative
4 (2011)	Hardware	Oil and gas	R&D institution	Middle aged	Extensive	None	Emergence	Calculative
5 (2007)	Software	Media	Previous work experience	Middle aged	Extensive	None	Early growth	Calculative
6 (2010)	Software	Media	Previous work experience	Middle aged	Extensive	Limited	Emergence	Identity
7 (2011)	Software	Restaurant	Start-up community	Young	Limited	None	Emergence	Identity
8 (2011)	Software	Media	Previous work experience	Young	Limited	None	Emergence	Identity
9 (2011)	Software	Finance	Previous work experience	Young	Some	None	Emergence	Identity
10 (2010)	Software	Media	Start-up community	Young	Limited	None	Emergence	Identity

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TRANSLATED VERSION: SPANISH

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSION TRADUCIDA: ESPAÑOL

A continuación se muestra una traducción aproximada de las ideas presentadas anteriormente. Esto se hizo para dar una comprensión general de las ideas presentadas en el documento. Por favor, disculpe cualquier error gramatical y no responsabilite a los autores originales de estos errores.

INTRODUCCIÓN

El enfoque en este artículo es estudiar si la incubación empresarial puede proporcionar a las empresas emergentes empresariales recursos críticos de la red. Una incubadora de empresas se define como una entidad formalizada con una infraestructura destinada a nutrir a las empresas emergentes con recursos críticos en la búsqueda de la supervivencia y el crecimiento (en parte derivados de Allen y Rahman 1985). La incubación empresarial puede proporcionar a las empresas emergentes recursos como el espacio de oficinas, el asesoramiento y otros servicios básicos, pero su propósito es también estimular el trabajo interno en red y el intercambio de conocimientos entre las empresas emergentes empresariales (Hansen et al. 2000; 2007; Sá y Lee 2012; Kitagawa y Robertson 2012). Además, las incubadoras de empresas deben ayudar a los inquilinos a construir redes con empresas externas, organizaciones y otras personas (Hansen et al. 2000). Con todo, se puede argumentar que las incubadoras de empresas pueden fomentar los recursos de la red, que definimos como el acceso de una empresa a la información, el conocimiento, la reputación y los factores de insumos de una variedad de fuentes como clientes, proveedores, competidores, instituciones de I+D y organismos gubernamentales (en parte derivados de Spithoven y Teirlinck 2015). La importancia de los recursos de la red de empresas emergentes empresariales está claramente reconocida en la literatura académica (Hite y Hesterly 2001; Coviello 2006; Pettersen y Tobiassen 2012; 2010). Los emprendedores pueden utilizar los recursos de la red para generar o probar ideas, desarrollar nuevas tecnologías, identificar oportunidades de mercado (Chen y Wang 2008; Sullivan y Marvel 2011), obtener acceso a financiación financiera, y ganar legitimidad (Pettersen y Tobiassen 2012), por mencionar algunos beneficios.

Por lo tanto, para evaluar los beneficios potenciales de la incubación empresarial, es fundamental estudiar los recursos de red proporcionados por las incubadoras, que incluyen tanto las redes internas entre los inquilinos como las redes externas facilitadas por la incubadora. Sin embargo, para comprender plenamente el papel potencial genuino de la incubación empresarial, también es esencial que los investigadores comparen las redes externas de las empresas emergentes que van más allá del entorno de la incubadora y se derivan de la trayectoria dependiente de la trayectoria de sus propios esfuerzos e iniciativas. Por lo tanto, en este documento hacemos una distinción entre (1) recursos de red proporcionados por incubadora (internos y externos) y (2) recursos de red externa "propios" de las empresas emergentes (que no están relacionados con el contexto de la incubadora). En consecuencia, hacemos hincapié en una variedad de factores que se espera que garanticen recursos críticos de la red para aprovechar los productos y servicios de las empresas emergentes y para mejorar el crecimiento a largo plazo.

El esquema del documento es el siguiente: En primer lugar, elaboramos el concepto de recursos de la red de empresas emergentes empresariales, y a continuación, revisamos los estudios que han examinado los recursos de la red de empresas emergentes incubados. En la siguiente sección, analizamos y presentamos los resultados de entrevistas cualitativas con los inquilinos emergentes en una incubadora de tecnología en Bergen, la segunda ciudad más grande de Noruega y ubicada en la costa oeste. En la sección final, discutimos nuestros hallazgos empíricos considerando la literatura de investigación existente, abordamos las limitaciones del estudio y sugerimos vías para futuras investigaciones.

