



15th International Entrepreneurship Forum (IEF) CONFERENCE

14-16 December, 2016. Venice, Italy

Panel Session Synopses

2.30 pm - 4.00 pm

Panel Session 1, Room 6 - L

Technology, Open Data, Ecosystems and SMEs

Panel Session 2, Room 6 - M

**Impact Investment for Start-Ups and Growth, Social Responsibility
and Social Entrepreneurship**

Panel Session 3, Room 6 - O

Female Entrepreneurship and Female Owned SMEs

6.00 pm - 7.30 pm

Panel Session 4, Room 6 - L

SME Policy Development

Panel Session 5, Room 6 - M

Cities and SMEs

Panel Session 6, Room 6 - O

Transnational Entrepreneurship

Technology, Open Data, Ecosystems and SMEs

Chair: Sudip Roy

From Technology eco-system to innovation eco-system

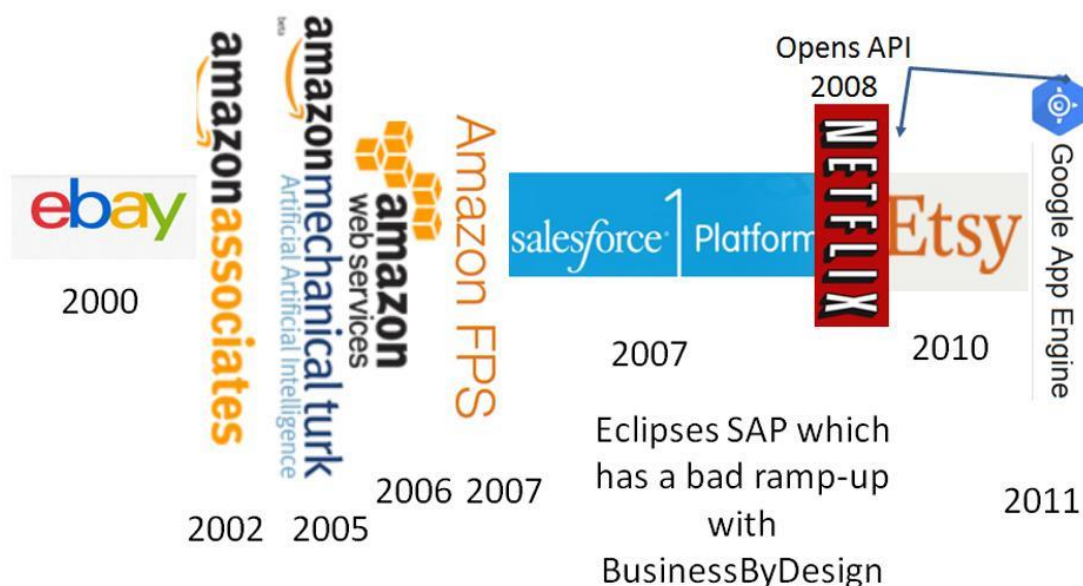
Companies across industries are identifying new opportunities to gain competitive advantage by creating compelling experiences for their customers. One change in business strategy enabling these improved customer experiences is to leverage platforms combining capabilities from multiple players in an ecosystem model. Successful platforms generate incremental value as each new user and each new service is introduced into the platform.

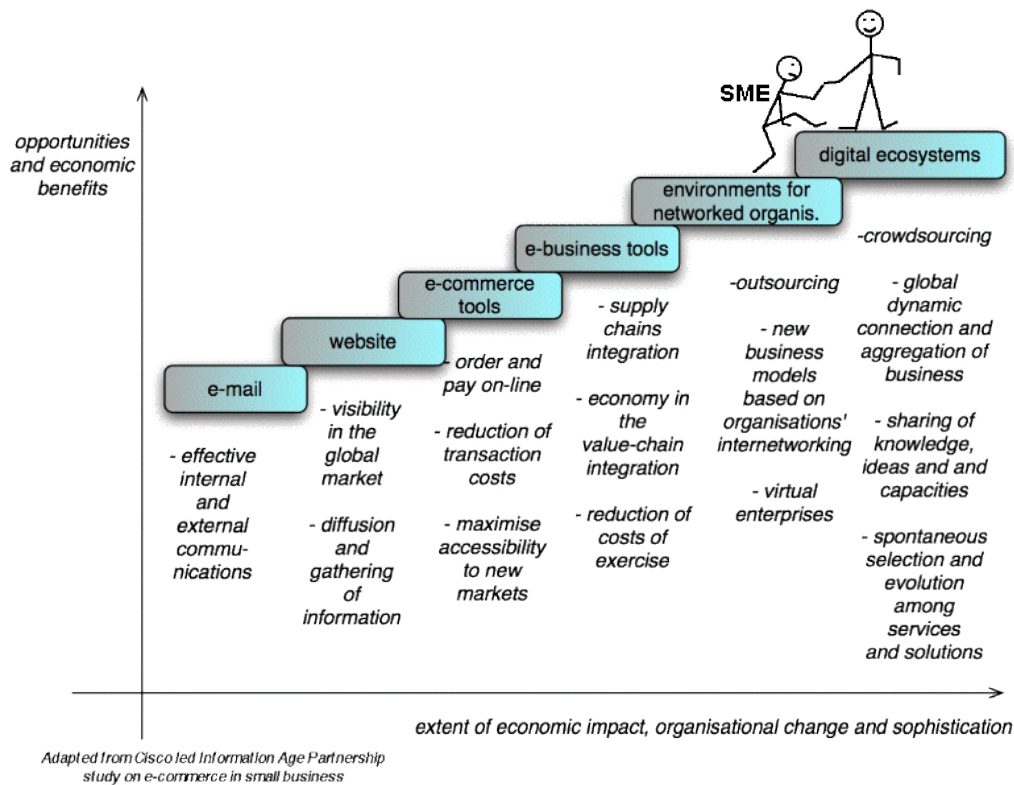
This ecosystem approach to generating new experiences has applicability in many industries. We see the future of financial services moving from the boundaries of the branch networks and call centers to a new world where services are integrated into the point of need for customers as they live their daily lives. The same can be true for health care as the industry focuses on preventative medicine, healthy living choices, and proactive care for those patients most at risk of various disease patterns. The ecosystem approach is already well documented by technology companies such as Amazon and its network of small to medium business partners leveraging the platform to deliver products. We see the same approach as Uber partners with others to provide delivery of food, seasonal products such as flu vaccines and a variety of point of need products which can leverage their incremental distribution economics.

In a startup scenario have you considered who will develop and own the platforms impacting your industry and how your company will be positioned to participate? Will your industry be disrupted as customers adopt a new platform from an adjacent industry?

Companies at the front edge of the digital services wave are designing and optimizing platform ecosystems designed to scale exponentially and drive an economic shift from supply-side to demand-side economies of scale. Using the demand-side model, these companies can create value by tapping into resources and capacity that they don't have to own.

Champions of the platform and ecosystem model





Almost all SMEs use the Internet for business purposes, but intensity varies with increasing size. The most common use of the internet is emailing customers; the use of e-commerce is increasing, but is much less prevalent: only 20 per cent of turnover derived from this source in 2013, and only 22 per cent of businesses made e-commerce sales.

