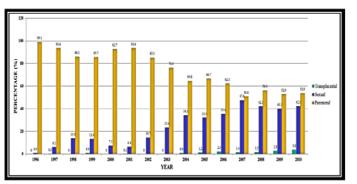
TABLE 6: Changes in modes of hiv transmission from 1996-2010 in nizhny Novgorod region



#### **CONCLUSION**

- (a) Although HIV surveillance in Russia has some advantages, but still it is inadequate
- (b) Insufficient surveillance system can result in high number of incidence rates in NNR, VFR and RF and pronounced increasing trend of prevalence rate in VFR and RF from 2006-2012
- (c) The disadvantages in surveillance system can also be related to increases in transplacental and sexual modes of transmission and infected male sex distribution
- (d) As such, an improved surveillance system is needed for proper treatment, control and prevention of HIV infection
- (e) It is highly recommended that some of the effective surveillance measures, which are implemented successfully in certain regions of Russian Federation, are also carried out in different/all regions of this country

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# THE EMPLOYMENT OUTLOOK FOR YOUTH: Building Entrepreneurial Ecosystems as a Way Forward

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Since the outbreak of the recent financial crisis we have experienced some of the highest rates of youth unemployment in history. If we want to avoid branding the young people as a "Lost Generation", we need to act quickly. One important active labor market strategy to solve the youth unemployment crisis is entrepreneurship, helping them turn into job creators rather than job seekers. Entrepreneurship has received significant attention over the past decade with a rapid and often uncoordinated increase in entrepreneurship support programs. These constitute a major part of entrepreneurial ecosystems. In order to build effective entrepreneurial ecosystems, we need to understand the components and assessment indices of such ecosystems. This essay proposes a new conceptual framework describing entrepreneurial ecosystems. The proposed framework is expected to support policymakers and practitioners in setting up new entrepreneurial ecosystems and serve as a basis for future research.

*Keywords:* Entrepreneurial Ecosystems, Youth Unemployment, Next Generation

#### INTRODUCTION

An economic and labor market crisis has plagued the world since 2008. The labor market slowdown is dramatic with a current deficit of around 50 million jobs, in comparison to the pre-crisis si¬tuation (ILO, 2012). Policymakers around the world face critical challenges in reducing unemployment and poverty (Guillén, 2001). According to the ILO, 45% of the worlds' employed live below the poverty line (below \$1.25/day), a trend, which has worsened since the onset of the financial crisis. Further deterioration in the global economy may push as many as 200 million workers, mostly in developing economies, into extreme poverty. One of the UN Millenium Development Goals is that "full and productive employment and decent work must be achieved by all means".

A lack of job opportunities disproportionately affects youth, permitting only a small percentage of

these young men and women to follow their professional dreams. This trend prevails even during positive economic situations and is worse during bad economic times (ManpowerGroup, 2012). The average youth unemployment rates in OECD countries are consistently in the range of 1.5 - 4.5 times higher than the adult unemployment rates (Figure 2). Unemployment has been shown to have severe effects on individuals, particularly when they are still young and in a stage of developing their professional "Self" (Winefield, 1997; Blakely, Collings & Attkinson, 2003). Various reasons, such as (1) the recent technological revolution and the resulting revolutionary change in generational characteristics, (2) outdated educational systems, which are disconnected from the labor market, and a demographic shift with an overwhelming proportion of older people that are forced to work longer, are partly explaining the particularly high rates of youth unemployment in recent years. It is critical that all stakeholders need to work on strategies to develop decent employment conditions for the next generation.

Entrepreneurship is a promising active labor market policy (ALMP), being an important driver of economic prosperity and social well being, creating jobs and econo-mic competitiveness (Monitor Company Group 2009). In 2008, roughly two thirds of the working population in Europe was employed by microenterprises, or small- and medium-sized (SMEs) enterprises (Eurostat, 2012). As a result, the number of programs and initiatives promoting entrepreneurship and self-employment has increased rapidly over the past years. However, little scientific knowledge exists on the effectiveness and efficiency of existing and newly created programs. Furthermore, as a result of this rapid increase in support programs, an overall understanding of how the different actors and factors interconnect is missing. In order to best support the new generation of entrepreneurs to redefine the labor market for themselves and their peers, one needs to understand which mechanisms best support their activities in regard to both firm survival as well as job creation.

