



Global Entrepreneurship Monitor 2012

— Report on Switzerland






HAUTE ÉCOLE DE GESTION FRIBOURG
HOCHSCHULE FÜR WIRTSCHAFT FREIBURG
SCHOOL OF MANAGEMENT FRIBOURG

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All data used in this report are collected and processed centrally by the GEM consortium. The authors have exclusive responsibility for evaluation and interpretation of the data.

About the Authors

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Management Summary (EN)

The Global Entrepreneurship Monitor Report 2012 on Switzerland illustrates national differences in entrepreneurial attitudes, activity, and aspirations between economies, revealing the factors that determine the nature and level of national entrepreneurial activity, and identifying policy implications for enhancing entrepreneurship in Switzerland. The GEM data not only complement already existing indicators of competitiveness and innovation, but also allow – as in 2011 – the creation of a new aggregate index, the Global Entrepreneurship and Development Index (GEDI).

In the 2012 census, perceived opportunities to start a business were lower in Switzerland than in previous years. Nonetheless, Switzerland ranks above the average of innovation-based countries. What is particularly noticeable is the fact that Fear of Failure has clearly lessened in the past few years, and in 2012 was as low as in the USA. Switzerland has even joined the USA in leading all innovation-based economies.

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Rank in Doing Business Inde	26/183	Global Innovation Index	1/125
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Classification Phase of Economic Development: Innovation-Driven Economies

*Please see glossary for definitions and references
**Average Innovation-driven Economies

Entrepreneurial Profile

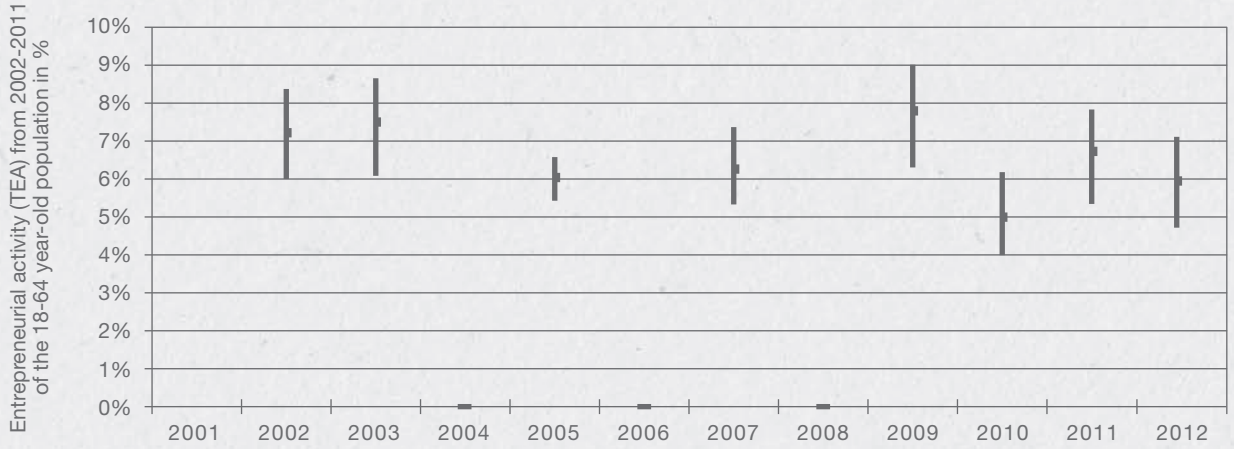
Switzerland shows no great potential with regard to creating new jobs via young companies (Total Entrepreneurial Activity, TEA), at least in the short term. This lack of potential is also noticeable in other economies of the comparison group, with the exception of the USA. On the other hand, a clear orientation on (combined product-market) innovation and orientation to international markets is clear. In these areas, Switzerland ranks 8th and 6th respectively, which, in the long term, reaps positive results: it is known that product innovation and a company`s orientation to international markets are closely related to an increase in global demand. This, in turn, creates new jobs and economic growth.

With the exception of 2010, the entrepreneurial activity rate (TEA) fluctuated between six and eight percent. Although the quantitative aspect of entrepreneurial activity (TEA) is of great interest to policy makers, more attention should be paid to its quality (low vs high job expectations) and to the entrepreneurial behaviour of employees. Swiss parameters related to entrepreneurial employee activity are below average compared with other innovation-driven economies. In contrast, Switzerland enjoys one of the best positions in terms of women`s entrepreneurial activity rates (TEA) (a practically equal woman-to-man ratio). In 2012 Switzerland even ranked first place of all innovation-based economies.

The age structure of entrepreneurial activity in Switzerland is noteworthy. Entrepreneurial activity among the young in Switzerland (18-24) is the lowest of all comparable countries, whereas the 35-44 age group shows the highest entrenpreneurial activity. Data collected for the first time on the entrepreneurial behaviour of migrants is also of interest. Entrepreneurial activity for both first and the second generation migrants is significantly higher than the Swiss average.

Development of Entrepreneurial Activity in Switzerland (TEA)

The overall entrepreneurial framework conditions in Switzerland — along with those in Singapore — are generally better than those of other innovation-based economies included in the study. Switzerland achieves outstanding results in finance, commercial infrastructure, tertiary education, and knowledge and technology transfer, as well as in stable internal market dynamics.



Management Summary (DE)

Die Hochschule für Wirtschaft (HSW) Freiburg hat in Zusammenarbeit mit der ETH Zürich und dem SUPSI Manno in der Schweiz auch 2012 die Datenerhebung für den internationalen Global Entrepreneurship Monitor (GEM) durchgeführt. Mittels 2000 Telefon- und 36 Experteninterviews wurden die unternehmerischen Einstellungen, Aktivitäten und Ambitionen ermittelt sowie Einflussfaktoren erhoben, welche Art und Ausmass der unternehmerischen Tätigkeiten bestimmen.

Der Länderbericht Schweiz des Global Entrepreneurship Monitors 2012 dokumentiert nationale Unterschiede bezüglich unternehmerischer Einstellungen, Aktivitäten und Ambitionen. Im Weiteren werden die Einflussfaktoren erhoben, die unternehmerische Tätigkeiten eines Landes beschreiben. Zudem kann dank des GEM das politische Engagement für Unternehmertum analysiert werden. Die GEM-Daten ergänzen nicht nur bereits bestehende Daten in den Bereichen Wettbewerbsfähigkeit und Innovation, sondern sie erlauben überdies – wie 2011 - die Schaffung eines neu aggregierten Index, den Global Entrepreneurship and Developement Index (GEDI).

In der Erhebung von 2012 wurden in der Schweiz weniger Möglichkeiten zur Unternehmensgründung wahrgenommen als in den Jahren zuvor. Nichtsdestotrotz bewegt sich die Schweiz über dem Durchschnitt der innovationsbasierten Länder. Auffallend ist, dass die Angst vor Scheitern in den letzten Jahren eindeutig gesunken ist und 2012 auf einem ähnlich tiefen Niveau bewegt wie in den USA. Die Schweiz nimmt mit den USA sogar die Spitzenposition aller innovationsbasierten Volkswirtschaften ein.

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Classification Phase of Economic Development: Innovation-Driven Economies

* Für Definitionen und Quellenangaben siehe Glossar
** Durchschnitt der innovationsbasierten Volkswirtschaften

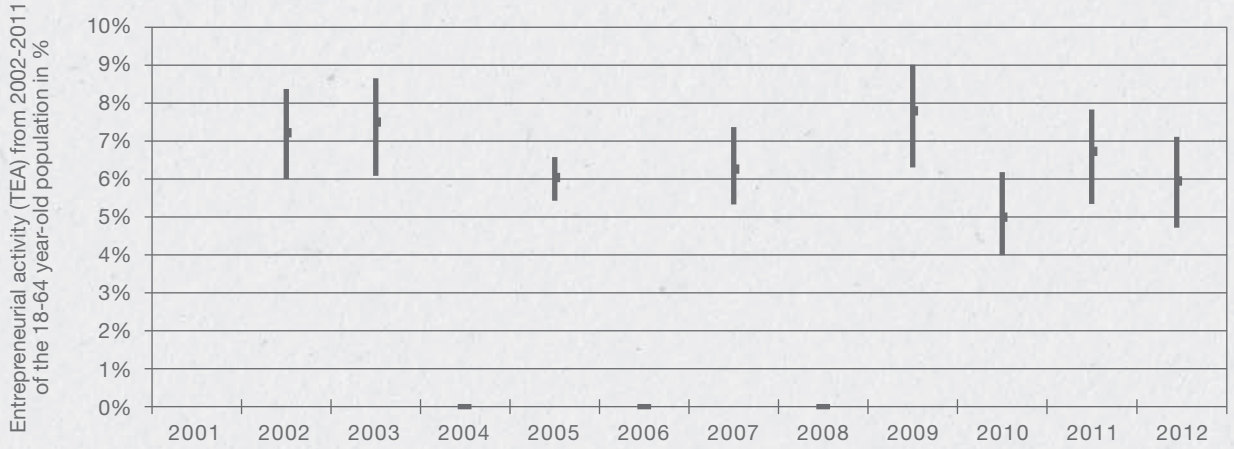
Unternehmerisches Profil

Die Schweiz zeigt zumindest kurzfristig kein grosses Potential bezüglich der erwarteten Schaffung neuer Arbeitsstellen durch Jungunternehmen (Total Entrepreneurial Activity, TEA). Dieses fehlende Potential ist auch bei anderen Volkswirtschaften aus der Vergleichsgruppe zu konstatieren, wobei die USA ausgenommen sind. Hingegen ist eine Konzentration auf (kombinierte Produkt-Markt-) Innovationen und auf eine internationale Ausrichtung unbestritten. In diesen Bereichen belegt die Schweiz Platz acht resp. sechs, was langfristig einen positiven Effekt hat: Es ist bekannt, dass Produktinnovationen und die internationale Ausrichtung von Unternehmen eng mit der globalen Nachfragesteigerung gekoppelt sind. Diese generiert wiederum wirtschaftliches Wachstum sowie neue Arbeitsstellen. Abgesehen vom Jahr 2010 bewegte sich die Quote der Gründungsaktivität (TEA) jeweils zwischen sechs und acht Prozent. Interessiert der quantitative Aspekt vor allem politische Entscheidungsträger, sollte den qualitativen Aspekten (bspw. tiefe vs. hohe Joberwartungen) sowie dem unternehmerischen Verhalten nichtsdestoweniger vermehrt Aufmerksamkeit geschenkt werden. Die Schweizer Ergebnisse im Bereich unternehmerischer Mitarbeiteraktivität liegen unter dem Durchschnitt der innovationsbasierten Volkswirtschaften. Hingegen rangiert die Schweiz auf einer der besten Positionen, wenn es um Gründungsaktivität (TEA) von Frauen geht (praktisch ausgeglichene Frau-Mann-Ratio). 2012 hielt die Schweiz diesbezüglich sogar die Spitzenposition aller innovationsbasierten Volkswirtschaften inne.

Beachtenswert ist in der Schweiz u. a. die Altersstruktur der Gründungsaktivität. Bei den Jüngeren (18-24 Jahre) ist die tiefste Gründungsaktivität aller vergleichbaren Länder feststellbar, hingegen weist die Altersklasse der 35-44-jährigen Personen die höchste Gründungsaktivität auf. Interessant sind ferner die zum ersten Mal erhobenen Daten hinsichtlich des unternehmerischen Verhaltens von Migranten. Die Gründungsaktivität sowohl der ersten als auch der zweiten Generation übertrifft markant den schweizerischen Durchschnitt.