A quarter of SMEs report that they do not possess basic digital skills; there is a positive link between digital skill levels and turnover growth. There is an attitudinal barrier amongst a minority of SMEs towards developing an online presence, a lack of awareness about the benefits and opportunities available, and a lack of understanding about online security threats.

To make digital a success for the SMEs and the startup sector we need to bring together an innovation eco-system to make the best use of available technology platforms.

I intend to explore this further at the discussion and understand the views of the various members of the panel on the need to move to an innovation eco-system as compared to a technology eco-system.

Impact Investment for Start-Ups and Growth, Social Responsibility and Social Entrepreneurship

Chair: Candace Johnson

1. What Impact?

The need for investment to travel a mile further than the economic impact landmark, has generated considerable interest in and consideration of the value of social impact. This relatively new objective of investment stems in part from a realization of the limitations of economic value creation. Growing income and wealth inequalities both among and within nations, together with rising levels of environmental degradation, have led to a reconsideration of the:

- The nature and scope of investment projects,
- The duality of economic and social objectives having equal or distributed value within investment projects;
- The creation of usable metrics to measure both economic and social outcome of investment projects; and
- An enhanced realization of the common good that can be created through a meaningful attention to such impact in the performance of different projects.

According to IRIS Research impact tends to cover both “social” and “environmental” objectives. In other words what is measured can be either or both social and environmental outcomes alongside pure economic ones. Typical examples include:

“SOCIAL OBJECTIVES The lack of low-income housing in Pakistan leads to social problems including homelessness and unsafe slums. To address this gap, “PML Housing, Ltd.” develops affordable housing units and provides livelihood assistance to residents.

ENVIRONMENTAL OBJECTIVES “No H2O Auto Wash” is a franchise of car washes that uses an innovative technology to wash cars without using water. The goal of the enterprise is to improve the environmental footprint of the car wash industry.

SOCIAL AND ENVIRONMENTAL OBJECTIVES “SunStarTec” is a solar energy company operating in developing countries. It aims to develop environmentally-friendly renewable energy solutions that provide access to electricity for rural communities”

Source: IRIS, 2015

Social impact objectives can include a rich variety ranging from income and productivity growth, agricultural productivity, capacity building, community development, affordable housing, employment creation, access to energy, education and clean water, and many other causes. While environmental impact’ tends to address sustainability and efficiency uses of land and energy, water management, bio-diversity conservation and prevention of accidents and health hazards, to name a few.

The selection of objectives can be influenced by the local and regional factors affecting the impact that an organization intends to make. Equally, the prospects of growth opportunities in specific sectors may skew impact investment in certain sectors in particular countries. Organizations with a strong environmental focus are more likely to develop production/manufacturing operational models, while services-related models tend to be the norm for socially focused organizations

The application of the principles of SDGs (Sustainable Development Goals) adds another layer of complexity to the debate in that with their adoption we are mindful of making and sharing impact value across the globe.

Discussion Point (1)

Do local and regional factors affect decision makers when considering what type of impact investors wish to make? Also, do certain industry sectors benefit more from a focus on social and environmental impact?

Do the SDGs make a difference to how we examine impact?

2. Inclusivity

Incorporating social and environmental impact objectives can contribute to ‘inclusive growth’ opportunities. Initiatives aimed at serving the welfare of disadvantaged or lower-income groups can lead to the modification of technologies, services and products to better meet the needs of these communities. The larger the segment of these communities that are reached by inclusive strategies, the greater is the impact that flows from their adoption (OECD, 2015). Where human capital and knowledge is deficient, or where infrastructure is poor, the challenges to making an impact multiply. Innovative approaches, including the use of information and communication technologies can make a difference. Examples include the: Hridulaya Cardiac Care Centre which provides heart surgery at a much lower price using state of the art technologies but efficiency-based, no-frills management practice.

Discussion Point (2)

How can investors and organisations incorporate inclusive innovation strategies to make higher levels of economic, social and environmental impact?

3. Context and Conditions

Discussions and debates on impact are sometimes torn between the proportionate importance that can or should be attached to economic and social value or gain given any single investment project. This is a perennial issue of interest to investors, researchers and beneficiaries. We do not really have any consensus on these issues with some arguing that investors should sacrifice financial return so that social impact can be maximized, while others argue that it is important to understand that there is a strong positive correlation between financial returns and social impact. The proponents of the former view point to the drift (from social impact) that occurs when businesses focus on profit maximization, while the latter group put forward the argument that by maximizing profitability, generating a healthy cash flow, encouraging growth and obtaining easier access to capital markets you are more likely to make tangible impact. In other words the trade-offs between profit maximization and maximizing social impact continues unabated!

Both the Omidyar Network and academic researchers will suggest that it depends on a whole range of factors. In fact, the trade-offs debate can be an unproductive. It may be better to focus attention on more pertinent and relevant questions (Bannick et al, 2016).

The trade-off debate also misses out on a more fundamental issue affecting any kind of investment, and that is one relating to entrepreneurial outcomes. In other words the nature of any impact – social or environmental – has to reflect on whether the impact is a one-off or is it something that generates new or spin-off opportunities. Does impact act like a platform of possibilities in the same way that new platform technology enables the provision of multiple services and goods from one platform?.

Discussion Point (3):

Under what conditions should an investor accept a risk-adjusted below-market return in exchange for an opportunity to achieve social impact? And how can we factor in entrepreneurial opportunities in setting impact objectives?

4. Evaluation and Measurement

Understanding and taking impact seriously means that evaluation and measurement are essential considerations for any impact driven project. The value of any investment is predicated upon adopting, using, analysing and interpreting meaningful metrics. To do so requires investors to be systematic about collecting relevant data. But what constitutes relevant data? In order to quantify impact Root Capital collects data on, for example, poverty levels in regions where an enterprise operates, expected performance of an enterprise in relation to addressing poverty, environmental vulnerability as measured by soil degradation, scarcity of water, threats to biodiversity and exposure to climate change, and scale as measured by number of farmers and workers reached by an enterprise (McCreless, 2016). Root Capital raise investment impact above enterprise impact because their objective is to subsidise loans that would not happen in a commercial market. The Grameen Bank ensures that the reach of an enterprise involves the community and especially women in that community. In all cases developing adequate measurement tools is dependent on the objectives set by the investor ideally in consultation with a beneficiary enterprise/community.

Discussion Point (4).

What metrics are best adopted for measuring social impact? Are there good examples of the use of appropriate metrics?

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References:

- Bannick, M., P. Goodman, M. Kubzansky, and Y. Saltuk (2016). 'Across the Returns Continuum' *Stanford Social Innovation Review*/Winter 2017; Vol.15 No.1: 42-48
- IRIS (2015) *IRIS Data Brief – Focus on Impact Objectives*; Sept, Issue 3
- McCreless, M. (2016). 'Toward the Efficient Impact Frontier' *Stanford Social Innovation Review*/Winter, 2017; Vol.15, No.1: 49-53

Female Entrepreneurship and Female Owned SMEs

Chair: Prof. Pooran Wynarczyk

Co-Chair: Dr. Silke Tegtmeier

Rare, but Exceptional – Women in Entrepreneurship: High Growth, Science and Technology (S&T)-based SMEs and Globalization

The way we address women's role in entrepreneurship is somewhat contradictory:

On the one hand, it apparently became common sense that women's participation in higher education and at the labour market has enhanced extremely (Devos et al., 2008). In line with this, scholars as well as policy organizations do not stop to stress that women entrepreneurs play a significant and growing role in economies and welfare worldwide (De Bruin et al., 2006; Acs et al. 2011; Sternberg et al. 2013; Xavier et al. 2013; Terjesen and Lloyd 2015; European Commission 2016). For the last two decades, research has paid specific attention to studying women's entrepreneurship. Particularly, the DIANA project as well as its DIANA International Research Conference (Brush et al., 2001) gained a high reputation. Global research initiatives, such as the Global Entrepreneurship Monitor (GEM) as well as the Global Entrepreneurship and Development Institute (GEDI) include specific reports to women's entrepreneurship (Kelley et al., 2015; Terjesen and Lloyd, 2015).

