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Student entrepreneurship ed ecosistema universitario: un'analisi internazionale

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Entrepreneurship and Innovation Centre (EIC)

- The Center is hosted by the Technology Transfer Lab

- The mission of the **Entrepreneurship and Innovation Centre** (**EIC**) is to conduct world-class scientific research on entrepreneurship and innovation, promote an entrepreneurial and innovation culture and provide a direct support for the growth of the entrepreneurial environment of Politecnico di Torino.

- The activities of the Centre include
  - Scientific research, both theoretical and empirical
  - Education and training
  - Entrepreneurship and innovation in practice
    - Support to the activities of Technology Transfer and exploitation of scientific research at Politecnico di Torino complementing activities such as IP protection and Proof of concept

- A research line is dedicated to Entrepreneurship Education

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Student entrepreneurship: relevance

- Given the widely acknowledged importance of new venture creation to employment and economic growth, start-ups play a central role in the policy agenda and in the scholarly debate. Entrepreneurship policy is becoming more selective by targeting more **innovative start-ups** rather than new firms in general.

- **Youth entrepreneurship** is a timely research topic. The global youth unemployment rate is on the rise. It is therefore critical that the development strategies of economies worldwide focus on growth that is sustainable, people-centred, and inclusive.

- **Student entrepreneurship** is at the intersection of these issues
  - Student start-ups contribute substantially to a knowledge transfer from the university to the market (Astebro et al. 2012).
  - Universities are sources of knowledge that creates new entrepreneurial opportunities which can lead to the formation of innovative new firms (Audretsch and Lehmann 2005).

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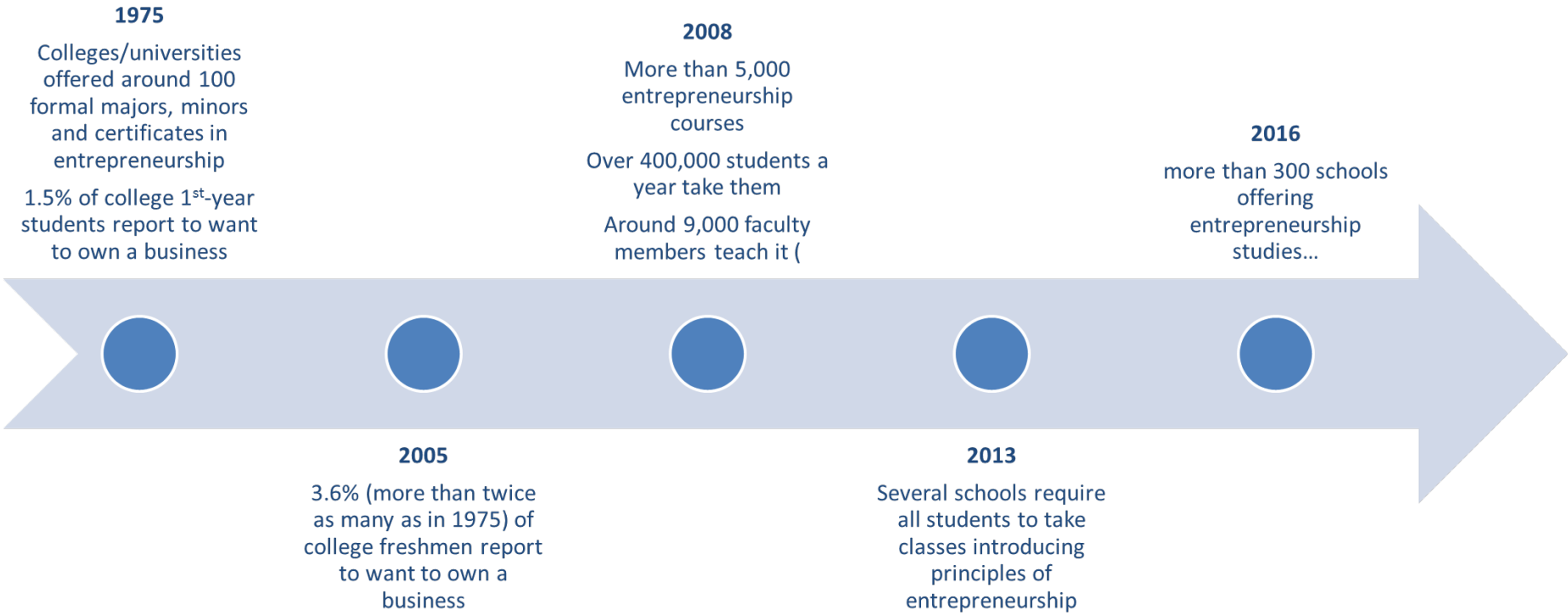
Student entrepreneurship: Trends

- In the past two decades, there has been a **dramatic increase in the number of curricular and co-curricular offerings** in entrepreneurship across the globe (European Commission 2012; Kuratko 2005; Morris et al., 2013). Universities have to a different degree adopted measures to increase the entrepreneurial propensity of their students, so to create supportive contexts for starting a business (Eickelpasch and Fritsch 2005; Hoppe 2015; Walter et al. 2013).