Entwicklung der Gründungsaktivität in der Schweiz (TEA)

Die generellen Rahmenbedingungen der Schweiz und Singapurs sind im Allgemeinen besser als diejenigen der anderen innovationsbasierten Volkswirtschaften, die sich an der Studie beteiligt haben. Die Schweiz erreicht überragende Ergebnisse in den Bereichen Finanzen, wirtschaftliche Infrastruktur, tertiäre Ausbildung, Wissens- und Technologietransfer sowie in der Stabilität der inländischen Marktdynamik.



Management Summary (FR)

Le rapport du Global Entrepreneurship Monitor 2012 pour la Suisse illustre les différences entre les économies dans les attitudes, l'activité et les aspirations entrepreneuriales, en relevant les facteurs qui déterminent la nature et le niveau de l'activité entrepreneuriale nationale et en identifiant les implications politiques liées à l'encouragement de l'entrepreneuriat en Suisse. Les données du GEM complètent les indicateurs de compétitivité et d'innovation et permettent aussi, comme en 2011, la création d'un nouvel indice agrégé, le Global Entrepreneurship Index (GEDI).
Le recensement de 2012 fait apparaître qu'en Suisse, les opportunités perçues de créer une entreprise ont diminué par rapport aux années précédentes. Néanmoins, la Suisse évolue au-dessus de la moyenne des pays basés sur l'innovation.
Il est intéressant de constater que la crainte de l'échec a chuté ces dernières années, pour se situer à un niveau aussi bas que celui des Etats-Unis. La Suisse se situe ainsi, avec les Etats-Unis, en tête de toutes les économies comparables.

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Classification Phase of Economic Development: Innovation-Driven Economies

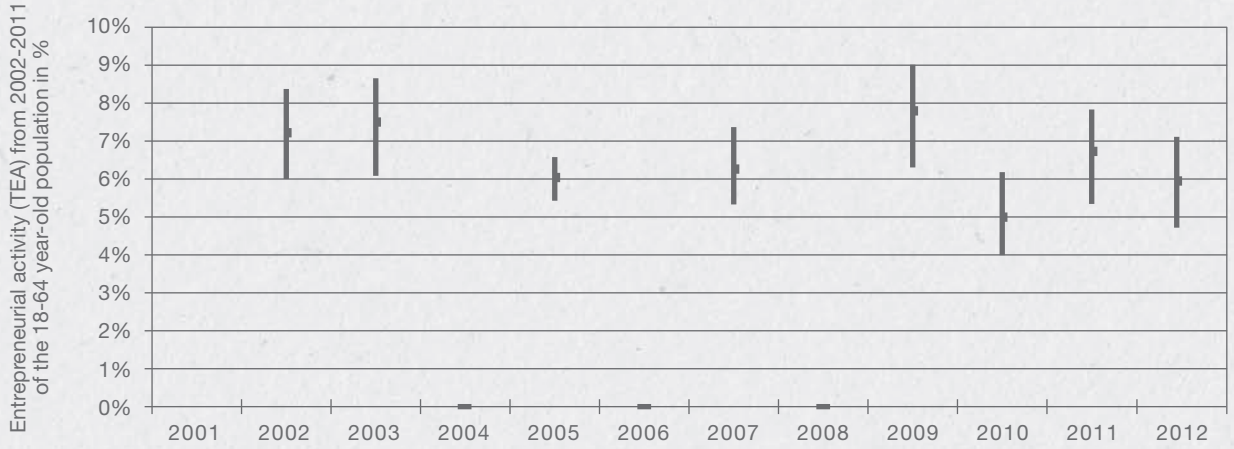
*Voir le glossaire pour les définitions et sources des indicateurs
** La moyenne des économies basées sur l'innovation

Profil Entrepreneurial

Comme les autres pays du groupe de comparaison, hormis les Etats-Unis, la Suisse ne montre pas de très grand potentiel de création d'emplois par le biais d'activités entrepreneuriales nouvelles (Total Entrepreneurial Activity, TEA), du moins à court terme. La focalisation observée sur l'innovation en termes de combinaison produit-marché (huitième position), ainsi qu'une orientation internationale (sixième position) peuvent compenser en partie cet impact toutefois limité. Ces deux tendances sont de bon augure sur le long terme; il est connu que l'innovation de produit et l'orientation vers les marchés internationaux sont étroitement liées à la croissance de la demande globale qui, en retour, génère un accroissement de l'emploi et, par là, une accélération de la croissance économique.
2010 étant une exception, le taux de TEA suisse fluctue généralement entre 6 et 8 pour cent. Bien que l'aspect quantitatif de l'activité entrepreneuriale (TEA) soit d'un grand intérêt pour les décideurs politiques, une plus grande attention devrait être portée à sa qualité (attentes faibles vs élevées en matière d'emploi) et au comportement entrepreneurial des employés. Les paramètres suisses liés à l'activité entrepreneuriale des employés (tels que le pourcentage de population adulte et le pourcentage d'employés) se situent en dessous des moyennes en comparaison aux autres économies basées sur l'innovation. Or la Suisse jouit de l'une des meilleures positions relativement à l'entrepreneuriat féminin (dans le sens du rapport hommes-femmes pondéré). En 2012, la Suisse occupait même la première place de toutes les économies basées sur l'innovation.
La structure des âges relative à la création d'entreprise en Suisse présente la particularité suivante : les jeunes entrepreneurs (18-24 ans) affichent la plus faible activité entrepreneuriale de tous les pays comparables, alors qu'à la classe d'âge des 35-44 ans est associé le taux le plus élevé de création d'entreprise. Quant aux données recueillies pour la première fois sur le comportement entrepreneurial des migrants, elles révèlent que l'activité entrepreneuriale de ces derniers, qu'ils soient issus de la première ou de la deuxième génération, se situe nettement au-dessus de la moyenne suisse.

Evolution de l'Activité Entrepreneuriale Nouvelle (TEA)

Les conditions globales du réseau entrepreneurial en Suisse – comme celles de Singapour – se développent généralement mieux que celles des autres économies basées sur l'innovation incluses dans cette étude. La Suisse atteint d'excellents résultats dans les domaines de la finance, de l'infrastructure économique, de la formation tertiaire et du transfert de connaissances et technologique, tout en affichant des dynamiques de marché interne stables.



Management Summary (IT)

Il rapporto per la Svizzera del GEM, Global Entrepreneurship Monitor, del 2012 mostra differenze sugli atteggiamenti, sulle intenzioni, sulle ambizioni e sulle attività imprenditoriali dei diversi paesi che partecipano al rilevamento. Come ogni anno, sono stati rilevati ed analizzati anche per il 2012 i fattori che influenzano e determinano la natura e la dimensione delle attività imprenditoriali in Svizzera, come pure l'impegno politico a sostegno e promozione dell'imprenditorialità.

I dati del rilevamento GEM non danno indicazioni solo sullo stato della competitività e dell'innovazione ma contribuiscono anche, come nel 2011, alla costruzione di un nuovo indice aggregato, segnatamente l'Indice globale di imprenditorialità, GEDI nell'acronimo inglese.

Il sondaggio 2012 mostra come in Svizzera, rispetto agli anni precedenti, siano state percepite minori opportunità per avviare una nuova attività imprenditoriale. Ciononostante, la Svizzera si situa al di sopra della media dei paesi basati sull'innovazione. Colpisce il fatto che, negli ultimi anni, la paura del fallimento sia chiaramente diminuita, tanto che nel 2012 si è attesta a un livello (basso) simile a quello rilevato negli Stati Uniti. Nel confronto internazionale, la Svizzera, con gli Stati Uniti, assume il primo posto fra tutte le economie basate sull'innovazione.

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Classification Phase of Economic Development: Innovation-Driven Economies

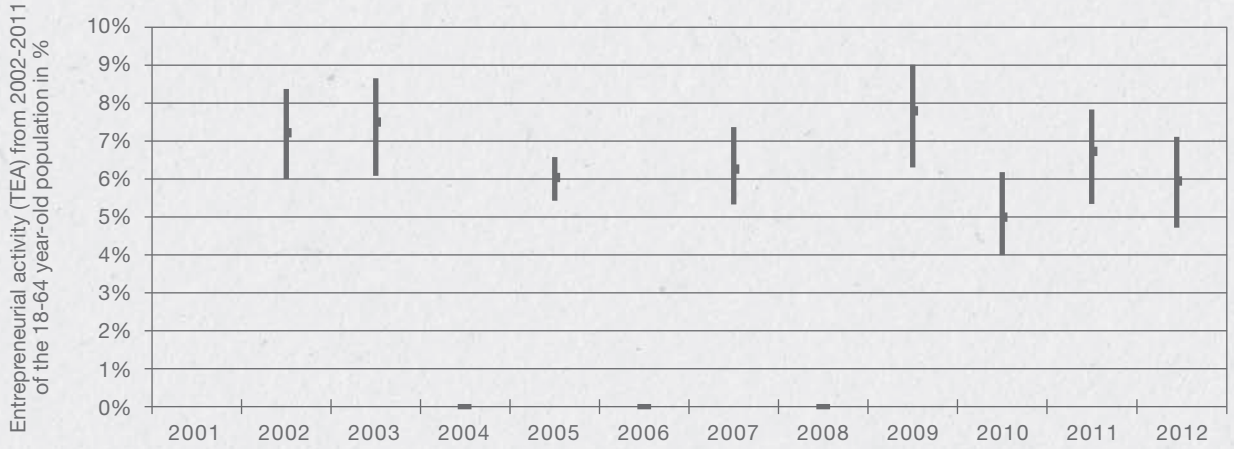
*Per le definizioni e le fonti si veda il Glossario
**Media dell'economie guidate dall'innovazione

Profilo Imprenditoriale

La Svizzera, almeno nel breve periodo, non mostra un grande potenziale per la creazione di nuovi posti di lavoro nelle nuove imprese (Tasso di attività imprenditoriale, TEA). Questa mancanza di potenziale, ad eccezione degli Stati Uniti, vale anche per le economie degli altri paesi del gruppo di confronto della Svizzera. Ciononostante, si denota per il nostro paese un chiaro orientamento all'innovazione (nella combinazione prodotto mercato) e all'internazionalizzazione. Su queste dimensioni, la Svizzera si situa al ottavo posto, rispettivamente al sesto. In termini di effetti sul lungo termine questo posizionamento è sicuramente di buon auspicio. È noto, infatti, che l'innovazione di prodotto e l'internazionalizzazione delle imprese sono strettamente connesse con l'aumento della domanda globale, con la creazione di nuovi posti di lavoro e, quindi, con la crescita economica.
Ad eccezione del 2010, il tasso di attività imprenditoriale (TEA) in Svizzera fluttua tra il sei e l'otto per cento. Anche se i decisori politici guardano soprattutto gli aspetti quantitativi del fenomeno imprenditoriale, particolarmente interessanti e degni di nota sono pure gli elementi qualitativi legati alle attività impreditoriali, segnatamente, per esempio, le aspettative, più o meno elevate, in termini di creazione di posti di lavoro, oppure le attitudini ed i comportamenti imprenditoriali. I risultati per la Svizzera riguardanti le attività imprenditoriali dei collaboratori (la cosiddetta intraprenditorialità) sono al di sotto della media delle economie basate, come il nostro
paese, sull'innovazione. Tuttavia, la Svizzera gode di una delle migliori posizioni per quanto concerne il tasso d'attività imprenditoriale (TEA) delle donne che, nel 2012, ha ormai raggiunto un rapporto d'equilibrio con gli uomini, posizionando la Svizzera al primo posto tra tutte le economie basate sull'innovazione.
Degna di nota, inoltre, per la Svizzera, é pure la struttura per età dell'attività imprenditoriale. Tra i giovani (18-24 anni), si constata il tasso più basso tra tutti i paesi comparabili con il nostro. Al contrario, la fascia di età compresa tra i 35 e i 44 anni presenta, nel confronto, una più alta attività imprenditoriale. Interessanti anche i primi dati raccolti sul comportamento imprenditoriale dei migranti. Sia il tasso d'imprenditorialità (TEA) della prima generazione, sia quello della seconda è chiaramente superiore al tasso medio d'imprenditorialità degli svizzeri.