On the other hand, the so-called gender gap in entrepreneurship still seems to be apparent and significant (Arenius and Kovalainen 2006; Gatewood et al. 2003; Reynolds et al., 2004; Verheul et al. 2006). Not only do less women start a business than men (in many countries worldwide), but also only a small percentage of women entrepreneurs does show high growth rates (Gupta et al., 2009; Marlow, 2002). Many research endeavours reveal manifold reasons for this gender gap: Several approaches focus on women's personality traits in comparison to men's (Wilson et al. 2007; Caliendo et al. 2009; Sexton and Bowman-Upton 1990; Brush 1992; Tchouvakhina 2004), women's human capital (e.g. Furdas and Kohn 2010), and their social network (e. g. Aldrich et al. 1989; Renzulli et al. 2000; versus Caputo and Dolinsky 1998; Cromie and Birley 1992; Jungbauer-Gans 1993), or influence factors in women's family and society (e. g., McManus 2001; Boden 1996; Brush 1992; Carr 1996; Ettl and Welter, 2010; Gurley-Calvez et al. 2009; Lohmann 2001, Bruce 1998; Caputo and Dolinsky 1998; Carr 1996; Lauxen-Ulbrich and Leicht 2004).

Due to the child care argument among others, entrepreneurship has widely been regarded as a male field of activity (e.g., Achtenhagen and Welter 2011; Baker et al. 1997). However, nowadays, in many countries there are increasing facilities for childcare, such as day nurseries or kindergartens. Parents can agree on more egalitarian and flexible arrangements (Devos et al., 2008). However, stereotypical perceptions still exist, although in more subtle ways (Devos et al., 2008; Ahl, 2006, Butler, 1990 and 1993). In this context, gender needs to be regarded as socially constructed. It is combined with appropriate behaviour the society expects (Ahl, 2006). Because of the ongoing repetition in societal behaviour, scholars use the term "doing gender" (Ahl, 2006; Butler, 1990, 1993). While dominance, independence, and aggressiveness are seen as masculine characteristics, emotionality, passivity, and warmth are seen as feminine characteristics (Hardy, 1995). Instead of taking male entrepreneurs as the norm, scholars suggest to focus on women specifically instead of considering them as a homogeneous group and as the opposite of man (Tegtmeier et al., 2016; Tegtmeier and Mitra, 2015; Ahl 2006; Ahl and Marlow, 2012; Hughes et al., 2012).

It is widely acknowledged that science and technology-based SMEs are amongst the key components of a dynamic process of national and regional economic development. The growth and global competitiveness of this 'atypical' segment of the SME sector rely heavily on the strength of scientific and technological expertise and a highly skilled labour force. Existing research clearly demonstrates that young girls and women are under-represented in the Science, Technology, Engineering and Mathematics (STEM) education. Concerns about the 'gender gap' in these fields have been increasingly raised and addressed by some governments

and other organizations around the globe, resulting in the development of numerous positive action measures and gender specific initiatives. Despite some significant improvements in certain scientific and related fields in recent years, the scientific labour market and enterprises remain, in general, male dominated around the globe due to some specific and persistent institutional, professional and personal barriers faced by women (Rosa & Dawson, 2006; Rosser, 2009); Wynarczyk and Marlow, 2010; Wynarczyk and Ranga, 2017, forthcoming).

This workshop aims to bring together several experts to discuss and debate, through a gendered lens, some key issues surrounding the growth and development of S&T based SMEs, including for example, STEM pipeline (education, career), specific barriers faced by women, open innovation, role of networks, public policy, internationalization activities, and commercialization of technology.

The panel aims to identify barriers, discuss and debate possible solutions and examples of good practice in HEIs, industry, and government and offer recommendation in order to promote and enhance greater participation of women in scientific and technological advancement in advanced, emerging, and developing around the world.

A selection of recent research reveals some cutting-edge results:

- When it comes to growth intentions, one major reason against such intentions is the perception of growth endangering the quality of the services offered by the business, while a major reason for growth intentions is fun and excitement (Bulanova et al., 2016).
- A recent study on women-led high-tech start-ups reveals that those start-ups are “more capital-efficient, achieve 35% higher return on investment, and—when venture-backed—generate 12% higher revenue than male-owned tech companies.” (Wadhwa/Mitchell, 2013).
- Although maximizing lifetime income is not necessarily among women’s key motives to become entrepreneurs, women entrepreneurs are indeed Jacquelines-of-all-trades as their male counterparts are (Tegtmeier et al., 2016).
- The number of role models is positively associated with entrepreneurial intentions (Austin/Nauta, 2016).

Questions

- Entrepreneurship is Entrepreneurship: Should we pay specific attention to women at all and if so, why? If only few women have entrepreneurial intentions and specifically intentions to grow or internationalize their business, shouldn’t we accept this fact? Why should we care? Do we need to motivate more women to engage into entrepreneurial activities? Why?
- Growth is a choice which is personal and strategic – Can and should this be influenced? If so, how? Should we aim for more growth at all (see e.g. the Triple Bottom Line approach which claims for the integration of social, environmental (or ecological) and financial value)? Do we need a new approach to firm performance? (If not,) how can the potentials of women entrepreneurs best be translated into ideas that are truly high growth and scale-able?
- What is the relative contribution of the entrepreneurship ecosystem (macro level), the firm (meso level) and individuals and dynamics (micro level) to successful women’s entrepreneurship?

- What are the gender differences in and impact on commercialization of technology in terms of, for example, creation of new technology/scientific-based SMEs, access to finance, sector of activity, social impact framework (e.g., climate change, green issues), solutions to societal challenges, access to role models and mentors, informal and formal networks, leadership style, access to market, business support, education and training?
- What are the opportunities and challenges, specifically faced by women, brought about by globalization and contemporary innovation and commercialization models, e.g., open innovation?
- What are the key roles of HEIs technology transfer officers and commercialization policies in enhancing women's participation in the creation of university spinoffs?
- Are there any examples of good practice in university, industry, and government that promote and enhance greater participation of women in high technology and scientific-based ventures, hence internationalization activities?

SME Policy Development

Chair: Giuseppe E. Gramigna

Co-Chair: Prof. David Smallbone

In our discussions on what to discuss for this panel, Prof. Smallbone shared one of his upcoming research where he raises several critical questions on the nature of government supported entrepreneurship programs.

Very eloquently, and indeed efficiently, he guides us through a sequential set of logically consistent, questions.