This essay proposes a novel conceptual framework to map out entrepreneurial ecosystems including their key stakeholders and assess their effectiveness and efficiency based on pre-defined indices. The terminology "entrepreneurial ecosystem" has gained increased scholarly interest over the past years (Krueger, 2012b); however, our understanding of their structure and the importance of adequate assessment mechanisms is still limited.

The following section will analyze and explain the current youth unemployment situation. Based on this analysis, the importance of entrepreneurship as an ALMP to partially solve the youth unemployment crisis will be discussed, including the introduction of a novel entrepreneurial ecosystem framework including actors, factors as well as assessment indices. In conclusion, future directions for research on entrepreneurial ecosystems as well as some initial suggestions for policymakers and practitioners who want to build entrepreneurial ecosystems will be provided.

#### YOUTH UNEMPLOYMENT

The International Year of Youth (2011) came at a time of strategic importance. According to a recent report published by the International Labor Organization (ILO), of the 620 million economically active youth between the ages of 15 and 24, 81 million were out of work by the end of 2009. This was a noticeable increase of over 2% from the 2007 figures of 11.9%, therefore making it the highest rate ever. The ILO predicts that there will be a huge number of unemployed youth adding to this number (ILO, 2010).

Youth population figures may more than double by 2050, with 90% of the world's youth living in developing countries (Population Reference Bureau, PRB). "Young people are the drivers of economic development [...]. Forgoing this potential is an economic waste and can undermine social stability", stressed Mr. Juan Somavia, ILO's General Director.

In the developed world, the picture looks equally grim as in the developing world. With Greece and Spain having passed the 50% youth unemployment rate in early 2012 (Figure 1), as well as a wide gap between youth unemployment and adult unemployment (Figure 2), difficult challenges have to be met on the labor market.

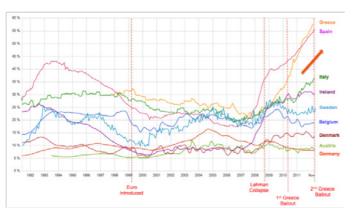


Figure 1: Youth Unemployment Rates in selected European countries (Thomson Reuters Datastream)

There is not a single OECD country, which has a youth unemployment rate that is equal to or lower than the adult unemployment rate. The global ratio of youth unemployment to adult unemployment is 2.9. In certain countries, for example in Sweden and New Zealand, the youth unemployment rate is roughly four times as high as the adult unemployment rate. In other countries, such as Spain, Greece and Portugal, the total rates of youth unemployment have reached shocking numbers with every second young person being unemployed (ILO, 2012), a trend which has worsened rapidly in the past years.

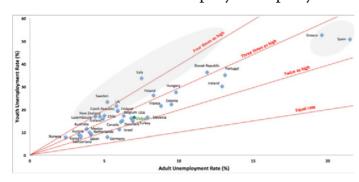


Figure 2: Ratio of Youth Unemployment and Adult Unemployment in OECD countries - 2010 (Data: Eurostat)

Detrimental effects of unemployment on young people. Unemployment not only leads to a waste of an enormous amount of unused economic potential, but also threatens to undermine the social stability of entire societies through a marginalization of large groups of people from the working population, particularly the youth. While psychological distress experienced by unemployed youth is less severe than that experienced by older people (Rowley & Feather, 1987; Broomhall & Winefield, 1990), there are other factors making youth unemployment a major social problem (Winefield, 1997). First, there are the disproportionately high rates of youth unemployment compared to adult unemployment. Second, based on

life span development theory (Erikson, 1959), scientists have made the assumption that unemployment during young years may retard healthy psychosocial development (Gurney, 1980). Third, social alienation may lead to increased criminal activity and other antisocial behavior (Thornberry & Christenson, 1984). Fourth, there is a potentially increased risk of suicide (Platt, 1984). Finally, there are the detrimental effects that unemployment has on work values and work ethics.