Andamento del Tasso di Attività Imprenditoriale Early-Stage (TEA)

In Svizzera, così come a Singapore, le condizioni quadro sono generalmente migliori rispetto a quelle degli altri paesi orientati all'innovazione che hanno partecipato allo studio. La Svizzera ha raggiunto ottimi risultati nei campi della finanza, delle infrastrutture economiche, nel trasferimento delle conoscenze e delle tecnologie, nonché nel campo della stabilità delle dinamiche interne del mercato.



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1 Introduction

1.1 The GEM Project

The purpose of Global Entrepreneurship Monitor (GEM) is to explore and assess the role of entrepreneurship in national economic growth. The GEM research program was initiated in 1997 as a joint venture between academics at London Business School in the UK and Babson College in the United States. From its first survey in 1999, GEM has grown into a consortium of more than 400 researchers from 99 economies over its 14 year history. In 2012, 69 economies participated in GEM (representing an estimated 74% of the world's population and 87% of the world's total GDP), providing insights on entrepreneurship across the largest sample of economies to date, spanning a diversity of geographic regions and economic development levels.

Traditional analyses of economic development and growth have historically focused on large corporations, based on the assumption that these firms are the main drivers of economic growth in modern economies. Academics and policy makers are now increasingly appreciating and accounting for the role played by new and small businesses in the economy. GEM contributes to this recognition with a comprehensive analysis of entrepreneurial attitudes and activity across the globe. As such, GEM works toward the following objectives:

- to allow for comparisons with regard to the level and characteristics of entrepreneurial activity among different economies;
- to determine the extent to which entrepreneurial activity influences economic growth within individual economies;
- to identify factors which encourage and/or hinder entrepreneurial activity; and
- to guide the formulation of effective and targeted policies aimed at stimulating entrepreneurship.

GEM provides a comprehensive view of entrepreneurship across the globe by measuring the attitudes of a population, and the activities and characteristics of individuals involved in various phases and types of entrepreneurial activity.

1.2 *Patterns of Entrepreneurship: A Country Classification*

The GEM project views entrepreneurship as a process comprising different phases, from intending to start, to just starting, to running new or established enterprises and even discontinuing a business. Given that the context and conditions that affect entrepreneurship in different economies are diverse and complex, it is not possible to conclude that one phase inevitably leads to the next. For example, an economy may have a large number of potential entrepreneurs but this may not necessarily translate into a high rate of entrepreneurial activity. Therefore, the arrows that connect the different phases are not straight lines, suggesting the tentative nature of the relationship between the different phases. The entrepreneurship process and GEM's operational definitions are illustrated in Figure 1.

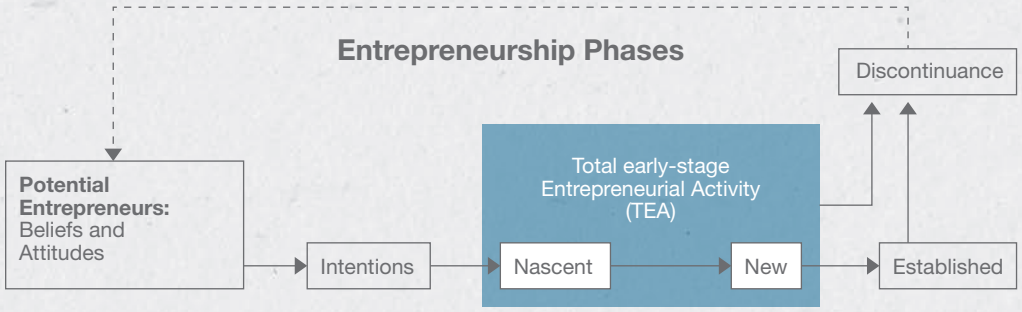
GEM's conceptualization of entrepreneurship as a multiphase process is useful for assessing the state of entrepreneurship at different points. This process starts with the involvement of potential entrepreneurs – those individuals who believe they possess the capabilities to start businesses, who see opportunities for entrepreneurship, and who would not be dissuaded from doing so for fear of failing. For some potential entrepreneurs, their intentions to start businesses are underpinned by the perceptions society holds of entrepreneurs, the status these individuals enjoy in their society, and whether the media positively represents entrepreneurs.

The next phase is nascent entrepreneurial activity – i.e. those starting new enterprises less than three months old. Given the challenges associated with starting a new business, many fledgling businesses fail in the first few months, hence not all nascent entrepreneurs progress to the next stage. New business owners are defined as those former nascent entrepreneurs who have been in business for more than three months, but less than three and a half years. Nascent and new business owners together account for the total early-stage entrepreneurial activity (TEA) in an economy, a key measure of GEM.

Established businesses are those that have been in existence for more than three and a half years. It is important to consider both established business owners as well as entrepreneurs who have discontinued or exited businesses because these two categories represent a key resource for other entrepreneurs (for example, by providing financing, mentorship, advice or other types of support). In addition, former entrepreneurs may reenter entrepreneurship (serving as serial entrepreneurs) or they may join established companies and enact their entrepreneurial ambitions as employees.

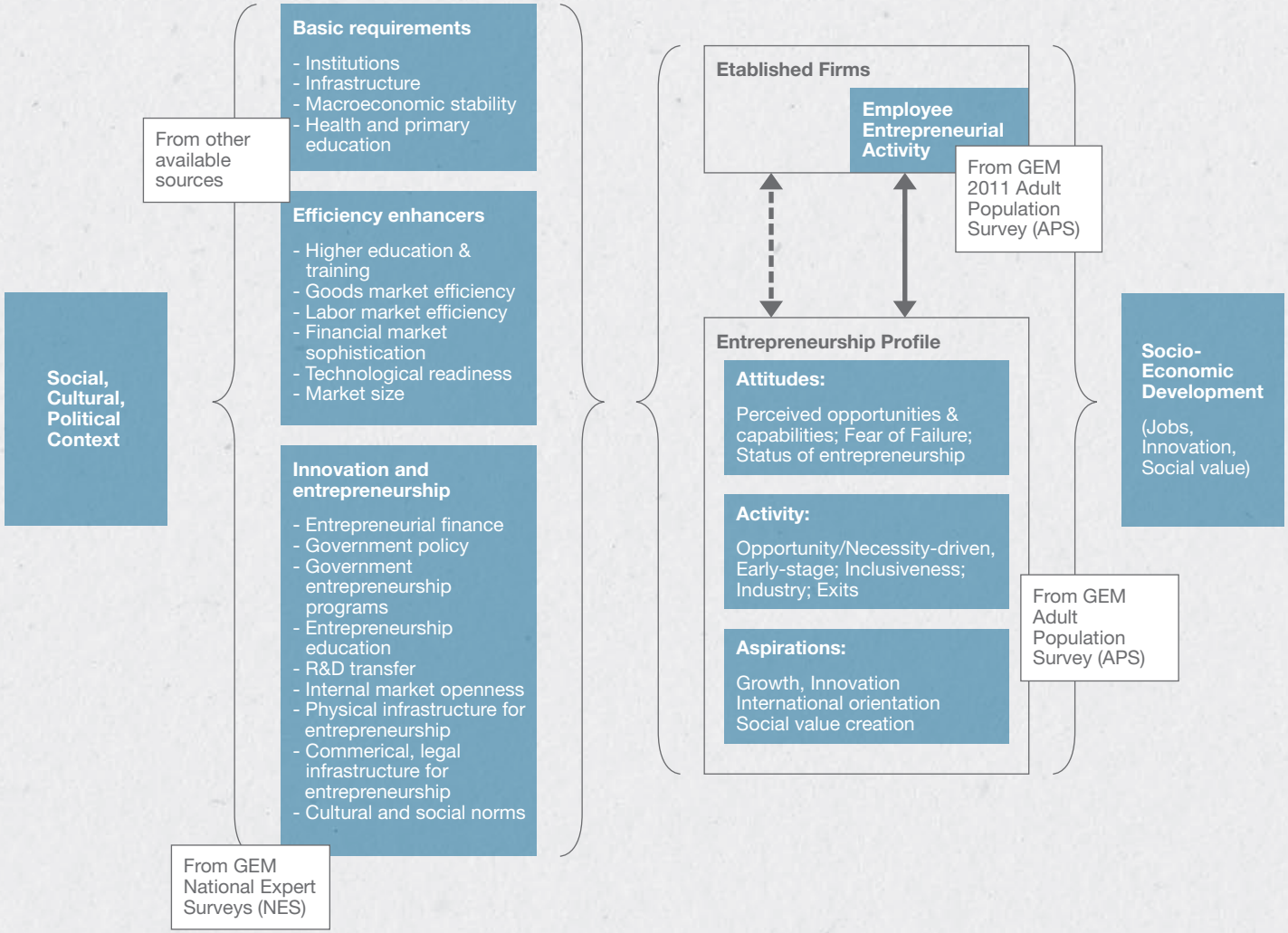
The GEM model, shown in Figure 2 illustrates the institutional environment, the effect it has on entrepreneurship and in turn, economic development. According to this model, two sets of conditions, namely basic requirements and efficiency enhancers, impact societies more broadly as well as entrepreneurial activity within these societies. Additionally, nine framework conditions for entrepreneurship influence individuals' decisions to pursue entrepreneurial initiatives and the rate and profile of entrepreneurship in different economies. This figure also acknowledges the efforts of employee entrepreneurs, those who develop and lead new business activities for their employers.

Figure 1:
The Entrepreneurship Process



GEM's harmonized dataset enables comparisons of entrepreneurship activity around the globe and within and across geographic regions. Following a typology used by the World Economic Forum, GEM classifies the 69 GEM participants as "factor-driven," "efficiency-driven" or "innovation-driven" economies.
This classification according to phases of economic development is based on the level of GDP per capita and the extent to which countries are factor-driven in terms of how much primary goods account for total exports. Factor-driven economies are primarily extractive in nature, while efficiency-driven economies exhibit scale intensity as a major driver of development. At the innovation-driven stage of development, economies are characterized by the production of new and unique goods and services that are created via sophisticated, and often pioneering, methods. Together with 23 other countries, Switzerland is included in the group of "innovation-driven" economies.

Figure 2:
The GEM Conceptual Model



1.3 How GEM Measures Entrepreneurship

GEM takes a comprehensive snapshot of entrepreneurs around the world, measuring the attitudes of a population and the activities and attributes of individuals participating in various phases of this activity. The study also considers the aspirations of these entrepreneurs regarding their businesses, along with other key features of their ventures. The primary measure of entrepreneurship used by GEM is the Total Early-stage Entrepreneurial Activity (TEA) Index, which gauges the level of dynamic entrepreneurial activity in an economy by considering the incidence of start-up businesses (nascent entrepreneurs) and new firms (up to 3.5 years old) in the adult population (i.e. individuals aged 18–64 years).

Another important feature of GEM is the distinction it makes between different types of entrepreneurship and how these contribute to economic growth and job creation. Individuals who start businesses in response to a lack of other options for earning an income are deemed to be “necessity entrepreneurs”, while those who start businesses with the intention to exploit an opportunity are identified as “opportunity entrepreneurs”. The latter may include individuals who aim to maintain or improve their income, or to enhance their independence.