First raises the question of the basis or rationale for government supported entrepreneurship programs. Through this question Prof. Smallbone invites (or more likely prods) us to think about the broader question of the government's role in the economy and indeed society. He hints that government interventions should be based on identified "need" emanating from identified market failures.

He then guides us through some of the more difficult challenges with these types of government supported programs.

Prof. Smallbone highlights the critical and nearly ubiquitous challenge of lack of evidence of the effectiveness of entrepreneurial programs.

In addition, he points to three additional critical but common challenges with these types of government supported programs:

- (1) **Deficient program design** where policy makers or program designers fail to consider current needs'
- (2) **Deficient program implementation** where the program delivery mechanisms are poorly aligned with current needs or target populations or even with stated policy objectives;
- (3) **Program fragmentation** where over time, a multitude of fragmented, uncoordinated, and often small programs are introduced across different government entities. In this environment, no program reaches sufficient size or scope to generate enough data for learning what works or what does not. I would also add that all too often these fragmented programs are artificially maintained thus propagating a static state where nothing is learned, and nothing is changed

Finally, Prof. Smallbone invites us to consider some relevant future research topics, something of great importance for all of us involved in the entrepreneurship and SME space.

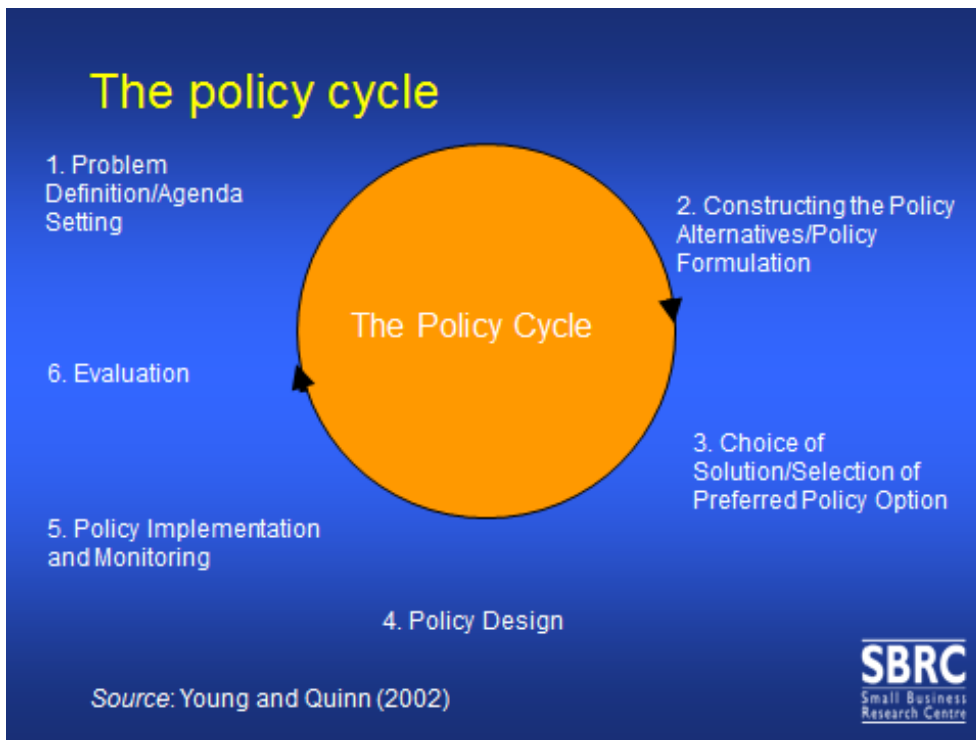
He outlines the need to further research on:

- (1) "**Policy Formulations**", which I understand to include **Policy and Program Design** and **Program Implementation**, with a specific focus on the role of ministers, senior advisors and civil servants;

He also invites us to consider

- (2) The need for further research on the cost and benefits of government supported entrepreneurship programs.

Finally he provides us with a robust analytical tool to undertake these empirical and analytical policy-oriented research tasks: A six-stage Policy Cycle.



In essence it is an analytical tool to learn what works and what does not with two critical features:

- (1) It incorporates data into the learning-development-more-learning-adaptation process; and More importantly,
- (2) It can be considered a continuous, dialectical process of continuous learning, and adaption.

This analytical tool or process is particularly applicable to some recently improved/expanded empirical modalities for **Evidence-Based Policymaking**, a topic I have been developing within the U.S. Federal government as the chair of a workgroup charged with developing a user guide for the *Evaluation of Business and Technical Assistance Programs (EBTAP)*.

The value proposition of this approach is as follows:

*During the past 10-15 years we have observed how **Big Data** has changed the paradigm of how the private sector delivers its goods and services to its clients. Likewise, the adroit use of **Program Administrative Data (PAD)** which is collected as part of the normal delivery of government services, and already residing within government databases; and when linked to other datasets already residing across other government entities and possibly to private sector datasets can change the cost and empirical paradigm of how the government learns what works and what does not within government. As such this approach can produce the foundation of **Evidence-Based Policymaking**.*

To give you an example of this paradigm shift, a national-level study based on a survey modality with an expected cost of \$ 50 Million was implemented for about \$500,000 using PAD.

A description of the essential elements of this modality will illustrate that it provides potential solutions to the challenges raised by professor Smallbone. So here are some of the requirements, and basic characteristics of this **Empirical Modality**:

1. Prof. Smallbone hinted that the efficiency and effectiveness of any entrepreneurial program is based on an enabling entrepreneurial ecosystem. Likewise, the efficiency, effectiveness and indeed the possibility of implementing a program evaluation based micro-level *Program Administrative Data* that is linked to other datasets is based on the existence of a robust data-sharing infrastructure of laws and technologies that includes laws and procedures on (1) **Privacy** that outline which data is

collected, (2) **Confidentiality** that outline the allowable users and uses these data, and **Security**, that outline the excluded users and uses of these data.

Any effort that gets anyone of these three critical elements wrong will fail on its own weight, measured by the quality and quantity of the data collected, stored and used.

Within this robust data-sharing infrastructure, this modality requires several program specific elements (all of which have been highlighted by professor Smallbone):

- (1) A set of clearly defined **program objectives** and targeted recipients.
- (2) A set of clearly defined theories of how the program is expected to affect change. This **Theory of Change**, would outline the logical and transmission mechanisms from program:
 - a. **Inputs**: (funds, or resources or materials used by the program to provide its services);
 - b. **Activities**: Services provided by the program.
 - c. **Outputs**: Quantifiable amount of service provided (e.g., classes attended, people served, number of hours of services received, financing, etc.).
 - d. **Outcomes/Impacts**: Any behavioral or other change occurring as a result of receiving these services. Note: this change is usually measured at the individual recipient level, but can include broader regional or economy wide impacts.

Tracing and measuring these elements will require that the program collect certain data for each service delivery, i.e. **transactional-level data** of each service delivered. These *Data Items* include information on the:

- (1) **Service Provider** (who);
- (2) **Service Provided** (type, intensity, time, location);
- (3) **Service Recipient Characteristics** (*Individual* age, gender, education, *firm* age, size, sector, etc.);
- (4) **Service Recipient Identifiers**, including **Unique Identifier** codes (fiscal codes), as well as **Supplemental Identifiers** (Names, Addresses, telephone numbers, web and e-mail addresses, etc.)