Explanations for a Widening Gap. There are four main explanations for the widening gap between youth unemployment and adult unemployment as well as the particularly high rates of youth unemployment in certain countries (ManpowerGroup, 2012). First of all, there are generational characteristics, which provide a partial explanation. Generations, just like individuals, have characteristics, depending on the political, social and economic setting within which they are embedded. Despite the difficulties to put chronological boundaries between generations (Taylor & Keeter, 2010: 5), there are certain patterns (periodic effects, cohort effects and life cycle events), which can be used to describe a particular generation. While those generations born between 1945 and the introduction of the Internet experienced an evolutionary generational development, the introduction of the Internet, computers and mobile phones marks a distinctive and revolutionary change in the way people live, work and think. The first generation to be fully immersed in this novel virtual world (digital natives) consequently has quite distinct characteristics, values and attitudes than the previous generations. These markedly different characteristics can cause inter-generational tensions. Employers are doubtful about the abilities of young people to apply their skills in a productive and meaningful manner. Therefore, as long as there are unemployed adult workers available for hire, employers might be reluctant to make a hiring commitment with a young and inexperienced individual. Second, a demographic shift is taking place currently exerting significant pressure on the retirement and pension systems, forcing older generations to work longer. This, in return, reduces the amount of open positions for the influx of younger workers. Third, national education systems are confronted with three major challenges. (1) We are experiencing an academic inflation with more young people receiving a degree than ever before. (2) The national education systems

typically prepare students in a rather theoretical and abstract manner, equipping them with skills that do not match those required on the labor market. "21st Century Skills" such as cooperation, communication, critical thinking, creativity and an entrepreneurial mindset are oftentimes missing (Trilling & Fadel, 2009; Rotherham & Willingham, 2010). (3) Education systems require a radical re-thinking instead of gradual reforms.

"Around the world, there is growing recognition of the need to strengthen policies and investments involving young people ... Youth can determine whether this era moves toward greater peril or more positive change. Let us support them developing into productive and powerful leaders." (Ban Ki-Moon). Youth unemployment does not have to end in a catastrophe. They might actually benefit from the situation if the different stakeholders could provide support mechanisms, which are tailored to the next generations' skills and talents and help them develop the career they are actually best suited for, may it be academic, corporate, entrepreneurial, political or social.

#### ENTREPRENEURSHIP AS A WAY FORWARD

There are already significant numbers of young people who would rather start their own business than work for someone else. Entrepreneurship is an important driver of economic prosperity and social well being, creating jobs and economic competitiveness (Thurik & Wennekers, 2004; Monitor Company Group, 2009; ManpowerGroup, 2012).

Promoting entrepreneurship is a difficult and multi-faceted issue, as there is no "one best way" to foster oppor-tunity identification and exploitation. Over the past few years, we have experienced a rapid increase in entrepreneurship programs all around the world. On a daily basis, we can witness the establishment of some new entrepreneurship support program, as everyone wants to be part of this new and shiny trend. However, we see that these programs often lack coordination, resulting in redundant service offerings and a seemingly useless abundance of activities. It is important to understand the underlying economic, educational and socio-cultural conditions that entrepreneurs face in particular regi-ons, countries, or industries in order to establish efficient entrepreneurial ecosystems. What changes have to take place on a political level in order to foster entrepreneurship and promote entrepreneurially minded people in their endeavors?