Source: Kauffman Foundation

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Student entrepreneurship: Trends

- On the contrary, the number of **college graduates** starting ventures has not demonstrated commensurate growth (Sieger et al., 2014).

- In the 18 countries that took part in the GUESSS editions 2011, 2013/2014, and 2016, the share of intentional founders (5 years after studies) dropped from 34.8% in 2011 to 29.0% in 2013/2014 and raised to 30.1% again in 2016.

- In 2016 55.4% of all students have not attended any entrepreneurship offerings at university.

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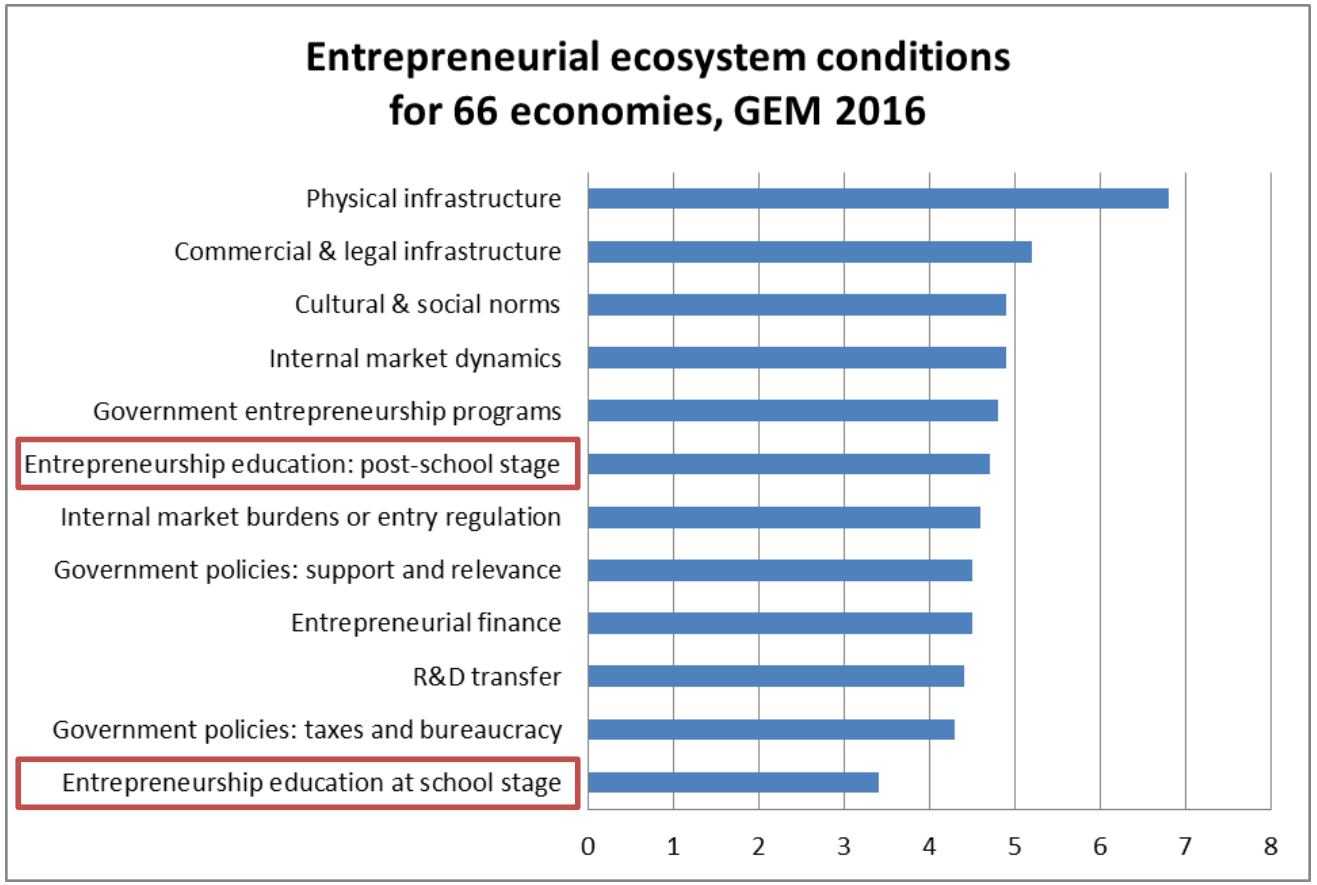
Student entrepreneurship: Trends