Con todo, argumentamos que nuestra contribución proporciona una imagen matizada de los recursos de la red de empresas emergentes emprendedores que residen dentro y fuera de una incubadora. Aunque ha habido un número cada vez mayor de estudios que examinan los recursos de la red de emprendedores incubados, según nuestro conocimiento, este es el primer estudio que compara explícitamente los recursos de red proporcionados por incubadoras (internos y externos) y los propios recursos de red externa de las empresas emergentes. Por lo tanto, argumentamos que nuestro estudio llena un vacío importante en la literatura de investigación sobre las empresas emergentes emprendedoras en la incubación.

CONCLUSIÓN

Recientemente, un número cada vez mayor de estudios han demostrado cómo la incubación empresarial puede proporcionar a las empresas emergentes recursos de la red. Nuestro estudio se suma a esta literatura en que hemos comparado los recursos de red proporcionados por la incubadora, las redes entre inquilinos y la trayectoria "privada" dependiente de la ruta de los inquilinos de recursos de red externa que no están relacionados con el entorno de la incubadora. Hasta nuestro conocimiento, este es el primer estudio destinado a distinguir y sistematizar los recursos de red de las empresas de incubadoras de acuerdo con estas dimensiones. Por lo tanto, nuestra investigación se basa en estudios previos, pero contribuye y avanza en la investigación académica proporcionando una imagen matizada de las oportunidades de red proporcionadas por las incubadoras, y distinguiendo los tipos y la naturaleza de los diferentes recursos de red que residen dentro y fuera de la incubadora.

En general, nuestros datos indican que la incubación puede proporcionar recursos de red genéricos, pero en menor medida ofrece recursos de red idiosincrásicos (no genéricos). Por lo tanto, se puede argumentar que las redes proporcionadas por incubadoras pueden complementar, pero no sustituir, las redes "privadas" externas de los inquilinos, que parecen ser cruciales para el acceso a recursos idiosincrásicos.

Además de contribuir a la literatura académica, argumentamos que nuestro estudio también tiene implicaciones para los responsables políticos y los gerentes de incubadoras. En primer lugar, la incubación en sí misma parece no ser una "solución rápida" para que los inquilinos garanticen los recursos de red necesarios para desarrollarse y crecer; ni parece que una incubadora pueda servir únicamente como catalizador para el suministro de recursos críticos de la red. A pesar de estas limitaciones, una incubadora desempeña un papel crucial en la medida en que puede proporcionar la asistencia necesaria en términos de recursos genéricos de la red. Algunos de los inquilinos también informan que los eventos sociales pueden estimular la inspiración, el conocimiento y un sentido de "pertenencia" ("estamos en esto juntos") en busca de aprovechar su empresa. Parece que la proximidad física impulsa a los conocidos sociales, lo que también está en consonancia con los estudios citados anteriormente (Béllingtoft 2012; 2012).

Además, es interesante aprender que los recursos de la red de incubadoras tienden a tener rasgos similares a los de los recursos de red basados en la identidad porque no se rigen principalmente por intereses económicos, pero al mismo tiempo no dependen del camino. Por lo tanto, los recursos de red entre inquilinos pueden tener una combinación de propiedades de vínculos débiles no vinculantes (Granovetter 1973) que también proporcionan información no redundante desde diferentes perspectivas (Burt 1992). Estos son temas para una investigación más profunda en futuras investigaciones de incubación.

Las investigaciones futuras deben finalmente tener como objetivo obtener más conocimiento sobre nuestra observación de que los empresarios que emergen de las llamadas "comunidades de nueva creación" fueron capaces de compartir recursos idiosincrásicos, permitiendo el establecimiento de una spin-off. Necesitamos saber si estos hallazgos pueden ser generalizados más allá de los dos casos estudiados aquí. Esto puede tener implicaciones en la política de contratación y la gestión de las incubadoras de empresas. Hasta nuestro conocimiento, no se han realizado comparaciones de diferentes estilos empresariales con referencia a la investigación de incubación.

Los datos se recopilaron de un número limitado de empresas que residen en una incubadora. Por lo tanto, los futuros investigadores deben apuntar a recopilar datos de un grupo más grande de empresas emergentes que residen en una variedad de incubadoras. Además, los datos se recopilaron retrospectivamente. Por lo tanto, los estudios longitudinales están justificados en estudios futuros, en los que se sigue a las empresas candidatas a través de las etapas previas y previas a la incubación, la etapa de incubación y, preferiblemente, en las etapas posteriores a la incubación. También deben realizarse estudios comparativos en los que los patrones de ensonado de las empresas emergentes incubadas se comparan longitudinalmente con las start-ups no incubadas.