1.4 GEM Methodology

One of the key purposes of GEM is to provide reliable data on entrepreneurship that will over time be useful in making meaningful comparisons, both internally and between economies. For this reason, all participating economies make use of standard research instruments. The GEM data is gathered annually and is derived from two main sources, namely:

Adult Population Survey (APS)

Each participating economy conducts a survey of a random representative sample of at least 2,000 adults (aged 18 – 64 years). The surveys are conducted at the same time of year (generally between April and June), using a standardized questionnaire developed by the GEM consortium. The raw data is sent directly to the GEM data team for inspection and uniform statistical calculations before being made available to the participating economies.

National Experts Survey (NES)

The NES provides insights into the entrepreneurial startup environment in each economy with regard to the nine entrepreneurial framework conditions, namely:

- financing
- governmental policies
- governmental programs
- education and training
- research and development transfer
- commercial infrastructure
- internal market openness
- physical infrastructure
- cultural and social norms.

The NES sample comprises a minimum of 36 respondents, with four experts drawn from each of the entrepreneurial framework condition categories. Out of this sample, a minimum of 25% must be entrepreneurs or business owners, and 50% must be professionals.

Additional aspects, such as geographical distribution, gender, the public versus private sector, and level of experience, are also taken into account in selecting the sample.

In addition to the APS and NES, GEM reports also make use of standardised national data from international data sources, such as the World Bank, the International Monetary Fund and the United Nations. This information is used to add context to the report, and to explain the relationship between entrepreneurial activity and national economic growth.

2 *The Phases and Profiles of Entrepreneurship*

This section examines the rate of individual participation in the various phases of entrepreneurship for Switzerland as compared with other innovation-driven countries. We discuss potential entrepreneurs, individuals with the intention of starting businesses, people starting and running new businesses (early-stage entrepreneurs), those running established businesses, and the discontinuation of businesses.

The GEM data collection for Switzerland yields entrepreneurial profiles along three important dimensions. Entrepreneurial attitudes, perceptions, and intentions reflect the degree to which individuals tend to appreciate entrepreneurship, both in terms of general attitudes and in terms of self-perceptions: how many individuals recognize business opportunities, how many believe they have the skills and knowledge to exploit such opportunities, and for how many would fear of failure prevent them exploiting such opportunities? Entrepreneurial activity measures the observed involvement in several phases of entrepreneurial activity. It also tracks the degree to which entrepreneurial activities are driven by opportunity and/or necessity.

Moreover, discontinuations of entrepreneurial activity (and the reasons for doing so) are estimated, based on the GEM Adult Population Surveys. Finally, entrepreneurial aspirations are of key importance in addressing the (socio-) economic impact of entrepreneurial behavior. Of particular interest are those entrepreneurs who expect to create jobs, to be involved in international trade, and/or to contribute to society by offering new products and services.

2.1 *Entrepreneurial Attitudes*

Fostering entrepreneurial awareness and positive attitudes toward entrepreneurship is high on Switzerland's policy agenda. The idea is that evolving attitudes and perceptions toward entrepreneurship could affect those individuals wishing to venture into entrepreneurship. However, the key factor that determines whether someone progresses to entrepreneurship is not the perception of opportunities for start-ups or of (matching) personal capabilities: context also plays a role. Factors such as the availability of (good) job alternatives in an economy can make a difference for those who perceive market opportunities and have confidence in their own entrepreneurial capabilities, and help to determine whether they engage in independent entrepreneurial activity or not. So, while in some societies positive attitudes and perceptions toward entrepreneurship may be instrumental in achieving new (high-value) entrepreneurial activities, in many others they are certainly not, on their own, sufficient reason for people to choose to engage in entrepreneurial activity. For example, there may be other excellent options available to individuals. Bearing this in mind, we can see in Table 1 how Switzerland compares in terms of entrepreneurial percep-

▸ **Table 1:**
Entrepreneurial Perceptions, Intentions and Societal Attitudes in Innovation-Driven Economies, 2012

Innovation-Driven Economies	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions **	Entrepreneurship as a good career choice +	High Status to successful entrepreneurs +	Media attention for entrepreneurship +
Austria	49.21	49.61	35.96	8.57	46.42	75.82	
Belgium	33.29	37.11	40.83	9.06	62.27	57.38	53.82
Denmark	44.41	31.02	39.26	6.64			
Finland	55.33	34.32	36.52	7.73	45.11	83.38	68.37
France	37.52	35.66	42.84	17.29	64.54	76.82	41.08
Germany	36.16	37.09	41.91	6.01	48.92	76.40	49.01
Greece	12.95	50.00	61.29	9.51	64.36	68.30	33.05
Ireland	25.55	45.16	35.37	5.43	45.41	81.41	61.45
Israel	30.62	29.31	46.76	12.81	59.47	72.39	47.44
Italy	19.80	29.97	57.68	10.76	66.68	69.74	51.33
Japan	6.37	9.00	53.13	2.49	29.67	54.79	52.87
Korea	12.52	26.93	43.01	12.98	59.37	69.59	68.06
Netherlands	34.40	42.30	30.45	8.63	79.33	65.15	58.33
Norway	64.43	34.37	39.37	4.91	50.37	79.53	59.30
Portugal	16.19	46.80	42.30	14.37			
Singapore	22.51	26.58	41.63	16.08	50.25	62.52	76.72
Slovakia	17.84	49.73	38.32	11.83	50.27	74.40	59.43
Slovenia	19.62	51.32	27.28	13.25	52.73	71.08	51.08
Spain	13.90	50.38	41.76	11.13	63.64	63.71	47.26
Sweden	66.48	36.99	32.61	10.96			
Switzerland	35.67	37.34	32.29	7.26	44.20	63.46	57.35
Taiwan	38.55	26.38	37.60	25.49	70.36	62.85	82.54
United Kingdom	32.82	47.13	36.01	9.52	49.79	76.69	46.98
United States	43.49	55.88	32.32	12.53			
average (unweighted)	**32.07**	**38.35**	**40.27**	**10.63**	**55.16**	**70.27**	**56.08**

* fear of failure assessed among those seeing opportunities
** intentions assessed in non-entrepreneur (non-TEA) population
+ These questions were optional and therefore not included by all economies

tions and attitudes to other innovation-driven economies in general and to the comparison group in particular. Table 1 reflects the percentage of individuals who believe there are opportunities to start a business in the area they live in. Perceived capabilities reflect the percentages of individuals who believe they have the required skills and knowledge to start a new business. The measure of fear of failure (when it comes to starting your own business) applies to these individuals only. Entrepreneurial intentions are defined by the percentage of individuals who expect to start a business within the next three years (those who are currently already entrepreneurially active are excluded from this calculation). For all four measures we should consider that cultural differences and business-cycle patterns are an important explanation for the differences in perceptions across countries.

In the 2012 census the perceived opportunities (36%) to start a business are lower in Switzerland than in 2011 but higher than the average (32%) for innovation-driven economies. Nordic countries, such as Finland, Sweden, and Norway, remain at the top when it comes to available opportunities.

Switzerland shows, as in previous years, a rather high perception of capabilities paired with a very low fear of failure. While Switzerland's perception of capabilities is at least as good as or even better than the European benchmark, it still lags behind the United States inhabitants' very strong belief in their own capacity to start a business. The entrepreneurial intentions of Swiss inhabitants (7%) are lower than in 2011 (10%) and under the average (11%) for innovation-driven countries. Most remarkable are the differences between Switzerland, Singapore, Germany, and France. While in Germany only 6% of the individuals expect to start a business in the next three years, almost one-fifth of the individuals in France and Singapore are thinking about setting up a new business.

2.2 *Entrepreneurial Activities*

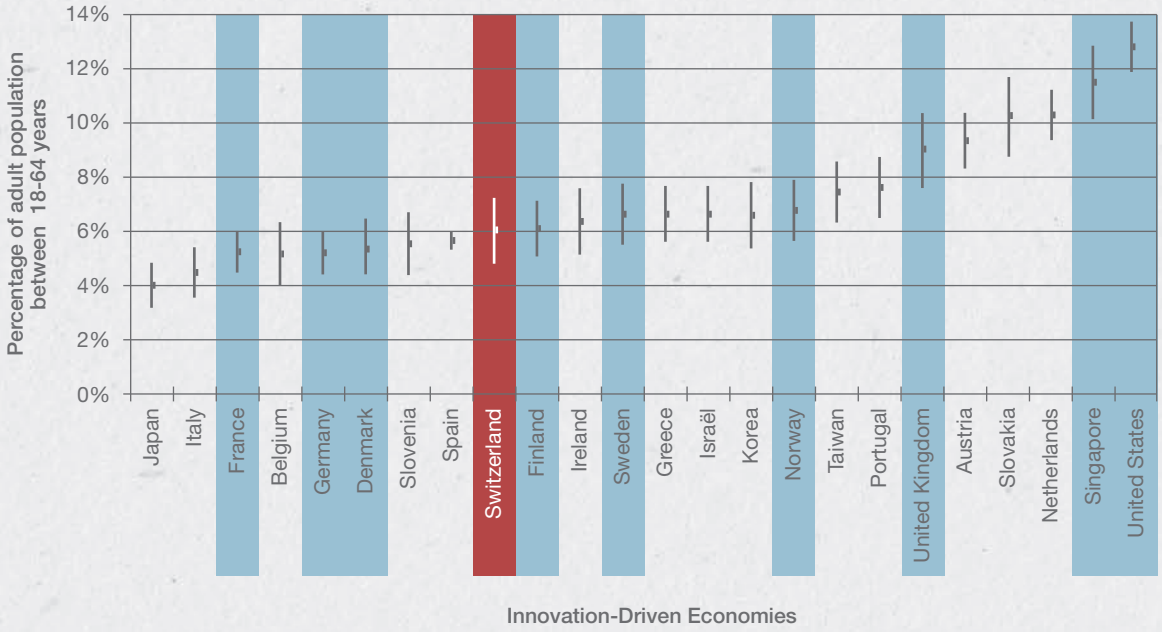
GEM conceptualizes entrepreneurship as a continuous process that includes nascent entrepreneurs involved in setting up a business, entrepreneurs who own and manage a new business, and entrepreneurs who own and manage an established business. In addition, GEM assesses the rate and nature of business discontinuations. As a result, indicators for several phases of the entrepreneurial process are available. Table 2 shows these entrepreneurial activity prevalence rates per phase of economic development. Taken together, these prevalence rates form a first glance of the entrepreneurial dynamics for each of the economies. In the remainder of this section, we elaborate on these phases of entrepreneurial activity. Most attention is paid to the situation in Switzerland, its development over the last years, and the comparison with innovation-driven economies.