With these micro-level Program Administrative Data (PAD) researchers will be able to observe and estimate the degree of program **effectiveness** (e.g. measure the effectiveness in delivering its services via different types of training, by different types of trainers, to different types of entrepreneurs, and in accordance with stated policy objectives).

Linking these Program Administrative Data (PAD) to other datasets across government ministries and possibly across the private sector will allow observing and estimating behavioral change (**the Program Impacts**) such as employment, revenues, profits, market expansion, business dynamics (births, deaths...) of not only the program recipients but also of a comparison group. The difference in behavioral changes between these two groups could be deemed to be an empirically robust estimate of impacts **attributable to the program**. Of course, one could implement a similar modality to estimate and attribute the impacts of a number of programs.

There are several **Analytical Modalities** that were established in the natural sciences around the 1800, and discussed in the social sciences but were deemed unfeasible for the social science realm due to lack of data and ethical issues. However, recent technological advancements makes these empirically-robust analyses practical and cost effective. Of course there are many here unstated questions, which we hope to briefly discuss during the question and answer part of this panel.

Questions

1. Address the challenges and opportunities of (a) finding no evidence of impact, (b) finding evidence of no or insufficient impact, or (c) ineffectively achieved impacts.

Answer themes:

- a)* Finding no evidence of impact leaves the researcher with the hard task of explaining that not finding evidence of impact does not support the conclusion that the program had in fact no impact. This is often an erroneous conclusion of novice evaluators and policy makers. It could be that the program was too small or too brief or too recent to generate any detectable impact. This is often referred to as the challenge in “*finding a needle in a haystack*”: The probability of finding the needle is dependent on several factors: (i) The size of the needle (the treatment intensity), (ii) the size of the barn (the nature of the market gap or need), (iii) the number of times one looks for the needle (the sample size).
 - b)* Finding evidence of no or insufficient impact that is inappropriately provided to a novice policy maker may result in an “*up or down*” vote on the program, instead of a learning exercise of what could be changed to obtain sufficient impact.
 - c)* Ibid for finding of inefficiently achieved impacts.
2. Address the challenges of using the Program Administrative Data (PAD) process to evaluate and learn from young, small, or recently implemented Pilot Programs.

Answer themes:

The PAD process is based on the existence of fairly large number of observations. There are significant limitations with implementing the PAD process for relatively small datasets. For example, one may not obtain sufficient number of matched observations. Perhaps, more importantly one must take great care when interpreting the “informational value” of these evaluations with limited number of observations. For example, they may only provide preliminary, weak evidence of effectiveness and impact for the specific program evaluated (AKA weak, preliminary and limited **Internal Validity**). However, even this preliminary data is better for than no data. Finally, one must take great care not to extend these weak Internal Validities to other programs or environments. That is, there is little to no **External Validity** valued to be extracted by these weak studies.

3. Address the challenges of the long gestation timeframe for implementing Program Administrative Data (PAD) process.

Answer themes:

- a)* Use Performance Measurements that are observable in shorter-time frames to evaluate the effectiveness and possibly temporarily justify the program;
- b)* Leverage a well-developed data-sharing infrastructure with specific government and private sector entities to implement rapid-cycle evaluations.

Cities and SMEs

Chair: Prof. Piero Formica

Co-Chair: John Edmondson

CITY, SMALL AND MEDIUM-SIZED ENTERPRISES, AND TRANSFORMATIVE STARTUPS

Stepping forward into the Renaissance City of the 21st Century

By Piero Formica¹

The city is a mental clock whose hours strike at the time of the pendulum swinging between the tradition of its small and medium-sized enterprises and innovation made by the "useful monsters" – namely, the transformative start-ups. The pace of the city reflects its alternative movement between the camp that sets the stage for incremental improvements and the camp that sets in motion a process of thinking in unconventional ways and that comes up with heterodox ideas and proceeds in unexplored directions – those undertaken by the transformative start-ups which change the state-of-the-art, leading up to the Renaissance city of the 21st century.

The city of small and medium-sized enterprises

It is cultural the tie between the city and its small and medium-sized enterprises (SMEs). The vocations of its territory give the city a distinctive imprint. SMEs are the result of those vocations. SMEs make them own by reinforcing and replicating their distinguishing features. Thus, a virtuous circle is triggered between the city and its SMEs. The one and the others are successful. However, are the good and the excellent results achieved over time sustainable and durable?

An answer comes from Italy, favoured homeland of artisans, technicians and workers who from the lifeblood of vocations in their community have extracted the elements rich of active ingredients with strong entrepreneurial properties. They were the founders of a myriad of business ventures deployed in the cities of north-eastern Italy: companies that have largely retained the minor size and the configuration of *ortus conclusus* (i.e., enclosed, walled garden) typical of those urban communities.

Venice is a case for the books. The naval vocation of that prestigious and powerful maritime republic, as is evident in the eyes of those who visit its Arsenal, nurtured creativity and spurred innovation and entrepreneurship in the construction of the galleys. Later, Venetians tested their galleasses (galleons evolved from oar-driven galleys) in the waters of the Gulf of Patras. These galleasses were different from traditional galleys: they carried large-calibre cannons. However, following the battle of Lepanto, it was not the Venetian Arsenal that led the race to innovate. Situated as Venice is, overlooking the shores of the Mare Nostrum, Alessandro Barbero, Professor of Medieval History at the University of Eastern Piemonte, notes that the galley remained for a long time the favourite vessel of Venetian navigators. Venice was crowned with enormous success and fame. It was the discovery of America by Christopher Columbus that triggered the process of decline.

Initially comfortable in his *ortus conclusus*, from that time on the location of Venice was disadvantaged. The creative destruction represented by the galleon was to be exploited in full by the countries of the Atlantic coast, including Spain, allied to Venice at the time of Lepanto. To innovate, you have to be in the right place

¹ Professor Formica is Founder of the International Entrepreneurship Academy and a Senior Research Fellow of the Innovational Value Institute at the Maynooth University in Ireland where he leads an international research team on experimentation and simulation of high-expectation start-ups.

at the right time. Venice was disadvantaged, because of its geographical location at the northern extremity of the Adriatic Sea, with respect to the new trading routes. Many years were to pass before the sun would be seen setting on shipping traffic on the Venetian horizon, but at that moment the die of the lagoon city was cast.²

The case of Venice is one of many demonstrating the appeal of an irresistible territorial vocation – which has the force of the foot decidedly pressed on the accelerator of efficiency. The glue that binds together vocational competencies and a high degree of specialization holds the city and its SMEs together. Experts who follow the vocational journey by consulting the mastered knowledge maps populate the local community with its SMEs. Innovation is incremental along the direction of doing things right that leads to do better what we already are able to do.

In Bologna, mental associations caused by a strong vocation for mechanics showed the way forward, passing from the sophisticated pre-industrial machines for processing silk to today's cutting-edge machines and systems for automatic packaging. In the sign of efficiency, the Bolognese "Packaging Valley" is another case of success achieved thanks to a perfect match between the city and its vocational SMEs whose creativity stems from the accumulation of experience along the directional vectors for incremental innovation.