#### **ENTREPRENEURIAL ECOSYSTEMS**

The terminology "ecosystem" originated from ecology, having first been used in print by Tansley (1935), who stated that organisms cannot be separated from "the environment of the biome - the habitat factor in the widest sense... with which they form one physical system" (p. 299). Willis (1997) provides a contemporary definition of an ecosystem: "a unit comprising a community (or communities) of organisms and their physical and chemical environments, at any scale, desirably specified, in which there are continuous fluxes of matter and energy in an interactive open system". In the 1990s James F. Moore created the strategic planning concept of a business ecosystem. He defines it as "an economic community supported by a foundation of interacting organizations and individuals... producing goods and services of value to customers, who are themselves members of the ecosystem. The member organisms also include suppliers, lead producers, competitors, and other stakeholders. Over time, they coevolve their capabilities and roles, and tend to align themselves with the directions set by one or more central companies..." (Moore, 1996: 29).

While entrepreneurs drive change and innovation, they alone cannot be held responsible for creating the next steps in the societal evolution and the development of tomorrow's jobs. Historically, entrepreneurship scholars have predominantly focused on the individual entrepreneur as the unit of analysis, ignoring the interaction of multiple actors that constitute entrepreneurial ecosystems (Van de Ven, 1993; Spilling, 1996). Research on entrepreneurial ecosystems is scarce; however, it has become increasingly popular over the past years (Isenberg, 2010). Based on previous work (Van de Ven, 1993; Spilling, 1996; Iansiti & Levien, 2004; Cohen, 2006), we define an entrepreneurial ecosystem as "an interactive community within a geographic region, composed of varied and inter-dependent actors (e.g. entrepreneurs, institutions and organizations) and factors (e.g. markets, regulatory framework, support setting, entrepreneurial culture), which evolves over time and whose actors and factors coexist and interact to promote new venture creation."

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The following section will analyze the most important components of an entrepreneurial ecosystem and describe some factors and criteria based on which one can assess whether the ecosystem is efficient and effective or not.

Components of an Entrepreneurial Ecosystem. Just like an ecosystem in nature, an entrepreneurial ecosystem is composed of a multitude of components, which are believed to strongly influence entrepreneurial activities in a specific ecosystem (figure 3). There are three overarching categories which constitute an entrepreneurial ecosystem, namely (1) infrastructure, governments and regulations, markets, innovation as well as the geographic location forming the non-entrepreneur-specific general context (externalities); (2) financing, entrepreneurial education, culture, networks, startup support and exposure of entrepreneurs as the entrepreneurship-specific environmental context; and (3) the entrepreneurial actors as the individual-level components. A detailed summary of the various sub-categories and components is provided in table 1.



Figure 3: Entrepreneurial Ecosystem Map

## Table 1: Entrepreneurial Ecosystem Measurement Indices

**Ecosystem Components and Sub-Components** Non-Entrepreneurship-specific Level astructure Physical infrastructure Policy framework Educational institutions (e.g. t Energy, telecom & ICT Immigration & labor law Property rights Freedom of neonle Transport & logistics Geographic Location Knowledge & skill creation · Cost of living Research & development Published scientific paper Technology transfer New processes and methods Distribution channels Large corp Entrepreneurship-specific Level Accounting & legal Business angels, FFFs, VCs Mentors & coache Debt
 Micro financing Experts & consult Export support Labor & talents 10. Private equity 11. Loans & grants 12. Smart capital 13. Crowdfunding 12. Cluster / Tech Parks Culture
6. Mindset, ambition, drive, creativity Role models
 Self-promotion skills
 Social status of entrepren Skill training & certificates Networks Formal networks: organizations institutions 10. Tolerance of failure & risk Informal networks: friends, families, colleagues 11 Tolerance towards succes Entrepreneurship associations & organization Visibility
7. Events & meet-ups Group networks (e.g. women entrepr 9. Startup awards / labels Startup-related internet portal
 Media / newspapers Entrepreneurial Actors

Assessment of Entrepreneurial Ecosystems. Having introduced the most essential components of an entrepreneurial ecosystem, this section focuses on the assessment of ecosystems. Why should we actually bother to measure and assess entrepreneurial ecosystems? The answer is quite simple: If we do not measure the effectiveness of the various components in an ecosystem as well as the ecosystem as a whole, we will not be able to improve existing programs and put in place new and complementary programs. There are a number of established research projects and secondary data sources that study a variety of national economic indices, which we use to supplement and cross-validate our primary data collection. Some examples for such data sources are the Global Entrepreneurship Monitor (GEM), the Global Entrepreneurship and Development Institute (GEDI), the World Bank Doing Business Index, the UN Human Development Index and the Global Innovation Index (GII).