▸ **Table 2:** Entrepreneurial Activity in Innovation-Driven Economies, 2012

Innovation-Driven Economies	Nascent entrepreneurship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of businesses	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
Austria	6.58	3.42	9.58	7.61	3.56	10.81	38.20
Belgium	3.32	1.95	5.20	5.12	2.39	17.91	61.56
Denmark	3.07	2.36	5.36	3.45	1.34	8.24	70.65
Finland	3.45	2.68	5.98	8.04	1.99	17.10	59.88
France	3.74	1.54	5.17	3.23	1.96	18.14	58.94
Germany	3.51	2.15	5.34	4.95	1.91	21.68	50.74
Greece	3.82	2.84	6.51	12.27	4.43	29.94	32.11
Ireland	3.91	2.28	6.15	8.32	1.74	28.14	40.52
Israel	3.50	3.03	6.53	3.78	4.04	19.17	46.13
Italy	2.47	1.92	4.32	3.32	2.43	15.74	22.30
Japan	2.26	1.72	3.99	6.11	1.12	20.72	66.41
Korea	2.56	4.08	6.64	9.57	3.17	34.89	46.17
Netherlands	4.08	6.26	10.31	9.49	2.17	8.44	66.35
Norway	3.70	3.15	6.75	5.75	1.45	7.41	69.63
Portugal	4.26	3.63	7.67	6.23	2.98	17.86	53.08
Singapore	7.60	4.18	11.56	3.10	3.88	14.77	54.45
Slovakia	6.65	3.91	10.22	6.38	4.69	35.57	42.88
Slovenia	2.95	2.53	5.42	5.79	1.62	7.36	64.02
Spain	3.35	2.45	5.70	8.74	2.11	25.59	32.51
Sweden	4.59	1.85	6.44	5.25	1.86	6.84	48.59
Switzerland	2.90	3.03	5.93	8.44	2.02	18.08	57.46
Taiwan	3.33	4.21	7.54	10.38	5.67	17.93	42.60
United Kingdom	5.30	3.74	8.98	6.16	1.69	18.30	42.61
United States	8.86	4.08	12.84	8.56	4.49	21.35	59.45
average (unweighted)	**4.16**	**3.04**	**7.09**	**6.67**	**2.70**	**18.42**	**51.13**

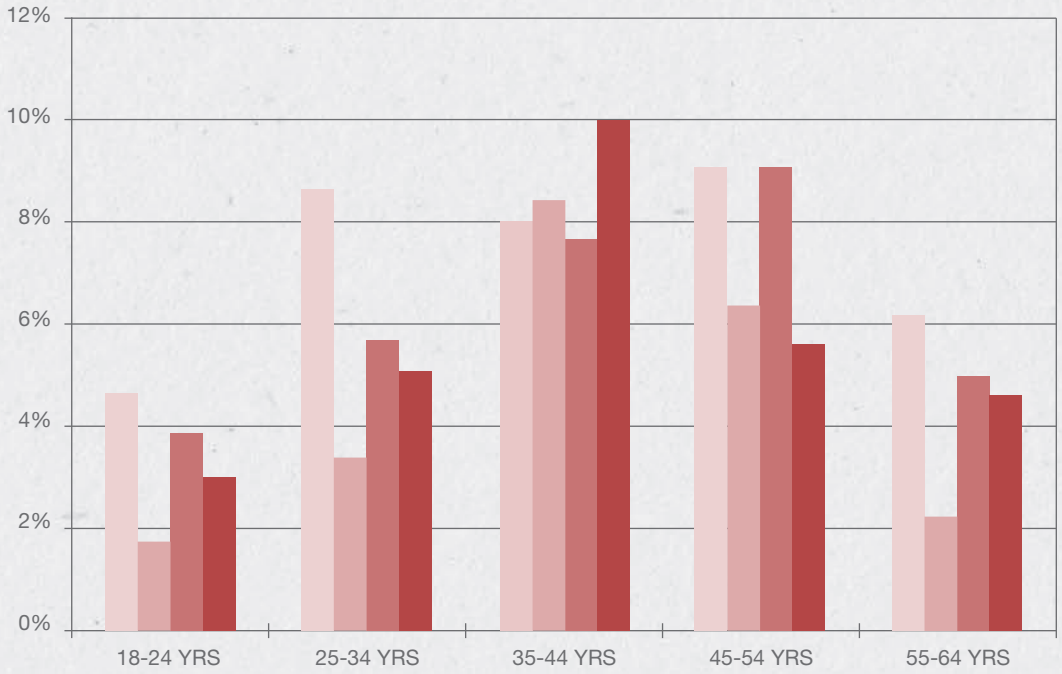
2.2.1 Total Early-Stage Entrepreneurial Activity (TEA)

Figure 3:
Total Early-Stage Entrepreneurial Activity (TEA)
in Innovation-Driven Economies, 2012



The Total Early-Stage Entrepreneurial Activity (TEA) rate is defined as the prevalence rate of individuals in the working-age population who are actively involved in business start-ups, either in the phase in advance of the birth of the firm (nascent entrepreneurs), or the phase spanning 42 months after the birth of the firm (owner-managers of new firms). As such, GEM takes the payment of any wages for more than three months as the "birth event" of the firm. Figure 3 shows the TEA rates for the innovation-driven economies. The 95% confidence intervals help to interpret the differences between countries. They measure the probability that the average value will fall within a certain range. Although the Swiss TEA rate tends to be higher than in neighboring countries such as France or Germany, adopting the 95% certainty, TEA rates of these countries are not statistically different from their Swiss counterpart. Among the comparison group, only the United States differs considerably. After the 2010 cycle, which was strongly influenced by the aftermath of the financial crisis, many Swiss entrepreneurship activity indicators for 2011 and 2012 turned upward again, with the total entrepreneurial activity (TEA) being one of them. After the all-time low of a Swiss TEA rate in 2010 of only 5%, the most important indicator for entrepreneurial activity once more reaches a normal level (6%).

Figure 4:
Total Early-Stage Entrepreneurial Activity (TEA) in Switzerland by age, 2009-2012



This rebound in entrepreneurial activities in Switzerland is reflected across most of the different age categories (Figure 4). When it comes to entrepreneurship, age matters. On the one hand, young people are often more likely to have fresh ideas; they have grown up with digital technologies, and in some societies they have received more education than their parents. On the other hand, older people have often accumulated an extensive body of experience, contacts, and capital over the course of their careers. This mix of social and financial capital puts this age group into a particular position.

Entrepreneurial activity among the adult population older than 35 is high at 10%, whereas the TEA rate of younger Swiss inhabitants still lags considerably behind the 2009 peak. Compared to other innovation-driven countries, the TEA rate for the age group 18-24 is, at 2.9%, the lowest and clearly below average (5.1%) and for entrepreneurs between 35-44 years, below the average (8.7%) for innovation-driven economies. The TEA rate for people older than 55 years (so-called Senior entrepreneurs) is, at 4.8%, also below the average.

2.2.2 Motivations to Start a Business

The motivations for starting a business differ vastly across the globe. Individual drivers are traditionally captured within the GEM framework by setting out necessity-driven entrepreneurship and opportunity-driven entrepreneurship. A necessity-driven entrepreneur indicates in the GEM Adult Population Survey that s/he started the business because there were no better options for work, rather than seeing the start-up as an opportunity. For those who did see the start-up as an opportunity (rather than no other options for work), a further assessment was made on the nature of this opportunity. Improvement-driven opportunity (IDO) entrepreneurs are defined as those opportunity-driven entrepreneurs who indicate that the opportunity be linked to either earning more money or being more independent, as opposed to maintaining income.

As Figure 5 shows, entrepreneurs in factor-driven economies tend to be driven equally by necessity and improvement-driven opportunity (IDO) motives. With greater economic development levels, necessity gradually falls off as a motivator, while IDO motives increase. The Swiss indicator for improvement-driven activities lies slightly higher than the average for innovation-driven countries and has remained rather stable over the last three years. Although the difference in the motivation structure of Swiss female and male inhabitants is not statistically significant, one can state that for maintaining income, opportunity-driven entrepreneurship is more strongly represented among females than among males.

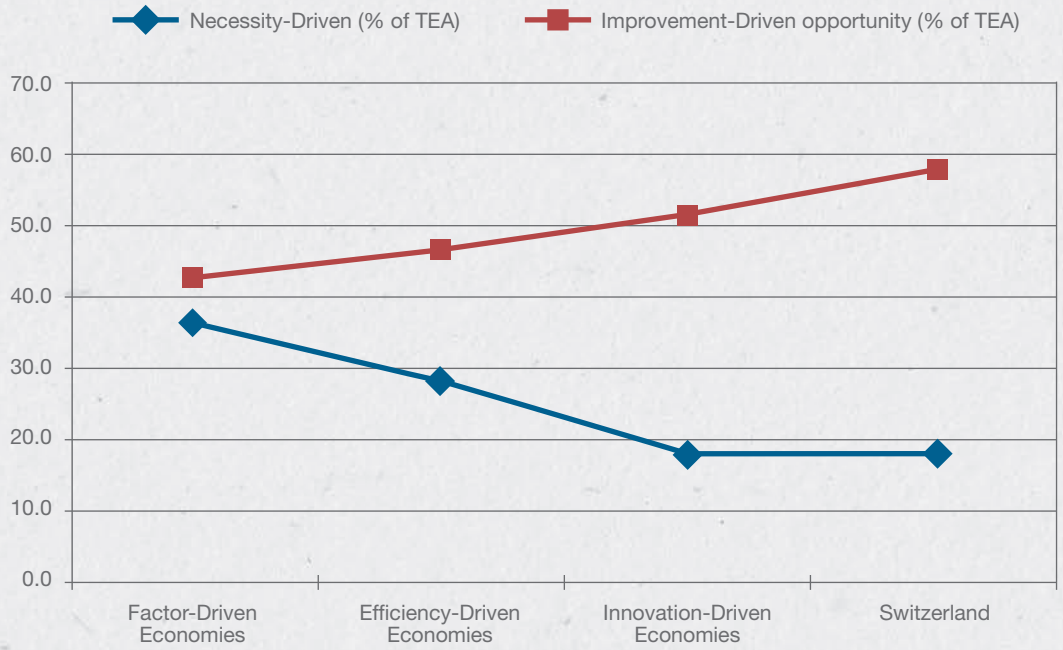


Figure 5:
Percentage of Early-Stage Entrepreneurs (TEA) Motivated by Necessity and Improvement-Driven, 2012

2.2.3 Established Business Ownership

Table 6:
Established Business Ownership and Total Early-Stage Entrepreneurial Activity (TEA) in Switzerland, 2003-2012