TRANSLATED VERSION: FRENCH

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSION TRADUITE: FRANÇAIS

Voici une traduction approximative des idées présentées ci-dessus. Cela a été fait pour donner une compréhension générale des idées présentées dans le document. Veuillez excuser toutes les erreurs grammaticales et ne pas tenir les auteurs originaux responsables de ces erreurs.

INTRODUCTION

L'objectif de ce document est d'étudier si l'incubation d'entreprises peut fournir aux entreprises en démarrage des ressources réseau essentielles. Un incubateur d'entreprises est défini comme une entité formalisée avec une infrastructure destinée à nourrir les start-ups incubées avec des ressources essentielles dans la poursuite de la survie et de la croissance (en partie dérivée d'Allen et Rahman, 1985). L'incubation d'entreprises peut fournir aux jeunes entreprises des ressources telles que des bureaux, des conseils et d'autres services de base, mais leur but est également de stimuler le réseautage interne et l'échange de connaissances entre les entreprises en démarrage entrepreneuriales (Hansen et al., 2000; Hughes et coll. 2007; Sá et Lee, 2012; Kitagawa et Robertson, 2012). De plus, les incubateurs d'entreprises devraient aider les locataires à établir des réseaux avec des entreprises, des organisations et d'autres personnes externes (Hansen et coll., 2000). Dans l'ensemble, on peut soutenir que les incubateurs d'entreprises peuvent favoriser les ressources réseau, que nous définissons comme l'accès d'une entreprise à des facteurs d'information, de connaissances, de réputation et d'intrants provenant de diverses sources telles que les clients, les fournisseurs, les concurrents, les institutions de R&D et les organismes gouvernementaux (en partie dérivés de Spithoven et Teirlinck 2015). L'importance des ressources réseau des entreprises en démarrage est clairement reconnue dans la littérature savante (Hite et Hesterly, 2001; Coviello 2006; Pettersen et Tobiassen 2012; Aarstad et coll. 2010). Les entrepreneurs peuvent utiliser les ressources du réseau pour générer ou tester des idées, développer de nouvelles technologies, identifier des opportunités de marché (Chen et Wang, 2008; Sullivan et Marvel 2011), obtenir l'accès à un financement, et gagner en légitimité (Pettersen et Tobiassen 2012), pour mentionner quelques avantages.

Pour évaluer les avantages potentiels de l'incubation d'entreprises, il est donc essentiel d'étudier les ressources réseau fournies par les incubateurs, qui comprennent à la fois des réseaux internes entre locataires et des réseaux externes facilités par l'incubateur. Pourtant, pour bien comprendre le rôle potentiel réel de l'incubation d'entreprise, il est également essentiel que les chercheurs comparent les réseaux externes des start-ups qui vont au-delà du milieu de l'incubateur et découlent de la trajectoire dépendante de leurs propres efforts et initiatives. Dans cet article, nous faisons donc une distinction entre (1) les ressources réseau fournies par incubateur (internes et externes) et (2) les ressources réseau externes « propres » des start-up (qui ne sont pas liées au contexte de l'incubateur). Par conséquent, nous mettons l'accent sur une variété de facteurs qui devraient assurer des ressources réseau essentielles pour tirer parti des produits et services des start-up et pour améliorer la croissance à long terme.

Les grandes lignes du document sont les suivantes : premièrement, nous élaborons le concept des ressources réseau des entreprises en démarrage, et ensuite, nous passons en revue les études qui ont examiné les ressources réseau des start-up entrepreneuriales incubées. Dans la section suivante, nous analysons et présentons les résultats d'entretiens qualitatifs avec des locataires en démarrage dans un incubateur technologique à Bergen, la deuxième plus grande ville de Norvège et située sur la côte ouest. Dans la dernière section, nous discutons de nos résultats empiriques en tenant compte de la documentation de recherche existante, nous abordons les limites de l'étude et nous proposons des pistes de recherche futures.

Dans l'ensemble, nous soutenons que notre contribution donne une image nuancée des ressources réseau des start-up entrepreneuriales résidant à l'intérieur et au-delà d'un incubateur. Bien qu'il y ait eu un nombre croissant d'études examinant les ressources du réseau des entrepreneurs incubés, à notre

connaissance, il s'agit de la première étude qui compare explicitement les ressources réseau fournies par les incubateurs (internes et externes) et les ressources réseau externes propres aux start-ups. Nous soutenons donc que notre étude comble une lacune importante dans la documentation de recherche sur les start-ups entrepreneuriales en incubation.