Specific Features of the Couple City-SME

EFFICIENCY

- DOING THINGS RIGHT
- THINK +10%

BUSINESS PLAN in order to count the **RISK**

EXPERTS

- Who master KNOWLEDGE MAPS
- Who KNOW THEY DON'T KNOW
- Who are PATH FINDERS
- Whose concerns are TECHNIQUE-DRIVEN
within their realm of expertise ('silo thinking')

In cities with high-intensity spontaneous socialization, the local vocations are a fertile ground for prestigious achievements. In Bologna, already in the twenties of the twentieth century, coffee, tobacco and card games would be the three key ingredients of socialization between ordinary working people, whatever their employment. More so than with current academic and professional conferences, with their rituals of exchanging business cards, the ritual of drinking coffee while playing cards in city bars gave rise to informal relationships amongst different people, often with unexpected results. In just such bars in Bologna, general and specialist employees first developed and then launched packaging machines that would eventually reach global markets.³

Spontaneous socialization: from the 'bottegas' of Renaissance Florence to the co-working⁴ of knowledge city

Co-working spaces are on the rise, from Google's "Campus" in London to NextSpace in California. Much has been made of these shared workspaces as a brand-new idea, one that barely existed 10 years ago. But the way they function reminds me of a very old idea:

The Renaissance 'bottega' (workshop) of 15th-century Florence, in which master artists were committed to

² See Piero Formica, *STORIES OF INNOVATION FOR THE MILLENNIAL GENERATION. The Lynceus Long View*, Palgrave Macmillan, 2013

³ See Formica 2013, quoted in footnote 2.

⁴ This section was originally published on Harvard Business Review, April 27, 2016: "The Innovative Coworking Space of 15th-Century Italy", by Piero Formica.

teaching new artists, talents were nurtured, new techniques were at work, and new artistic forms came to light with artists competing among themselves but also working together.

The Renaissance put knowledge at the heart of value creation, which took place in the workshops of these artisans, craftsmen, and artists. There they met and worked with painters, sculptors, and other artists; architects, mathematicians, engineers, anatomists, and other scientists; and rich merchants who were patrons. All of them gave form and life to Renaissance communities, generating aesthetic and expressive as well as social and economic values. The result was entrepreneurship that conceived revolutionary ways of working, of designing and delivering products and services, and even of seeing the world.

Florentine workshops were communities of creativity and innovation where dreams, passions, and projects could intertwine. The apprentices, workers, artisans, engineers, budding artists, and guest artists were interdependent yet independent, their disparate efforts loosely coordinated by a renowned artist at the center — the “Master.” But while he might help spot new talent, broker connections, and mentor younger artists, the Master did not define others’ work.

For example, Andrea del Verrocchio (1435–1488) was a sculptor, painter, and goldsmith, but his pupils weren’t limited to following his preferred pursuits. In his workshop, younger artists might pursue engineering, architecture, or various business or scientific ventures. Verrocchio’s workshop gave free rein to a new generation of entrepreneurial artists — eclectic characters such as Leonardo da Vinci (1452–1519), Sandro Botticelli (1445–1510), Pietro Perugino (c. 1450–1523), and Domenico Ghirlandaio (1449–1494).

What can those who want to create more innovative and collaborative workplaces today — whether that’s a better office in a traditional organization, a co-working space, a startup incubator, or a fab lab — learn from the workshops of the Renaissance? The bottegas’ three major selling points were turning ideas into action, fostering dialogue, and facilitating the convergence of art and science:

Turning ideas into action. Renaissance workshops were not just a breeding ground for new ideas; they helped ideas become reality. Likewise, today’s innovative workplaces need to be equipped with everything people need to turn their insights, inspirations, and mental representations into new products and ventures. Coming up with new ideas is hard enough, but the real challenge for many organizations is figuring out how to exploit them and turn a profit.

Fostering dialogue. Ferdinando Galiani, a Neapolitan economist of the 18th century, argued that markets are conversations. The quality of the network — that is, the combined intelligence of people and organizations with different skills and abilities — plays a critical role in innovation.

In Renaissance workshops, specialists communicated with each other consistently and fluidly, facilitating mutual understanding. The coexistence of and collision among these diverse talents helped make the workshops lively places where dialogue allowed conflicts to flourish in a constructive way. The clash and confrontation of opposing views removed cognitive boundaries, mitigated errors, and helped artists question truths taken for granted.

Today, we often recognize the need for these kinds of illuminating conversations without really making space for them in our organizations, either because organizations are too afraid of conflict or because people are simply too busy to try to expand their understanding of each other. But Renaissance workshops offer proof of how important it is for collaborative workplaces to draw on sources of opposing ideas and controversial opinions.

Facilitating the convergence of art and science. While often remembered as primarily artistic today, in truth the Renaissance workshop was trans-disciplinary. This helped create a holistic approach to creativity, which stands in opposition to our own organizations, in which people in different specialties are often separated into silos.

For example, during the Renaissance nature was seen as a convergence of art and science, as in the famous “Vitruvian Man” drawing by da Vinci. Many of today’s most exciting business opportunities are similar meetings of technological advances and aesthetic beauty. Bringing these disciplines together fosters mutual learning through experiments that lead to business opportunities.

Whether you are running a co-working space or trying to get your own organization to be more creative and collaborative, think about some of the ways you might follow the example of a Renaissance workshop.

The city of transformative start-ups

In the entrepreneurial field of the SME city, people grow ideas associated with the vocations of the territory. Beyond the margins of the *ortus conclusus*, there's the no man's land without any associative barriers and, therefore, a fertile land for ideas which, if entrepreneurially exploited, can change the socio-economic fabric of the city so as to transform it. For citizens, workers, local businesses and policymakers who live and work in the field of vocations, transformative start-ups appear in the resemblance of monsters that, in fact, intervene to change the shape of the city.

Not to be caught up by surprise and awe at the sight of monsters, the city is challenged to look at the future with new eyes. There is to think about a future in different ways than the past with its deep-rooted vocations. A future that is unfathomable, ambiguous, and open to every option. The business is no longer constrained by associative borders and the business success depends from working outside the garden surrounded by high walls, at the intersection of sectors, markets, and generations culturally distinct and distant.

Stepping on the accelerator of incremental innovation that does raise the efficiency no longer gives the expected results. City and its SMEs have to switch from doing things right and getting better to do the right things. In short, not the incrementalism but a change of the-state-of-the-art – “change gear, by inserting that of the effectiveness”, we would say by resorting to an automotive metaphor – that jeopardises vocations for so long grown. It is precisely those monsters, which turn out to be useful with their way of thinking, that advocate for divergent and heterodox ideas. In line with this reasoning, they walk entrepreneurial paths never explored before.

To ensure effectiveness, it is no longer central the role of experts endowed with detailed knowledge maps. The central figure is the creative ignorant⁵, who arises abstruse questions, conscious of ‘not knowing of not knowing’. It is her action that triggers the entrepreneurial process of those start-ups that are agents able to transform the economic and social fabric of the city. If the SME is such for its size (turnover, employees, and balance sheet) circumscribed by the long habit to operate within the *ortus conclusus*, the transformative start-up does not fall into that measurement scale having as its underlying principle the exploitation of space with no borders, and its focus on cross-sectoral relations and cross-cultural networks of people and businesses of the most varied backgrounds.