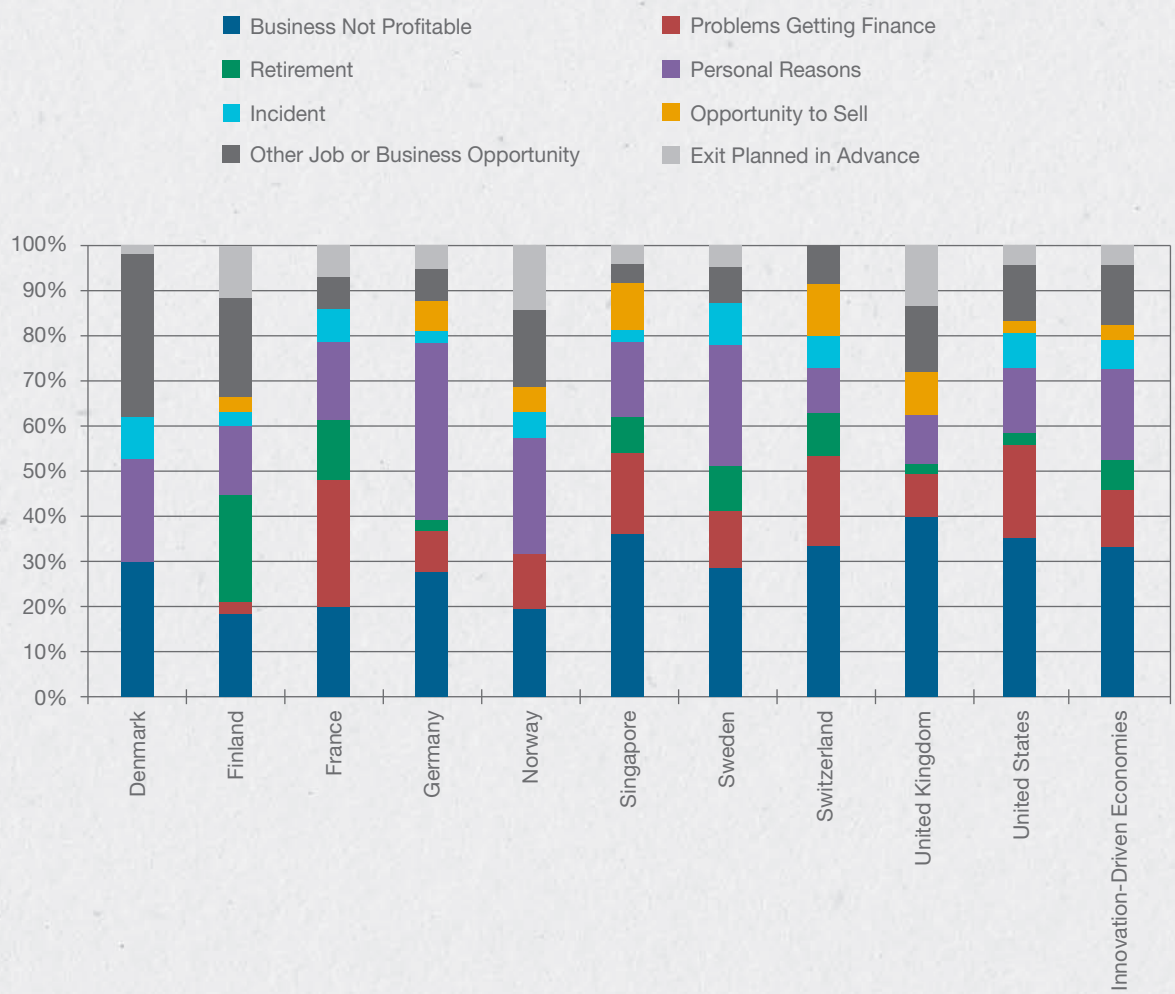
While it is important to have early-stage entrepreneurs for generating dynamism in an economy, established businesses and their owner-managers ensure an important degree of stability for the private sector. Owner-managers in established firms provide stable employment, can avail themselves of the knowledge accumulated in past experiences, and as such may contribute greatly to their societies – even if they are small or solo entrepreneurs. A healthy set of business owners provides some indication of the sustainability of entrepreneurship in a society. Together with the TEA, the Swiss rate for established business is lower in 2012 (Figure 6). It is notable that the proportion of early entrepreneurial activity and established business remained almost the same as in 2010. However, in 2007 and 2009 the two rates were much closer. The distinct prevalence of the established business rate over the TEA is quite unique within the comparison group. Switzerland, among other countries with lower-than-average TEA rates (Sweden, Japan, Finland, and Spain), shows comparatively high established business ownership.

2.2.4 Discontinuance

As new businesses emerge, others close. Those individuals selling or closing their businesses may once again benefit their societies by re-entering the entrepreneurship process. Recognizing the importance of this measure, GEM tracks the number of individuals who have discontinued a business in the last 12 months. Discontinuance may be considered along with TEA and established businesses as a component of entrepreneurial dynamism in an economy. GEM Survey respondents who had discontinued a business in the previous 12 months were asked to give the main reason for doing so. Financial difficulties, unprofitable businesses, and problems getting finance are considered a 'negative' reason to abandon a business. In Switzerland, these two reasons account for 54% of business discontinuance. For a substantial portion of entrepreneurs, discontinuance was already planned in advance (meaning that the business start-up was merely considered a 'project'), or resulted from another job or business opportunity or even from the opportunity to sell the business. These 'positive' reasons for discontinuing businesses explain 20% of all discontinuations in Switzerland. The remaining reasons can be seen as more neutral. Retirement is an issue in innovation-driven economies, for example, especially in several European countries and also in Japan — countries that are facing challenges with their ageing societies.

The Swiss data for 2012 reveals that retirement is the reason why 8% of all businesses were stopped in the last 12 months. Another reason to discontinue a business which merits attention is the opportunity to sell the business. In 2012, 12% of businesses that ceased trading were sold (Figure 7), compared to 5% in 2010 and 9% in 2011. Among innovation-driven economies, only the Nordic countries and Germany have a comparable amount of sold businesses.

Figure 7:
Reasons for discontinuing a Business, Selected Countries and Switzerland, 2012



2.2.5 Women's Participation in Entrepreneurship

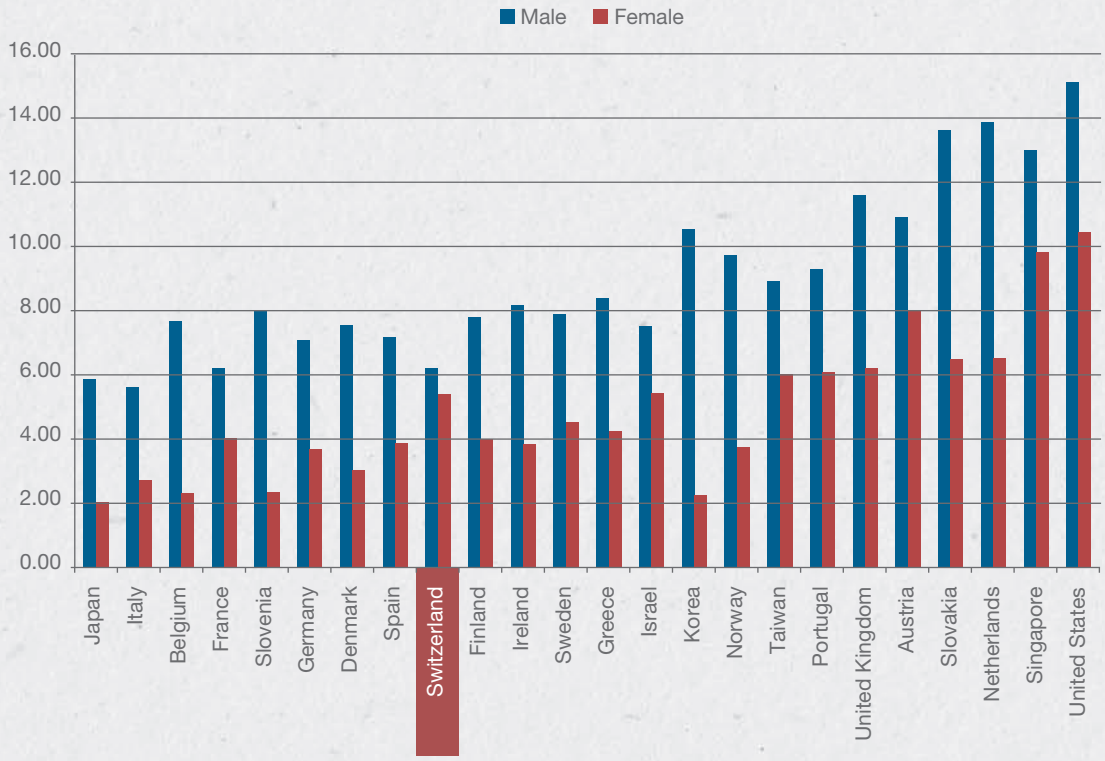
The structure and nature of entrepreneurial activities not only vary across countries or over time, but gender, too, plays a determining role in such activities (Acs et al., 2011). Demographically, Switzerland has an equal proportion of men and women in the 15-64 age groups, which is also the case in most of the other nations in the world (CIA World Fact Book, 2012). However, as a global trend, the number of females engaged in entrepreneurial activity is in most countries historically lower than for their male counterparts, which may well be explained by various social, cultural, or economic factors. In some countries, the number of males participating in entrepreneurial activities can be dramatically higher and the male preponderance is obvious. Pakistan is one such country; there, the number of male entrepreneurs is as much as ten times higher than that of their female counterparts. For example, Rossi (2009) argues that this male preponderance in entrepreneurship is accounted for by the lack of specific business skills, the less extensive social network, and perhaps the lack of identification patterns among women. It can be argued, therefore, that addressing these issues should help increase the proportion of female entrepreneurs.

There also exist a few 'outlier' nations where exactly the opposite scenario can be observed, that is, where female entrepreneurs outnumber male entrepreneurs; these include a few countries in Southeast Asia, such as Thailand and Singapore. As well as these extreme cases, however, there are economies where the female and male ratio of early-stage entrepreneurial activity is balanced. Female and male numbers that remain in equilibrium may sound like a desirable scenario since women's entrepreneurship brings about additional contribution to economic growth, such as job creation and the increased GDP that the global economy urgently needs (OECD Report, 2004). This category also includes Switzerland, which is very good news for this innovation-driven economy.

Actually, in terms of early-stage entrepreneurial activity, Switzerland enjoys the best position (meaning the equalized female-to-male ratio) when compared with other innovation-driven economies such as those in the Scandinavian countries or the French, German, Austria and even U.S. economies (Figure 8 and 9).

Even better news is that Switzerland shows strong potential to bridge the existing gender gap in entrepreneurial

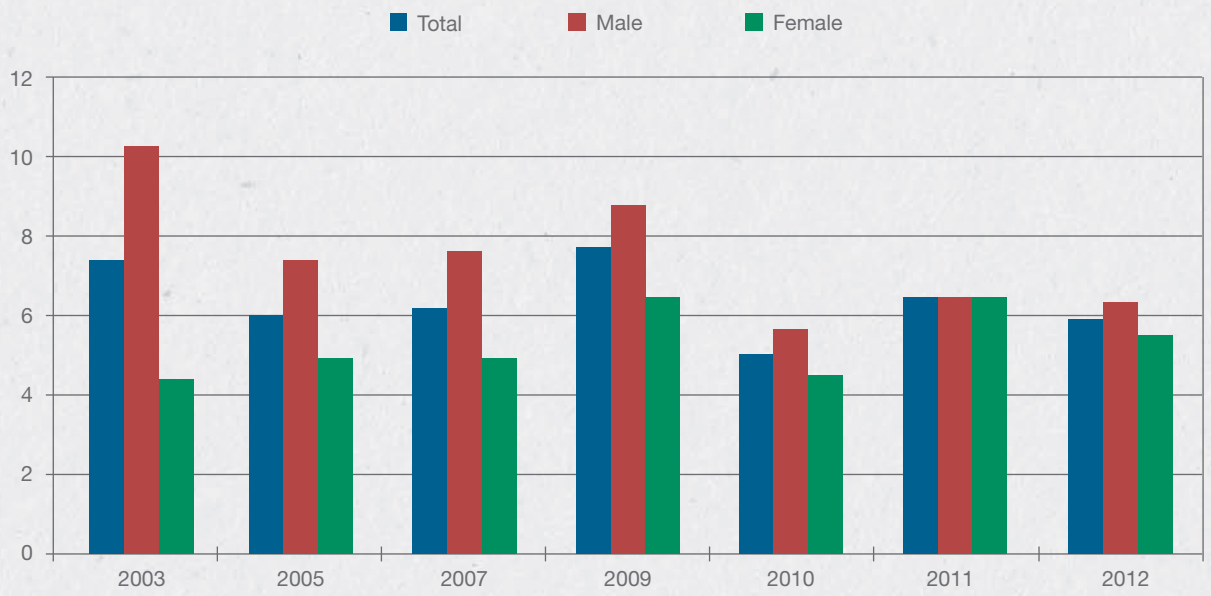
Figure 8:
Male and Female Early-Stage Entrepreneurial Activity 2012, by Country and Phase of Economic Development



activities. Although progress toward closing the gender gap in Switzerland is comparatively lower within its own class (i.e., the innovation-driven economies), it is hoped that facilitating female entrepreneurship and the existence of strong women entrepreneurs will assist in closing the gender gap and reaching the levels seen in Scandinavian countries (WEF Report, 2011; GEM Global Report, 2011). A higher level can be achieved in Switzerland if certain issues are addressed, such as increasing social services, opportunities, and the acceptance and encouragement of women entrepreneurship.