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Student entrepreneurship: Obstacles

- Relatively low student start-up rates have been attributed to the lack of :
  - business skills and knowledge;
  - infrastructure, support structures, mentorship and links to professional networks;
  - financial resources (Kew et al., 2013).

- There is also evidence that universities are beginning to reconsider the effectiveness of their traditional approaches to entrepreneurship (Morris et al, 2017; Duval-Couetil, 2013; Hoskisson et al., 2011).

- Modern universities vary considerably in the extent to which entrepreneurship has been embraced as an academic discipline or major area of study, and in their relative investments in developing learning climates that support the pursuit of entrepreneurial activity (Matlay, 2008; Morris et al., 2013).

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Factors affecting student entrepreneurship behavior

- Individual characteristics
- Contextual factors
  - University ecosystem
  - Local ecosystem

- Entrepreneurial activities do not happen in isolation but take place in a social, organizational, and spatial context (Autio et al. 2014; Welter 2011). Any type of behaviour is comprised of a range of actions made by individuals in conjunction with personal preferences and external conditions.

- Students' human capital and entrepreneurial motivation are influenced by the university environment. The educational environment can help students develop their self-efficacy and provide them with appropriate knowledge, skills and related resources to turn ideas into entrepreneurial actions (Pittaway and Cope, 2007; Solomon et al., 2002).

- Because students typically have no or little industry experience, the university and regional context (Geissler 2013) is more important for their entrepreneurial propensity than for people at a later stage of their professional career.

- Universities operate at two levels. They serve as one of the most valuable elements within regional ecosystems, while also operating their own internal ecosystems (Isenberg, 2011)

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University ecosystem: definition

- Community-based ecosystems consist of such components as social networks, academic and government institutions, support services, capital sources, and physical infrastructure (Neck et al., 2014; Spiegel, 2014).

- When applied in a university context, key components can include entrepreneurship course and degree offerings, engagement of alumni entrepreneurs, student incubators, prototype development services, seed funding to university start-ups, technology transfer services, and scholarly research (Rideout and Gray, 2013).

- To be effective, activities within an ecosystem require coordination and open communication, and are predicated on shared norms, values and goals (Colombelli et al., 2016; Fetters et al., 2010).

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University ecosystem: Impact

- This internal level, the spirit of the educational environment, its shared values and norms, and the internal infrastructure including curricular and co-curricular programming are key factors in developing and nurturing student entrepreneurial potential (Rideout and Gray, 2013).

- The evidence on the impact of entrepreneurship educational initiatives within universities is limited and mixed (Dickson et al., 2008; Matlay, 2008; Oosterbeek et al., 2010).

- The university environment can serve to both constrain and enable entrepreneurial behaviours (Welter and Smallbone, 2011).

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University ecosystem: EE curricular programmes

- Entrepreneurship courses provide students with knowledge and skills, experiential exercises and tasks which enhance entrepreneurial behaviour. They equip students with important tools for the start-up process, such as feasibility assessment rubrics, business plans, and risk mitigation approaches.

- Courses can help students recognise opportunities and may lead to a higher number of start-up activities undertaken by students.

- Entrepreneurship education is found to positively impact human capital (Martin et al., 2013), in terms of beliefs, capacity to exploit opportunities, and entrepreneurial knowledge (Volery et al., 2013); the scope of students' start-up activities (Morris et al. 2017); spin-off activities (Sansone, 2017)

- Offering entrepreneurship courses does not only affect the participants themselves but also other students from the same faculty, resulting from social interactions and observations of ones' peers (Bergman et al. 2016).

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EE methodologies

Theory based

Lecture

Seminar

Practical/ experiential

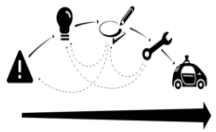
Project

Computer simulation

e-learning

Business plan

Internship



Prototyping

Ibrids

Discussion

Mentor

Collaboration with companies

Source: Solom (2006), Mwasalwiba (2010); Pittaway ed Edwards (2012)

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University ecosystem: EE curricular programmes

- The number of entrapreneurship courses has not an impact on spin-off activities.
- The use of experiential methodologies has a postive impact on spin-off activities.
- Projects, business plan and prototyping have the higher impact on spin-off activites (Sansone , 2017).