⁵ See Piero Formica, *THE ROLE OF CREATIVE IGNORANCE. Profile of Pathfinders and Path Creators*, Palgrave Macmillan, 2014

Specific Features of the Couple City-Transformative Startups

EFFECTIVENESS

- DOING THE RIGHT THINGS,
- THINK 10X, NOT 10%,

BUSINESS MODELS in a climate of UNCERTAINTY

NON-EXPERTS

- Who are CREATIVE IGNORANT
- Who DON'T KNOW THEY DON'T KNOW
- Who are PATH CREATORS, unrestricted by the corset of knowledge
- Whose concerns are BEHAVIOUR-DRIVEN in order to interact appropriately with those who are different from oneself in extraction, culture, discipline, and character

If the city-SMEs pair brings us back to the world divided into sovereign nation-states, with the emergence of transformative start-ups the architecture of international relations changes. Protagonists are no more the states, but the cities embarked on a journey of entrepreneurship unconstrained by local vocations, conventional cultural, and political and geographical barriers. Indeed, findings from studies of entrepreneurship in different cultural contexts indicate that there are common values shared by entrepreneurs despite the diversity of their roots.

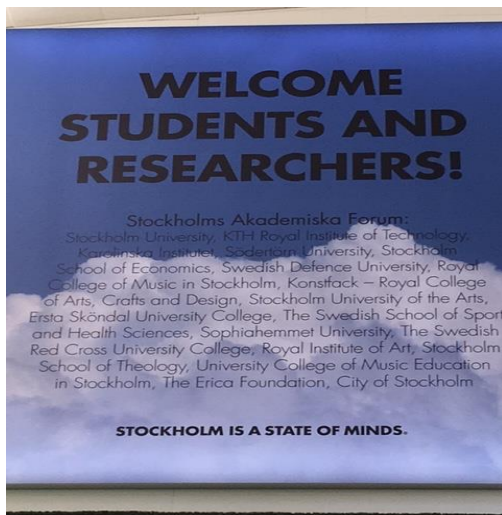
In Tel Aviv, the trans-disciplinary research programmes make global start-ups flourish. A major asset of Bangalore is the cultural interaction between industry and scientists.



Source: Compass, The 2015 Global Startup Ecosystem Ranking

In Stockholm, culture, productivity and economic growth go hand in hand. In the airport of the Swedish capital, the poster reproduced here says that that city is a state of mind, an attitude of the soul. That poster is a vivid image of a critical mass in the cultural field as well as of the team spirit, with players participating in the international talent circuit. In short, a widespread culture made up of open boundaries, education without borders, new connections, physical and virtual journeys into other places and disciplines.

As observed by Leif Edvinsson, pioneer of studies on intellectual capital, in a forthcoming book edited by the writer (Piero Formica, *Entrepreneurial Renaissance: Cities Striving Towards an Era of Renaissance and Revival*, Springer, New York), the city of culture it is an open space where each of us may harbour aspirations and engage in personal and collective projects in a climate of dynamism, harmony and creativity. From this perspective, the city could be compared to a super brain, as it emerged from research conducted by Debra Amidon and Bryan Davis on "Knowledge Innovation Zones" (<http://www.inthekzone.com/kIZ-triplelens.shtml>).



Source: <http://www.studyinstockholm.se/stockholm/stockholm-is-a-state-of-minds/>

Cities that draw on the discoveries, inventions and innovations to generate transformative entrepreneurship revive the lesson imparted by the clubs and informal learning societies like the Lunar Society of Birmingham and the Honest Whigs in London. Their members were the 18th century scientific and industrial revolutionaries who in England opened up that path which then became known as "industrial revolution". That variously articulated revolutionary body – were among them scientists, inventors, entrepreneurs, craftsmen, artists, and politicians – shared ideas in a completely transparent manner because free from monetary incentives that drive forward the formation of vested interests. The flow of ideas in motion and the consequent influence they exerted on the society of their time acted as a multiplier of productivity and growth.

Give full credit to the useful monsters

Transformative start-ups are useful monsters since they offer the city the right motivation to seize the emerging opportunities. The interaction between technological changes and new patterns of behaviour is the source of entrepreneurial phenomena that deeply affect the life of the city. E-commerce, drones, electric self-driving cars are examples of transformations in space and time of both logistics and urban mobility. Long chains of professions that have marked the working life of the city come into irreversible crisis.

One need only think to the growing number of people who will combine the mobility no longer with the ownership of a car, but with the demand for a transport service. To move from one place to another, one can book in real time the service of a self-driving the car. This will produce an upheaval in the activity heretofore performed by car dealers. To survive, they will have to transform into service providers by establishing close relationships with software vendors and maintenance technicians of the new infrastructures that allow those cars to circulate in the city.

Workshops for electrical repairs, tyre service centres, vehicle service centre and body shop, service stations, car washes, and garages: all have their activities turned upside-down. Equally heavy are the transformations that invest car insurances and the business chain for the issue of driving licenses. With fewer owners and car drivers, demand for driving licenses will drop, whereas alternative forms for the identification of persons on board of the new vehicles will come to light. It will also drop significantly the demand for taxi and lorry drivers.

What about the traffic police when the municipalities will lose revenue from fines and tolls? They must resort to new taxes to instruct the traffic policemen to perform the tasks required by that innovation. Meanwhile, multiple opportunities to work will spring forth since, as in the case of travelling by train and plane, car drivers together with passengers can eat, read, watch videos, and download to mobile phone programmes available on the Internet.

The beauty of the ideas that change the world is in the circuit of energy they trigger. When Henry Ford opened up the pathway of the car industry, all activities related to the horse-drawn carriages were swept. Has no future the self-driving car? There is no lightness of touch that will allay the fears of many a traditionalist. In the same vein of them, on June 22, 1902 the New York Times stated "no future" when Henry Ford showed the world its novelty. Cities that will recognize and appreciate the useful monsters will not make the same mistake.

To round it all off: the Renaissance cities of the twenty-first century

The name of the future of cities is "Transformative Entrepreneurship" to which "Renaissance" should be added. The 'Cambrian explosion' of entrepreneurship is a phenomenon akin to that which gave rise to the Renaissance with its culture which spread far beyond its own traditional borders – the monasteries.

Supported by digital technologies that create the infrastructure of 'knowledgefication' whose force of transmission is comparable to that of the electricity networks of the early twentieth century, the growing power of the human mind voluntarily builds its future using mental gymnastics to manage the uncertainties, being unable to predict what tomorrow will bring.

In the Renaissance cities of the twenty-first century, urged by technology to run swiftly, the younger generations abandon the heavy burden of knowledge maps entitled 'twentieth century' to travel with the light luggage of 'creative ignorance' along multi-directional paths. The creative ignorance learning is a journey that starts when you turn off the light of the day that is the certainty, advancing in the dark night of unmeasurable uncertainty. What will happen along the way towards the future, you will discover en route, as part of the redoing and inventing processes. Living in the certainty of uncertainty, creative ignorant face, looking ahead, the unpredictable. That's how new paths are made (not found!) by walking – previously unknown paths in science, art and culture, and, not least, in entrepreneurship that draws nourishment from them. That is precisely what marked the Renaissance Age.