CONCLUSION

Récemment, un nombre croissant d'études ont montré comment l'incubation d'entreprises peut fournir aux start-ups des ressources réseau. Notre étude s'ajoute à cette documentation en ce que nous avons comparé les ressources réseau fournies par incubateur, le réseautage inter-locataires et la trajectoire « privée » des ressources réseau externes des locataires qui ne sont pas liées au milieu de l'incubateur. À notre connaissance, il s'agit de la première étude destinée à distinguer et à systématiser les ressources réseau des incubateurs en fonction de ces dimensions. Par conséquent, notre recherche s'appuie sur des études antérieures, mais contribue et fait progresser la recherche savante en fournissant une image nuancée des possibilités de réseau offertes par les incubateurs, et en distinguant les types et la nature des différentes ressources réseau qui résident à l'intérieur et au-delà de l'incubateur.

Dans l'ensemble, nos données indiquent que l'incubation peut fournir des ressources réseau génériques, mais offre dans une moindre mesure des ressources réseau idiosyncrasiques (non génériques). On peut donc soutenir que les réseaux fournis par incubateur peuvent compléter, mais non remplacer, les réseaux externes « privés » des locataires, qui semblent essentiels à l'accès aux ressources idiosyncrasiques.

En plus de contribuer à la littérature savante, nous soutenons que notre étude a également des répercussions sur les décideurs et les gestionnaires d'incubateurs. D'abord et avant tout, l'incubation en soi ne semble pas être une « solution miracle » pour les locataires afin d'assurer les ressources réseau nécessaires au développement et à la croissance ; il ne semble pas non plus qu'un incubateur puisse servir uniquement de catalyseur pour la fourniture de ressources réseau essentielles. Malgré ces limitations, un incubateur joue un rôle crucial en ce sens qu'il peut fournir l'assistance nécessaire en termes de ressources réseau génériques. Certains locataires rapportent également que les événements sociaux peuvent stimuler l'inspiration, la connaissance et le sentiment d'« appartenance » (« nous sommes dans ce ensemble ») dans la poursuite de l'exploitation de leur entreprise. Il semble que la proximité physique propulse les connaissances sociales, ce qui est également conforme aux études citées ci-dessus (Bøllingtoft 2012; Cooper et coll. 2012).

En outre, il est intéressant d'apprendre que les ressources des réseaux d'incubateurs ont tendance à avoir des caractéristiques semblables à celles des ressources réseau basées sur l'identité parce qu'elles ne sont pas principalement régies par des intérêts économiques, mais en même temps, elles ne dépendent pas du chemin. Par conséquent, les ressources du réseau inter-locataires peuvent avoir un mélange de propriétés non contraignantes à faible lien (Granovetter, 1973) qui fournissent également des renseignements non redondants sous différents angles (Burt, 1992). Ce sont des sujets qui font l'objet d'une étude plus approfondie dans le cadre de futures recherches sur l'incubation.

Les recherches futures devraient enfin viser à mieux connaître notre observation selon que les entrepreneurs issus de soi-disant « communautés de start-up » ont pu partager des ressources idiosyncrasiques, permettant ainsi l'établissement d'une spin-off. Nous devons savoir si ces résultats peuvent être généralisées au-delà des deux cas étudiés ici. Cela peut avoir des répercussions sur la politique de recrutement et la gestion des incubateurs d'entreprises. À notre connaissance, les comparaisons de différents styles entrepreneuriaux n'ont pas été réalisées en ce qui concerne la recherche en incubation.

Les données n'ont été recueillies qu'auprès d'un nombre limité d'entreprises résidant dans un incubateur. Ainsi, les futurs chercheurs devraient viser à recueillir des données auprès d'un plus grand bassin de start-ups résidant dans une variété d'incubateurs. Les données ont en outre été recueillies rétrospectivement. Des études longitudinales sont donc justifiées dans de futures études, dans lesquelles les entreprises candidats sont suivies à travers les étapes de pré-fondation et de pré-incubation, le stade d'incubation, et de préférence dans les étapes post-incubation. Des études comparatives devraient

également être menées dans lesquelles les modèles de réseautage des start-ups incubées sont comparés longitudinalement aux start-ups non incubées.

TRANSLATED VERSION: GERMAN

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ÜBERSETZTE VERSION: DEUTSCH

Hier ist eine ungefähre Übersetzung der oben vorgestellten Ideen. Dies wurde getan, um ein allgemeines Verständnis der in dem Dokument vorgestellten Ideen zu vermitteln. Bitte entschuldigen Sie alle grammatikalischen Fehler und machen Sie die ursprünglichen Autoren nicht für diese Fehler verantwortlich.