A remarkable development in the ratio of the TEA rate between men and women has been seen in the last 10 years in Switzerland (Figure 9). Although the ratio in 2013 is clearly in favour of the men (2.3 men per woman), the ratio has changed dramatically in the last few years. In 2011, this ratio stood at 1:1 and in 2012, it was still at 1.2:1, the strongest proportion of female-to-male entrepreneurial activity of all innovation-driven countries.

Figure 9:
Relation Male and Female Early-Stage Entrepreneurial Activity 2003 -2012 in Switzerland



3 *Impact – Growth, Innovation, and Internationalization*

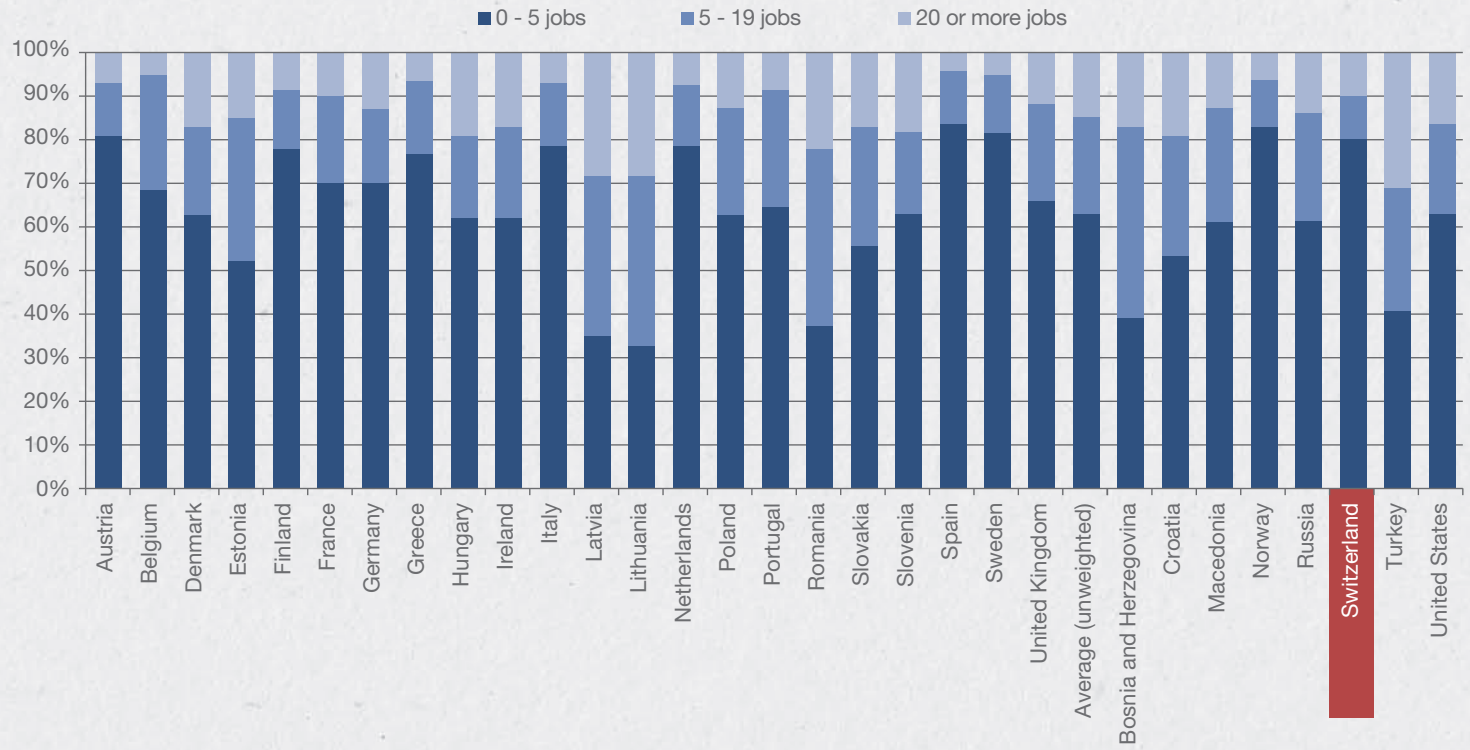
A rich body of literature acknowledges entrepreneurship as one of the core components of growth and socio-economic and regional development. Indeed, entrepreneurship contributes to creating new jobs (Storey, 1994); and it boosts competitiveness (Thurik & Wennekers, 2004), helped by a better distribution of resources across the economy (van Praag, 2007) and a heightened capacity for innovation (Michelacci, 2003). Therefore, entrepreneurship matters, not only for the individual, but for the nation's entire ecosystem (Minniti & Lévesque, 2008).
Economic literature, among other things, teaches us how to recognise the typical entrepreneur and his profile; how entrepreneurs make their decisions, why and how firms are created (and develop) and in what way all these actions affect the economic processes at the micro-, macro- and meso-levels. The literature helps us better understand the role that entrepreneurship plays in economic growth. Not only, but in turn, it serves to explain how the socio-economic and institutional peculiarities of a country or region have a bearing on the typology and rate of entrepreneurship. Generally speaking, economic theories portray entrepreneurs as innovators, as agents of change, able to perceive and seize entrepreneurial opportunities and turn them to advantage. However, the overall picture that emerges from the GEM (Global Entrepreneurship Monitor) survey turns out to be slightly different (Autio, 2011). We find that those entrepreneurs who answered the survey are less innovative than might be expected; they are only minimally risk-prone or growth-oriented. In the context of the GEM study, we want to pay closer attention to entrepreneurial activities characterised by high growth expectations. For this type of entrepreneur-pursuing, job-based growth, launching innovation or accessing new international markets are all vital elements of a strategy for business development.

3.1 Growth Orientation

New firms, above all in fast-growing sectors, greatly boost the creation of new jobs and contribute to revitalizing the economy. It is reckoned that start-ups have generated more than 350,000 net additions to payroll over the past decade in Switzerland (SECO, 2012). This is why the Confederation, the Cantons and local Councils are eminently in favour of this form of entrepreneurship. This is an idea already emphasized by Birch (Birch, 1979), who in his seminal works, pointed out that most new jobs were created by new, or small, enterprises. Studies on entrepreneurship tend to look at company growth – consisting broadly of growth in turnover and payroll figures – as a measure of success (Steffen, Davidsson, & Fitzsimmons, 2009). It is the (future) creation of new jobs that GEM uses as the main indicator for assessing this type of growth. During the survey, early-stage entrepreneurs (as defined by GEM criteria) were asked to indicate the number of current employees and the number of employees expected in five years' time. Figure 10 shows the findings sorted into three growth levels, namely: low (0-5 new jobs over the next five years), average/medium (6-19 new jobs) and high (20 or more new jobs).

Switzerland's TEA (Total early-stage Entrepreneurial Activity), at 6% for 2012, comprises just over 80% of entrepreneurial activities with low employment-based growth expectations (less than 5 jobs); about 10% expect average growth (5 to 19 jobs) while just under 10% an increase of more than 20 jobs. Compared to the average for the EU countries reviewed in the GEM Survey (22 countries in total), Switzerland registers a smaller share of activities with high levels of job-based growth. The European average for this category is in fact set at approximately 14%. This figure is mostly affected by those European countries characterised by efficiency-driven economies – in particular, Latvia and Lithuania – where entrepreneurial activities with high expectations of employment-driven growth achieve rates of over 20%. With a 16% score, the United States outstrips all the countries examined in the present study, having recorded the highest reading of entrepreneurial activities with high growth expectations. Even granting that entrepreneurs tend to overestimate the number of jobs created, this figure does bear out the impact and importance, in occupational terms, of start-up activities in this country.

Figure 10:
Job Growth Expectations for Early-Stage Entrepreneurship Activity



3.2 Innovative Orientation

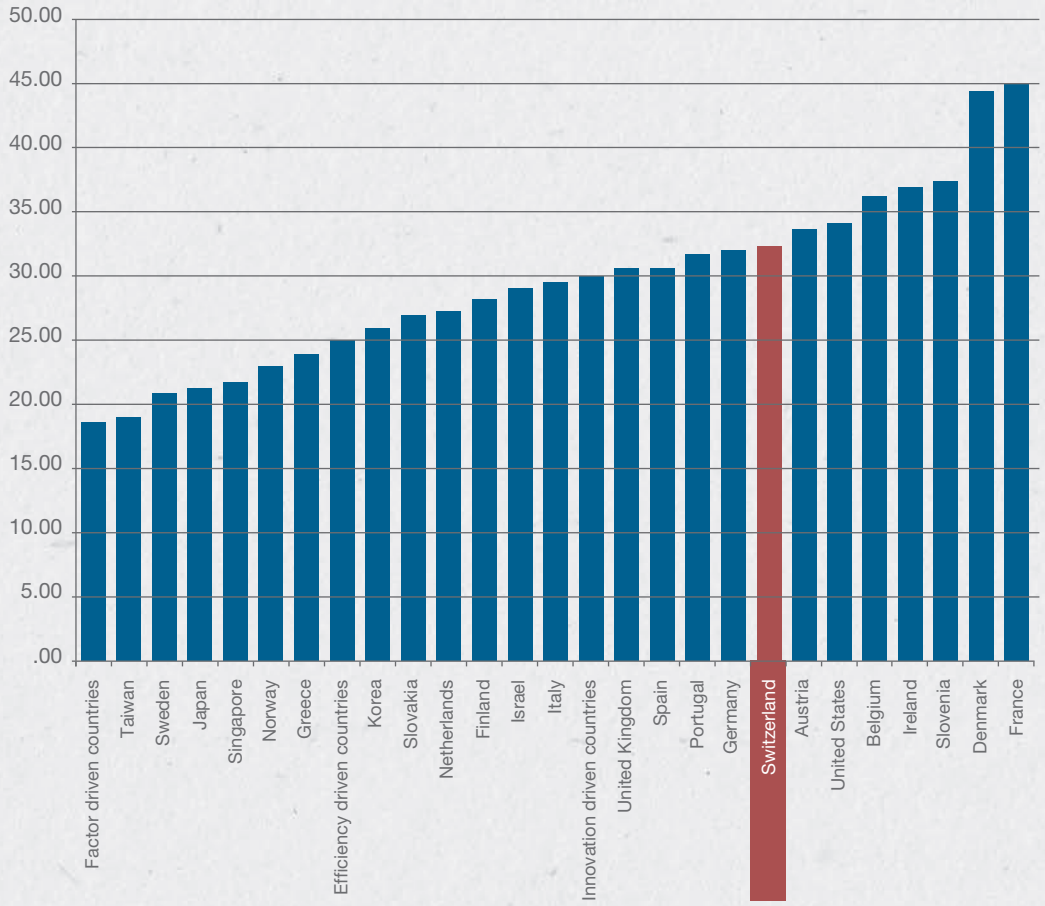
There is a tendency to see start-ups as a (borrowing Schumpeter's phrase) "storm of creative destruction" (Schumpeter, 1934). Indeed it is this type of firm that launches new products on the market, insofar as they introduce new products that may upset, or even destabilize, the order of well-established companies already present in the market. The Oslo Manual tells us that innovation may be defined as: the design and implementation of a new or a noticeably improved product (good or service), or of a process, of a new marketing method, or of a new organisational method in trading practices, in work organisation, or in external relations (OECD, 2005). Next to these types of innovation, one is gaining ground today: innovation applied to business models. Innovation, in other words, has turned out to be one of the major processes of strategic management. In its various forms, it is being acknowledged as the main source of competitive advantage for individual firms, as well as for entire socio-economic systems.

As can be inferred from Figure 11, which shows the percentage of early-stage entrepreneurs with a combination of new products / services and new markets, Switzerland ranks high in the league table of innovation-driven economies, with a 32% share, approximately 3 percentage points lower than in the 2009-2011 period.