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University ecosystem: EE co-curricular programmes

- Co-curricular activities (e.g. business plan competitions, internships, entrepreneurial mentorships and coaching programs, speaker series, entrepreneurship clubs, learning communities)
  - activities outside of the classroom, where the student has an opportunity to apply the theory and content learned in the classroom (Kolb, 2014)
  - tend to be experiential in nature
- Co-curricular activities can provide students with
  - opportunities to network with experts within the university, entrepreneurs, and other professionals
  - greater access to investors, suppliers, distributors, potential customers and other important resources (Florin et al., 2003).
  - opportunities to meet similar-minded students and potential partners
- Positive impact on knowledge structures, self-confidence, likelihood of subsequent action (Neck et al. 2014); entrepreneurial intentions of university students (Walter et al., 2013; Geissler (2013); social capital (Florin et al., 2003; Kwon et al. 2013); the scope of students' start-up activities (Morris et al. 2017) ; spin-off activities (Sansone, 2017)

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University ecosystem: Financing

- Although a growing range of funding vehicles for entrepreneurs is available, the pre-seed stage of new venture creation still represent an obstacle in the funding cycle (Schleinkofer and Schmude, 2013).
- Despite strong intentions, inability to access required financing is a common reason for exiting an entrepreneurial path (Meier and Pilgrim, 1994). And this problem is especially applicable to students who lack personal savings, collateral, and established credit histories.
- Family members, friends, personal savings are the most common sources of finance for students, and these regularly prove to be inadequate.

- A growing number of universities worldwide offer various types of seed funding, including equity and non-equity investments, loans, and small grants (Morris et al., 2013).
- Empirical evidence show that university financial support has a negative impact on student start-up activities (Klyver and Schenkel, 2013; Morris et al., 2017).

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Local entrepreneurial ecosystem

- The regional context is also important because start-ups have to acquire resources and find customers (Davidsson and Honig 2003; Mosey and Wright 2007), which can typically only be obtained from outside the university.

- Among the most important economic characteristics of regions are agglomeration effects, i.e. localization and urbanization economies.

- Regional factors include cultural, social, political, infrastructural, and financial characteristics as well as the system of education and research.

- Contextual influences are important for entrepreneurial intention and activities (Geissler 2013; Walter et al. 2013)

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The Entrepreneurial process

- Entrepreneurial discovery process starts with the conception of a venture idea that can change and become more and more elaborate over time

- In this evolutionary perspective, the creation of a new venture follows the following steps:
  - Recognising opportunities (Potential Entrepreneur)
  - Assembling resources (Nascent entrepreneur)
  - Launch of venture (Entrepreneur/founder)

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Local entrepreneurial ecosystem

- Contextual influences are likely to differ depending on the stage of the entrepreneurial process.
- The local entrepreneurial ecosystem becomes more important for managing the transition from a nascent to a new business. The closer the market entry, the more important become the regional and national context.
- Many new firms get their first customers in the region where the founders live (i.e. the location of the start-up) or from the private networks of the founders.
- University efforts to foster students' entrepreneurial activity have an impact on nascent entrepreneurial activity while the local entrepreneurial ecosystem has a positive effect on the establishment of new businesses exploiting ideas from inside the university
- This evidence questions the effectiveness of entrepreneurship offerings, which seem to have motivated students to become entrepreneurially active without being able to develop their venture to an operational firm