EINLEITUNG

Der Schwerpunkt dieses Beitrags liegt auf der Frage, ob Unternehmensinkubation unternehmerischen Start-ups kritische Netzwerkressourcen zur Verfügung stellen kann. Ein Gründerzentrum ist definiert als eine formalisierte Einheit mit einer Infrastruktur, die inkubierte Start-ups mit kritischen Ressourcen im Streben nach Überleben und Wachstum fördern soll (teilweise abgeleitet von Allen und Rahman 1985). Die Unternehmensgründung kann den Start-ups Ressourcen wie Büroräume, Beratung und andere grundlegende Dienstleistungen zur Verfügung stellen, aber ihr Zweck ist es auch, die interne Vernetzung und den Wissensaustausch zwischen unternehmerischen Start-up-Unternehmen zu fördern (Hansen et al. 2000; Hughes et al. 2007; Sé und Lee 2012; Kitagawa und Robertson 2012). Darüber hinaus sollten Gründerzentren Mietern helfen, Netzwerke mit externen Unternehmen, Organisationen und anderen Personen aufzubauen (Hansen et al. 2000). Alles in allem kann man argumentieren, dass Gründerzentren Netzwerkressourcen fördern können, die wir als Zugang eines Unternehmens zu Informationen, Wissen, Reputation und Inputfaktoren aus einer Vielzahl von Quellen wie Kunden, Lieferanten, Wettbewerbern, F&E-Institutionen und staatlichen Stellen definieren (teilweise abgeleitet von Spithoven und Teirlinck 2015). Die Bedeutung der Netzwerkressourcen unternehmerischer Start-ups wird in der wissenschaftlichen Literatur deutlich anerkannt (Hite und Hesterly 2001; Coviello 2006; Pettersen und Tobiassen 2012; Aarstad et al. 2010). Unternehmer können Netzwerkressourcen nutzen, um Ideen zu generieren oder zu testen, neue Technologien zu entwickeln, Marktchancen zu identifizieren (Chen und Wang 2008; Sullivan und Marvel 2011), erhalten Zugang zu finanzmittelfinanzierten Mitteln und gewinnen Legitimität (Pettersen und Tobiassen 2012), um nur einige Vorteile zu nennen.

Um die potenziellen Vorteile der Unternehmensinkubation zu bewerten, ist es daher von entscheidender Bedeutung, die netzwerkfähigen Ressourcen von Gründerzentren zu untersuchen, die sowohl interne Netzwerke zwischen Mietern als auch externe Netzwerke umfassen, die durch den Inkubator erleichtert werden. Um jedoch die wirklich potenzielle Rolle der Unternehmensinkubation vollständig zu verstehen, ist es auch wichtig, dass die Ermittler die externen Netzwerke von Start-ups vergleichen, die über das Inkubatorumfeld hinausgehen und aus dem pfadabhängigen Verlauf ihrer eigenen Anstrengungen und Initiativen herrühren. In diesem Beitrag unterscheiden wir daher zwischen (1) vom Inkubator bereitgestellten Netzwerkressourcen (intern und extern) und (2) den "eigenen" externen Netzwerkressourcen von Start-ups (die nichts mit dem Inkubatorumfeld zu tun haben). Dementsprechend betonen wir eine Vielzahl von Faktoren, von denen erwartet wird, dass sie kritische Netzwerkressourcen sicherstellen, um die Produkte und Dienstleistungen der Start-ups zu nutzen und das langfristige Wachstum zu steigern.

Der Entwurf des Papiers lautet wie folgt: Erstens erarbeiten wir das Konzept der Netzwerkressourcen unternehmerischer Start-ups, und als nächstes überprüfen wir Studien, die die Netzwerkressourcen von

inkubierten Unternehmensgründungen untersucht haben. Im folgenden Abschnitt analysieren und präsentieren wir die Ergebnisse qualitativer Interviews mit Start-up-Mietern in einem Technologie-Inkubator in Bergen, der zweitgrößten Stadt Norwegens und an der Westküste. Im letzten Abschnitt diskutieren wir unsere empirischen Erkenntnisse unter Berücksichtigung der vorhandenen Forschungsliteratur, befassen uns mit den Grenzen der Studie und schlagen Wege für zukünftige Forschung vor.