These are the knowledge nomads whose actions help overcome cultural and not only geographical distances, as well as the chasm between researchers and entrepreneurs. As evidenced by the fourteen thousand students of 38 higher education institutions of Hangzhou that in just one year, 2014, privately financed have gone to swell the ranks of the 21st-century wandering students, we live now in a time when the great migrations combined with the international mobility of the knowledge nomads envisage a future in pursuit of the primacy of the cities where the majority of the world population will be concentrate by 2050.

The first half of the current century is an accelerated rush of population to the cities. In the age of worldwide mobility, runners are the talents attracted by the research centres and laboratories of Academia and Industry very present in the cities, as well as by the opportunities to exploit the results of their investigations offered by multiple connections among the many leading protagonists crowding the city. But not only the talents flock in large number to cities. The movement is far broader, investing the most different layers of a world population looking for opportunities that take shape in the cities as places of design and implementation of innovative approaches in social and economic fields. What really meets the needs of old and new citizens is the entrepreneurial culture that arises from the adoption of a behaviour that provides effective answers to scientific, technological and human advancements, and to their manifold liaisons. This culture is synonymous with a new life, of a Renaissance, which gives a unique conceptual imprint to each city.

From education to science and entrepreneurship, the intangible factors of innovation are the central engine of that human change that is the Renaissance. In the cities of a new entrepreneurial Renaissance, the frontier of human knowledge is dynamic, always moves forward. The government of ideas springing from human creativity – the "ideocracy" – generates projects that create a demand for knowledge-based activities: from the intuitive knowledge to that along the two directions of induction and deduction. The common weal – and therefore the prosperity of the community – is the goal to achieve according to a holistic and organic view of the city.

Just as happened to some extent with the printing press in the Gutenberg era, ideas and contents leveraging on digital technologies acquire that commercial value which in the industrial age had been only assigned to material goods. Thus, in the Renaissance profile of the scientist one can glimpse increasingly pronounced the traits of the entrepreneur. To make growing the number of scientists who, setting up companies, are able to reconcile interest in research with entrepreneurship, it is necessary that a country be endowed with industrial research laboratories where scientists can combine thought with action.

Independent creators, who give rise to digital communities, sell their creations directly to customers in online markets – the result of mutual collaboration. ‘Creative Market’, founded in 2012 in San Francisco by Aaron Epstein, Chris Williams, and Darius A. Monsef IV, brought together about 9,000 independent creators (see <https://creativemarket.com/about>). As in the case with Francis Bacon (1561-1626), in the Renaissance cities the figure of the ‘scientific leader of the new industrialist’ imposes himself, relying heavily on science to manufacture different and higher quality products when compared to the industrial age. They also erupt on the scene ‘political entrepreneurs’ and ‘public entrepreneurs’ – characters whose names have been coined by Galal and De Haas⁶. The former channel their Renaissance vision in the direction of innovative strategies pursued by the latter – whether individuals or public sector organizations with the mission to increase the absorptive capacity of innovation.

Building upon these features, the whole body of entrepreneurship rises to new life with more entrepreneurs and creators of innovative businesses, which, bringing abundance, instill optimism in the cities that nurture them.

The pioneers and early followers of the digital age have accumulated fortunes that break down national, geographic, linguistic, and currency barriers. Along which roads will they be taking their fortunes? As in the Middle Ages, will it be their ambitions that dictate the rules of the game? Or, as happened in the Renaissance, will today’s new wealthy lords show a willingness to encourage the mobility of social classes and individuals, in order to break the power of the overwhelming feudal hierarchy of the lords of giant enterprises?

Emerging Renaissance cities under the aegis of a vision focused on transformative entrepreneurship are a testing bed for policy makers and public administrators. Investing in the learning processes of ideation, fertilizing the soil for the emergence of political entrepreneurs and public entrepreneurs within the meaning of the terms given by Galal and De Haas, positioning themselves at the crossroads of the circulation of knowledge nomads, making full use of multilingualists who bring together science and entrepreneurship, and pushing up the number of scientists who reconcile research and entrepreneurship: these are sensitive as well as vital tasks to be carried out for the purpose of the “City Renaissance in the Digital Age”.

For further analyses according to the author's line of thought

Piero Formica (Editor), *Entrepreneurial Renaissance: Cities Striving Towards an Era of Renaissance and Revival*, Springer, Winter 2016-17

⁶ Galal, H. and de Haas, E. (2016), “The Role of Innovation in Developing Competitive Cities”, *Cities Today*, 15th February

Transnational Entrepreneurship

Chair: Dr. Rondy de Silva

How transnational entrepreneurs engage with institutional voids: learning for policy, practice and research

Transnational Entrepreneurs (TEs) are migrant entrepreneurs engaged in concurrent cross-border economic activities that link their country of origin (COO) and their destination/host country. Scholarly activity on transnational entrepreneurship has gained momentum only in the past fifteen years, and is viewed as a field of study which represents an “alternative form of immigrant economic adaptation”. This recent momentum in scholarly activity on transnational entrepreneurs can be attributed to the positive economic impacts such skilled migrants are shown to have both in developing economies and emerging markets. Despite this, the extant literature still evidences very little research on TEs that has been conducted in emerging markets which suggests it is potentially a very fruitful area for research.

It is argued that TEs possess the distinct advantage of 'bi-focality', which enables them to navigate the often very different market and institutional conditions in their countries of operation. Therefore, they are also well placed to recognise institutional voids and capitalise upon them, which offers a further area of learning that can be gained from TE research. Arguably, the attraction, retention and engagement with such transnational entrepreneurs remain both in the interest of governments and policymakers alike. This panel discussion explores the important role migrants can play in the development of an economy and the need to develop such modes of entrepreneurship.

Objectives and Outcomes

The primary objective of this panel is to raise interest and promote scholarly activity on transnational entrepreneurship by raising awareness of the key debates within this area of research. A further objective is to explore the role of institutional voids within emerging markets and the opportunities and challenges they pose to entrepreneurs seeking to operate within such contexts. It is also hoped to encourage reflection on policy needs that can foster such important migrant economic activity.

The anticipated outcomes of this panel discussion will include enhanced understanding of the phenomenon of transnational entrepreneurship and how it fits within wider international entrepreneurship research. Panellists and audience will also engage in discussion and debate about the nature of institutional voids in emerging economy contexts.

The topics to be covered will include

- Transnational Entrepreneurship, what's in a name? Who is a transnational entrepreneur? The debates on definition and the challenges of setting it apart from international entrepreneurship and overthrowing the shackles of ethnic entrepreneurship.
- The value of encouraging and fostering diaspora and transnational entrepreneurship for home and host countries, what policy developments are needed. Entrepreneurial eco-systems
- Transnational entrepreneur bi-focality, what can we learn from how they engage with institutional voids? How do they capitalise on voids, adapt and change institutions in economies that have less developed formal institutions?
- Panel discussion to end with deliberations on the future of transnational entrepreneurship research and the role of migrant entrepreneurship

Format

The proposed format for the discussion is as follows

- Moderator will start with opening talk introducing the relevance of migrant entrepreneurship research in the current context and where transnational entrepreneurship fits within International business research
- Moderator will briefly introduce the panellists and their areas of expertise
- Panellist presentations/discussions will be based on targeted questions by the moderator
- Q and A with audience (audience involvement not limited to end of session but will be allowed to pose questions during the key debates)