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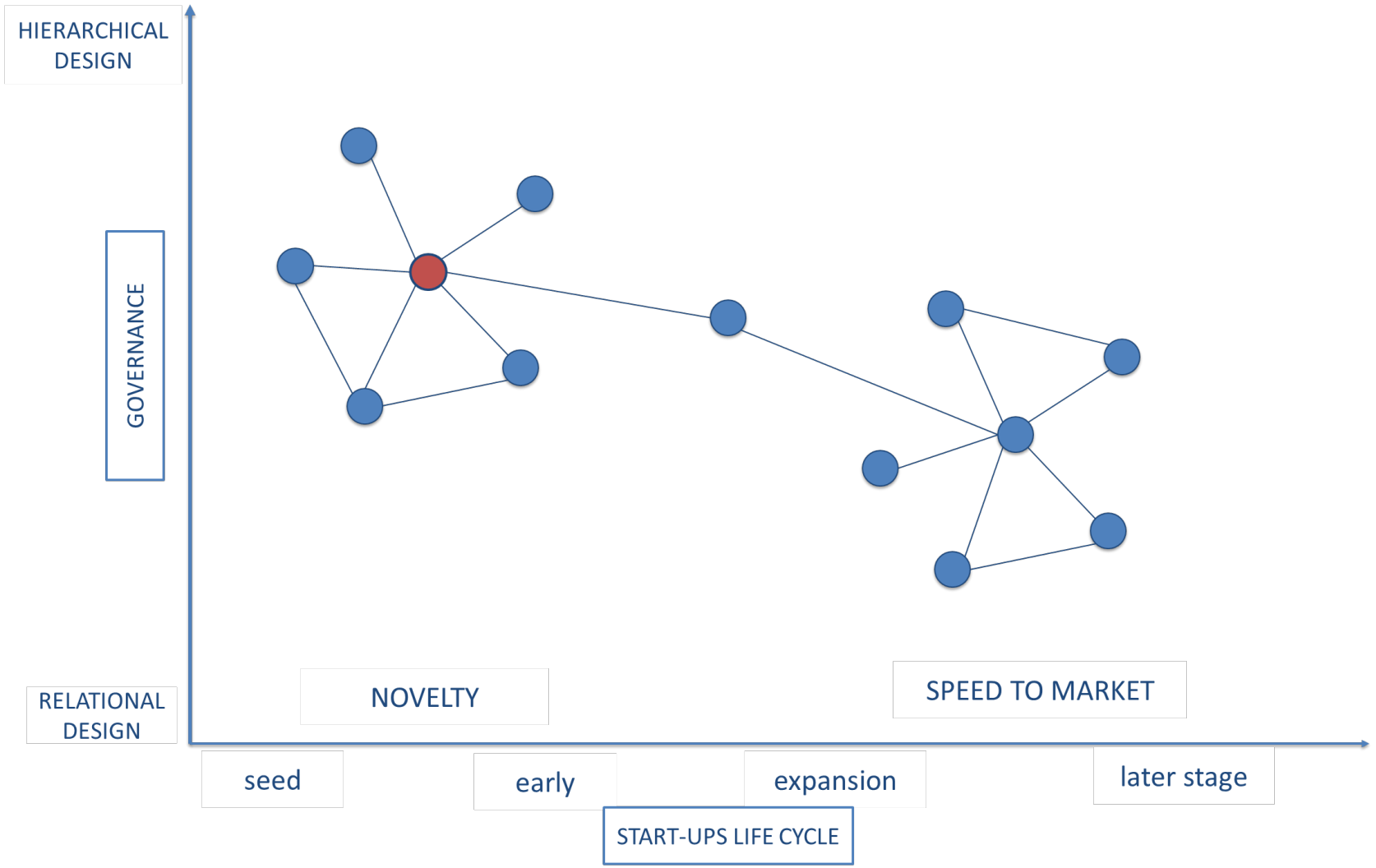
Local entrepreneurial ecosystem



Source: Colombelli et al., 2016

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Implications

- Findings reveals the value of a systemic and multifaceted approach to entrepreneurship.

- The strong correlations among the curricular and co-curricular and financial support elements and the complementary roles they play reveal that greater attention might be given to a total systems.

- Universities should have a well-formulated portfolio of activities that balance types of experiences. Beyond the curriculum universities should develop clear strategies for the provision of practical entrepreneurial experiences and social networking opportunities through co-curricular programming.

- An issue concerns funding programs and the way they are designed and managed.

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Implications

- University programmes to support entrepreneurship among students are more effective when coordinated with respective strategies of the region the university is located in.

- As many regional governments have developed entrepreneurship support policies (quite often not explicitly addressing the local universities), a coordinated strategy of government and university may be more successful than isolated efforts.

- Regional governments should view local universities as an important part of the regional entrepreneurial ecosystem, while universities should acknowledge the crucial role of the regional environment as an important driver of their students' entrepreneurial activities.

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Implications

- New ventures based on ideas from within the university are more easily established in economically growing regions where agglomeration economies and urbanization economies are present.

- Universities outside core regions can also develop capabilities to successfully promote spin-offs (Rasmussen and Borch 2010). Positive role models of entrepreneurial students may have a stronger effect in such non-core regions as there is a lack of entrepreneurial role models outside the university.

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Thank you!