Alles in allem argumentieren wir, dass unser Beitrag ein differenziertes Bild der Netzwerkressourcen unternehmerischer Start-ups bietet, die innerhalb und außerhalb eines Inkubators wohnen. Obwohl es immer mehr Studien gibt, die die Netzwerkressourcen von inkubierten Unternehmern untersuchen, ist dies nach unserem Wissen die erste Studie, die die vom Inkubator bereitgestellten (internen und externen) Netzwerkressourcen explizit mit den eigenen externen Netzwerkressourcen von Start-ups vergleicht. Wir argumentieren daher, dass unsere Studie eine wichtige Lücke in der Forschungsliteratur über unternehmerische Start-ups in der Inkubation schließt.

SCHLUSSFOLGERUNG

In jüngster Zeit haben immer mehr Studien gezeigt, wie Unternehmensinkubation Start-ups mit Netzwerkressourcen versorgen kann. Unsere Studie ergänzt diese Literatur insofern, als wir die von Inkubator bereitgestellten Netzwerkressourcen, die Netzwerknetzwerke zwischen den Mietern und den "privaten" pfadabhängigen Verlauf externer Netzwerkressourcen, die nicht mit dem Inkubatorumfeld zusammenhängen, verglichen haben. Unserer Kenntnis nach ist dies die erste Studie, die die Netzwerkressourcen von Gründerzentren nach diesen Dimensionen unterscheiden und systematisieren soll. Daher baut unsere Forschung auf früheren Studien auf, trägt aber zur wissenschaftlichen Forschung bei und fördert sie, indem sie ein differenziertes Bild der Netzwerkmöglichkeiten von Gründerzentren liefert und die Art und Art der verschiedenen Netzwerkressourcen unterscheidet, die sich innerhalb und außerhalb des Inkubators befinden.

Insgesamt deuten unsere Daten darauf hin, dass die Inkubation generische Netzwerkressourcen bereitstellen kann, aber in geringerem Maße idiosynkratische (nicht generische) Netzwerkressourcen bietet. Es kann daher argumentiert werden, dass von Inkubatoren bereitgestellte Netzwerke die externen "privaten" Netze der Mieter ergänzen, aber nicht ersetzen können, die für den Zugang zu eigenwilligen Ressourcen von entscheidender Bedeutung zu sein scheinen.

Neben dem Beitrag zur wissenschaftlichen Literatur argumentieren wir, dass unsere Studie auch Auswirkungen auf politische Entscheidungsträger und Inkubatormanager hat. Zuerst scheint die Inkubation an sich keine "schnelle Lösung" für Mieter zu sein, um die notwendigen Netzwerkressourcen für die Entwicklung und das Wachstum sicherzustellen; es scheint auch nicht, dass ein Inkubator nur als Katalysator für die Bereitstellung kritischer Netzwerkressourcen dienen kann. Ungeachtet dieser Einschränkungen spielt ein Inkubator eine entscheidende Rolle, da er die notwendige Unterstützung in Bezug auf generische Netzwerkressourcen leisten kann. Einige Mieter berichten auch, dass gesellschaftliche Ereignisse Inspiration, Bekanntschaft und ein Gefühl der "Zugehörigkeit" ("wir sind hier zusammen") anregen können, um ihr Wagnis zu nutzen. Es scheint, dass die physische Nähe soziale Bekanntschaften antreibt, was auch mit den oben zitierten Studien im Einklang steht (Béllingtoft 2012; Cooper et al. 2012).

Darüber hinaus ist es interessant zu erfahren, dass Inkubatornetzwerkressourcen in der Regel Merkmale aufweisen, die denen identitätsbasierter Netzwerkressourcen ähneln, weil sie nicht hauptsächlich von wirtschaftlichen Interessen bestimmt werden, aber gleichzeitig nicht pfadabhängig sind. Die ressourcenübergreifenden Netzwerkressourcen können daher eine Mischung aus unverbindlichen Schwachbeziehungen (Granovetter 1973) aufweisen, die auch nicht redundante Informationen aus verschiedenen Perspektiven liefern (Burt 1992). Dies sind Themen für die weitere Untersuchung in der zukünftigen Inkubationsforschung.

Zukünftige Forschung sollte endlich darauf abzielen, weitere Erkenntnisse über unsere Beobachtung zu gewinnen, dass Unternehmer, die aus so genannten "Start-up-Gemeinschaften" hervorgehen, in der Lage waren, eigenwillige Ressourcen zu teilen, was die Gründung eines Spin-offs ermöglichte. Wir müssen

wissen, ob diese Ergebnisse über die beiden hier untersuchten Fälle hinaus verallgemeinert werden können. Dies kann Auswirkungen auf die Einstellungspolitik und die Verwaltung von Gründerzentren haben. Nach unserem Wissen wurden Vergleiche verschiedener unternehmerischer Stile nicht im Zusammenhang mit der Inkubationsforschung durchgeführt.