20 indices have been created to rate and assess entrepreneurial ecosystems on three main levels: (1) individual level, (2) organizational level, and (3) community level. From these 20 indices, an ecosystem index is created to rank and compare ecosystems

from around the world. A detailed analysis of the different indices is summarized in figure 4.



Figure 4: Entrepreneurial Ecosystem Measurement Indices

#### **CONCLUSIONS**

In order to solve the youth unemployment challenge, we cannot rely on the large corporations to create sufficient amounts of jobs for the next generation. Instead, all stakeholders (policymakers, educators, large and small corporations and other support organizations) need to adapt and prepare the next generation to become job creators instead of job seekers. Youth entrepreneurship must be considered a critical pathway to decent work for young people and has to form a strategic component of national efforts to address youth unemployment. The number of entrepreneurship programs has rapidly increased in the past years; however, little knowledge exists about their inter-connection as well as their effectiveness. Picturing the components that make up an entrepreneurial ecosystem as well as providing measurement indices has been missing to date. The proposed framework is expected to support policymakers and practitioners in setting up new entrepreneurial ecosystems and serve as a basis for future research.

Suggestions for the Creation of Entrepreneurial Ecosystems: It is a complex, cost-intensive and risky endeavor trying to develop an entrepreneurial ecosystem, requiring expertise as well as patience. Policymakers and other stakeholders who try to establish entrepreneurial ecosystems should factor in the following suggestions:

• Each ecosystem is unique! It is not advisable merely to duplicate other ecosystems as many of the components making up an ecosystem are quite different across the globe and cannot necessarily be controlled. It is important to understand a community's strengths and weaknesses in order to develop a strategic roadmap for the successful creation of effective entrepreneurial ecosystems

- Developing an ecosystem requires a joint effort! Neither top-down government-driven initiatives nor bottom-up individual-driven initiatives can alone create effective ecosystems. It requires a joint initiative with both, bottom-up entrepreneurial dynamics embedded and supported by governments and institutions. The private sector plays a critical role and government officials need to stop being afraid of public-private partnerships (PPPs)
- Holistic and supervised implementation! It is advantageous to implement as many of the elements of the ecosystem in parallel as possible and to make sure that the underlying settings of market, infrastructure, regulatory frameworks, etc. are all in place prior to initiating the other components. It is advisable to execute the implementation plan in a coordinated and supervised manner
- Dynamic bureaucracy! Neither during the creation of entrepreneurial ecosystems nor in the entrepreneurial life within the ecosystem should bureaucratic processes cause stagnation. Building an entrepreneurial ecosystem as well as starting up and running a company are equally dynamic and therefore require dynamic and iterative processes (Krueger, 2012a)
- Building an entrepreneurial culture! An entrepreneurial culture is essential to successfully build an efficient entrepreneurial ecosystem. Only if entrepreneurship is seen as a viable career option and entrepreneurs are seen as responsible and respectable individuals, will young graduates dare to take the step and become job creators instead of job seekers. It is important to create quick success stories, which can serve as inspiration for the new generations of entrepreneurs

Outlook for Future Research: With research on entrepreneurial ecosystem being fairly young, the proposed framework forms a basis for future theoretical as well as empirical research on entrepreneurial ecosystems. The following questions could be addressed

in future research projects: (1) which components constitute an entrepreneurial ecosystem; (2) are certain components more important than others; (3) is there a temporal dependency of the importance of individual components (which came first, the chicken or the egg) and can we infer some sort of pattern on how to develop an entrepreneurial ecosystem without having to put everything in place at once; (4) how did different entrepreneurial ecosystems evolve historically; (5) which stages outline the development of an entrepreneurial ecosystem and how do the paths differ depending on the type of ecosystem?

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