Die Daten wurden nur von einer begrenzten Anzahl von Unternehmen erhoben, die in einem Gründerzentrum ansässig waren. Daher sollten zukünftige Forscher versuchen, Daten aus einem größeren Pool von Start-ups zu sammeln, die in einer Vielzahl von Gründerzentren leben. Darüber hinaus wurden die Daten rückwirkend erhoben. Längsstudien sind daher in zukünftigen Studien gerechtfertigt, in denen die Bewerberfirmen durch die Vorgründungs- und Vorinkubationsphasen, die Inkubationsphase und vorzugsweise in die Nachinkubationsphasen verfolgt werden. Es sollten auch vergleichende Studien durchgeführt werden, in denen die Vernetzungsmuster von inkubierten Start-ups längs mit nicht inkubierten Start-ups verglichen werden.

TRANSLATED VERSION: PORTUGUESE

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSÃO TRADUZIDA: PORTUGUÊS

Aqui está uma tradução aproximada das ideias acima apresentadas. Isto foi feito para dar uma compreensão geral das ideias apresentadas no documento. Por favor, desculpe todos os erros gramaticais e não responsabilize os autores originais responsáveis por estes erros.

INTRODUÇÃO

O foco deste artigo é estudar se a incubação de negócios pode fornecer start-ups empreendedoras com recursos críticos de rede. Uma incubadora de empresas é definida como uma entidade formalizada com uma infraestrutura destinada a nutrir start-ups incubadas com recursos críticos na busca de sobrevivência e crescimento (parcialmente derivados de Allen e Rahman 1985). A incubação empresarial pode fornecer às start-ups recursos como espaço de escritório, aconselhamento e outros serviços básicos, mas seu objetivo também é estimular o networking interno e a troca de conhecimento entre empresas iniciantes empreendedoras (Hansen et al. 2000; Hughes et al. 2007; Sá e Lee 2012; Kitagawa e Robertson 2012). Além disso, as incubadoras de empresas devem ajudar os inquilinos a construir redes com empresas externas, organizações e outros indivíduos (Hansen et al. 2000). Em suma, pode-se argumentar que as incubadoras de negócios podem fomentar recursos de rede, que definimos como o acesso de uma empresa a fatores de informação, conhecimento, reputação e insumos de uma variedade de fontes, como clientes, fornecedores, concorrentes, instituições de P&D e órgãos governamentais (parcialmente derivados de Spithoven e Teirlinck 2015). A importância dos recursos de rede das start-ups empreendedoras é claramente reconhecida na literatura acadêmica (Hite e Hesterly 2001; Coviello 2006; Pettersen e Tobiassen 2012; Aarstad et al. 2010). Os empreendedores podem usar recursos de rede para gerar ou testar ideias, desenvolver novas tecnologias, identificar oportunidades de mercado (Chen e Wang 2008; Sullivan e Marvel 2011), obtenham acesso a financiamento financeiro e ganhem legitimidade (Pettersen e Tobiassen 2012), para mencionar alguns benefícios.

Para avaliar os potenciais benefícios da incubação empresarial, é fundamental estudar os recursos de rede fornecidos pelas incubadoras, que incluem tanto redes internas entre inquilinos quanto redes externas facilitadas pela incubadora. No entanto, para compreender plenamente o papel potencial genuíno da incubação de negócios, também é essencial que os pesquisadores comparem as redes externas das start-ups que vão além do meio da incubadora e decorrem da trajetória dependente do caminho de seus próprios esforços e iniciativas. Neste artigo, fazemos, portanto, uma distinção entre (1) recursos de rede fornecidos

pela incubadora (internos e externos) e (2) recursos de rede externa "próprios" das start-ups (que não estão relacionados ao contexto da incubadora). Assim, enfatizamos uma variedade de fatores que devem garantir recursos críticos da rede para alavancar os produtos e serviços das start-ups e melhorar o crescimento a longo prazo.

O esboço do artigo é o seguinte: Primeiro, elaboramos o conceito de recursos de rede de startups empreendedoras e, em seguida, revisamos estudos que examinaram os recursos de rede de startups empreendedoras incubadas. Na seção seguinte, analisamos e apresentamos os resultados de entrevistas qualitativas com inquilinos iniciantes em uma incubadora de tecnologia em Bergen, a segunda maior cidade da Noruega e localizada na costa oeste. Na seção final, discutimos nossos achados empíricos considerando a literatura de pesquisa existente, abordamos as limitações do estudo e sugerimos caminhos para futuras pesquisas.

Em suma, argumentamos que nossa contribuição fornece uma imagem matizada dos recursos de rede de start-ups empreendedoras que residem dentro e fora de uma incubadora. Embora tenha havido um número crescente de estudos examinando os recursos de rede de empreendedores incubados, para nosso conhecimento, este é o primeiro estudo que compara explicitamente os recursos de rede fornecidos pela incubadora (interna e externa) e os recursos da própria rede externa das start-ups. Por isso, argumentamos que nosso estudo preenche uma importante lacuna na literatura de pesquisa sobre start-ups empreendedoras na incubação.

CONCLUSÃO

Recentemente, um número crescente de estudos mostrou como a incubação de negócios pode fornecer start-ups com recursos de rede. Nosso estudo acrescenta a essa literatura na comparação de recursos de rede fornecidos pela incubadora, redes interconquilinas e a trajetória "privada" dependente de caminhos dos inquilinos de recursos de rede externa que não estão relacionados com o meio da incubadora. Para nosso conhecimento, este é o primeiro estudo destinado a distinguir e sistematizar os recursos de rede das empresas incubadoras de acordo com essas dimensões. Portanto, nossa pesquisa se baseia em estudos prévios, mas contribui e avança na pesquisa acadêmica, fornecendo um quadro nuances das oportunidades de rede fornecidas pelas incubadoras, e distinguindo os tipos e natureza dos diferentes recursos de rede que residem dentro e fora da incubadora.

No geral, nossos dados indicam que a incubação pode fornecer recursos genéricos de rede, mas em menor grau oferece recursos de rede idiossincráticos (não genéricos). Pode-se argumentar, portanto, que as redes fornecidas pela incubadora podem complementar, mas não substituir, as redes externas "privadas" dos inquilinos, que parecem ser cruciais para o acesso a recursos idiossincráticos.

Além de contribuir para a literatura acadêmica, argumentamos que nosso estudo também tem implicações para formuladores de políticas e gestores de incubadoras. Em primeiro lugar, a incubação em si parece não ser uma "correção rápida" para os inquilinos para garantir que os recursos necessários para a rede se desenvolvam e cresçam; nem parece que uma incubadora pode servir apenas como um catalisador para o fornecimento de recursos críticos de rede. Apesar dessas limitações, uma incubadora desempenha um papel crucial na forma de prestar assistência necessária em termos de recursos genéricos de rede. Alguns dos inquilinos também relatam que eventos sociais podem estimular inspiração, conhecimento e um senso de "pertencimento" ("estamos juntos nisso") em busca de alavancar seu empreendimento. Parece que a proximidade física impulsiona os conhecidos sociais, o que também está em consonância com os estudos citados acima (Bøllingtoft 2012; Cooper et al. 2012).

Além disso, é interessante aprender que os recursos da rede de incubadoras tendem a ter características semelhantes às dos recursos de rede baseados em identidade, pois não são governados principalmente por interesses econômicos, mas, ao mesmo tempo, não são dependentes de caminhos. Os recursos de rede interconquilinas, portanto, podem ter uma mistura de propriedades de laços fracos não vinculantes (Granovetter 1973) que também fornecem informações não redundantes de diferentes perspectivas (Burt 1992). Estes são tópicos para uma investigação mais aprofundada em futuras pesquisas de incubação.

Pesquisas futuras devem finalmente ter como objetivo obter mais conhecimento sobre nossa observação de que os empreendedores emergentes das chamadas "comunidades iniciantes" foram capazes de compartilhar recursos idiossincráticos, permitindo o estabelecimento de um spinoff. Precisamos saber se esses achados podem ser generalizados além dos dois casos aqui estudados. Isso pode ter implicações na política de recrutamento e na gestão de incubadoras de empresas. Para nosso conhecimento, comparações de diferentes estilos empreendedores não foram realizadas com referência à pesquisa de incubação.

Os dados foram coletados de apenas um número limitado de empresas residentes em uma incubadora. Assim, os futuros pesquisadores devem buscar coletar dados de um grupo maior de start-ups residentes em uma variedade de incubadoras. Além disso, os dados foram coletados retrospectivamente. Estudos longitudinais são, portanto, garantidos em estudos futuros, nos quais as empresas candidatas são acompanhadas através das etapas de pré-fundação e pré-incubação, da fase de incubação e, preferencialmente, nas etapas pós-incubação. Estudos comparativos também devem ser realizados nos quais os padrões de networking de start-ups incubadas são comparados longitudinalmente com start-ups não incubadas.