Our country has always been gifted with a strong pioneering and creative spirit, inspiring the foundations from which a highly innovative and competitive business environment has since been built. This has earned Switzerland good, if not excellent, results and ranking in comparative surveys, such as the Global Competitiveness Report, the Innovation Union Scoreboard, or again INSEAD's Global Innovation Index. There are no actions without people behind them. The activity and the innovative capacity of firms in their early stages tend to rely quite heavily on the qualities of their founders. The latter, in fact, are frequently directly involved in the innovative process. As a recent study reveals (Arvanitis & Stucki, 2010), founders with tertiary-level training (even better when mixed, i.e. technical-managerial), with experience in research and development and, most importantly, strongly motivated to put their ideas into practice, are contributing factors in boosting the innovative capacity of start-ups. In addition, the existence of a diversified portfolio of products, cooperation and partnership with other enterprises and institutions in an 'Open Innovation' perspective, and an export-oriented drive are some of the characteristics underpinning the innovative performance of a business. Swiss enterprises, moreover, benefit from a political-institutional context, hence framework conditions, that are particularly conducive to business initiatives, especially if inspired by innovation.

3.3 International Orientation

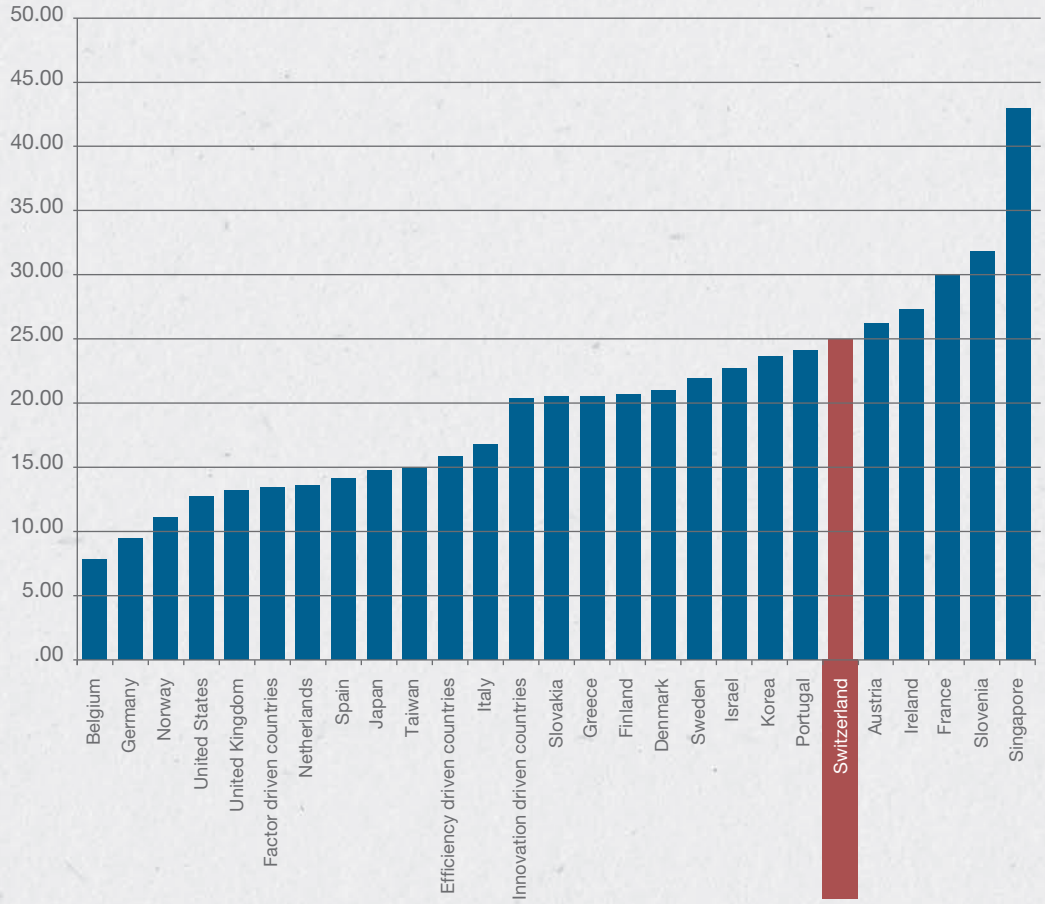
Figure 11:
Percentage of Total Early-Stage Entrepreneurial Activity, new product market combination



Entrepreneurship is frequently associated with novelty, change and expansion into new markets. As is the case with innovative activity, internationalisation, too, may be seen as a strategy for growth, to the extent that it makes it possible for the firm to take advantage of new opportunities outside the domestic market (Kyläheiko, Jantunen, Puumalainen, Saarenketo, & Tuppura, 2011). This is especially true of small, open economies, with limited scope and outlet in their home market. Enterprises, above all the innovative ones, tend to be active in well-defined market niches: these could be too narrow on home ground, yet promising on a world scale. Such being the case, it becomes imperative for these firms to expand and reach across their national borders. GEM measures the international orientation of early-stage entrepreneurs, based on sales of products and/or services to customers located outside their economy (Bosma, Wennekers, & Amorós, 2012). Figure 12 reports data for all innovation-driven countries.

On the global stage, the international ambitions of Swiss enterprises appear medium-high, at 25%, i.e. 5 percentage points higher than the average of innovation-driven countries. This fact confirms the trend observed in recent years, a trend which highlights our country's strong orientation towards, and reliance on, international markets.

Figure 12:
Percentage of Total Early-Stage Entrepreneurial Activity, more than 25% of Customers from Abroad



Indeed, a buoyant Swiss currency notwithstanding, one Swiss franc in three is the product of trading with the European Union. And again, there is a growing tendency for Swiss enterprises to diversify their outlet markets by switching or reaching out to emerging, and booming, markets, as a way of fending off and cushioning the backlash of the crisis gripping Europe. To support the early-stage enterprises in their growth strategies, as well as already consolidated enterprises, the Confederation makes available appropriate facilities and agencies to assist with export activities and install new firms outside the national borders. Think of Swissnex, an offshoot of the Commission for Technology and Innovation (CTI) network, responsible for developing and consolidating a dense network of links with universities, research institutes and businesses, in the host region. Likewise, think of Switzerland Global Enterprise (OSEC), the competence centre for the promotion of Swiss trade abroad, with its representative offices around the world, known as “Swiss Business Hubs”.

4 *Experts' Assessment of the Swiss Entrepreneurial Environments*

The GEM model (Figure 2) illustrates the relevant national conditions that impact on economic development and activity more generally, and those facilitating innovation and entrepreneurship more specifically in a society.
The third set of framework conditions is expected to concern public and policy makers in innovation-driven economies. The features that are expected to have a significant impact on the entrepreneurial sector are captured in the nine Entrepreneurial Framework Conditions (EFCs) and are illustrated and described in Table 3. The National Experts' Survey (NES) provides insights into the ways in which these EFCs either foster or constrain an entrepreneurial climate, activity and development. In order to assess the Swiss framework conditions influencing entrepreneurial activity, 36 Swiss experts completed a closed questionnaire on factors relating to our entrepreneurial environment. The responses are measured on a 5-point Likert scale, where a score of 1=completely false and 5=completely true.

The statements are phrased so that a score above 3 would indicate that the expert regarded the factor as rather positive for entrepreneurship, while a score below 3 would somewhat indicate that the expert regarded the factor as negative for entrepreneurship. In Switzerland, R&D transfer, commercial and physical infrastructures are valued most positively. In contrast, primary and secondary education is assessed negatively.

Table 3:
The GEM Entrepreneurial Framework Conditions

1. *Entrepreneurial Finance.*
   The availability of financial resources — equity and debt — for small and medium enterprises (SMEs) (including grants and subsidies).
2. *Government Policy.*
   The extent to which public policies give support to entrepreneurship. This EFC has two components:
   2a. Entrepreneurship as a relevant economic issue and
   2b. Taxes or regulations are either size-neutral or encourage new and SMEs.
3. *Government Entrepreneurship Programs.*
   The presence and quality of programs directly assisting SMEs at all levels of government (national, regional, municipal).
4. *Entrepreneurship Education.*
   The extent to which training in creating or managing SMEs is incorporated within the education and training system at all levels. This EFC has two components:
   4a. Entrepreneurship Education at basic school (primary and secondary) level and
   4b. Entrepreneurship Education at post school levels (such as vocational, college, business schools).
5. *R&D Transfer.*
   The extent to which national research and development will lead to new commercial opportunities and is available to SMEs.
6. *Commercial and Legal Infrastructure.*
   The presence of property rights, commercial, accounting, and other legal and assessment services and institutions that support or promote SMEs.
7. *Entry Regulation.*
   Contains two components:
   7a. Market Dynamics: the level of change in markets from year to year and
   7b. Market Openness: the extent to which new firms are free to enter existing markets.
8. *Physical Infrastructure.*
   Ease of access to physical resources — communication, utilities, transportation, land or space — at a price that does not discriminate against SMEs.
9. *Cultural and Social Norms.*
   The extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income.

Table 4 displays the assessed values of the nine EFCs in Switzerland as well as the values of other innovation-driven countries that serve as a comparison group.

The financial support framework condition describes the supply and demand of financial resources, especially for new and expanding businesses. Swiss experts evaluate the financial environment for entrepreneurship and innovation positively. This is in line with the results of previous years. The lack of debt finance and funding through IPOs for new and growing firms is perceived as suboptimal. Only Singapore, among the comparison group, offers a better financial support framework.

The national policy (general policy and regulation) entrepreneurial framework condition relates to the extent to which government policies seen as a whole influence new and growing firms. This includes the tax regime, labor market regulation, social security legislation as well as regulations and schemes that specifically aim at the small business sector. Again, this framework requirement is valued positively in Switzerland and lies clearly above the average of all innovation-driven economies. However, Swiss experts see potential for improvement regarding the administrative processes for the incorporation of an enterprise.

The government programs framework condition relates to the presence of programs (at national and regional levels) and other initiatives to support new and growing firms. Experts in Switzerland rate the presence of programs and other initiatives (science parks, business incubators, support organizations, etc.) to support new and growing firms positively throughout, i.e. with an average score of 3.48. The neighboring countries (Germany, France and Austria) have a comparatively high value.

The entrepreneurial framework condition education and training relates to the extent to which entrepreneurship and entrepreneurial qualities receive attention in all phases of the educational and training system. The variable primary and secondary education is assessed negatively (below 3) in Switzerland (2.30). The experts criticize the lack of attention that is given to creativity, self-sufficiency, and personal initiative, instruction in market economic principles and entrepreneurship in primary and secondary education. The Netherlands (3.07) is the only country with a score for this item above 3. However, Swiss experts estimate that in post-secondary education (colleges, university and professional education) enough adequate preparation is provided for starting up and growing new firms. 3.44 is the peak value of the comparison group and virtually identical with the value of the Netherlands (3.45).

The research and development framework condition refers to the extent to which national research and development will lead to new commercial opportunities and whether or not these are available for new, small, and growing firms. Switzerland (the country with the highest score) is the only

Table 4:
Entrepreneurial Framework Conditions in selected innovation-driven countries

	Finance		National Policy - General Policy		National Policy - Regulation		Government Programs		Education - Prim. and Second.		Education - Post-School	
Austria	2.61	*0.11*	2.78	*0.14*	2.82	*0.15*	3.52	*0.13*	**1.72**	*0.10*	3.05	*0.13*
Finland	2.73	*0.10*	3.17	*0.14*	3.31	*0.13*	2.95	*0.12*	2.47	*0.12*	2.87	*0.15*
France	2.86	*0.14*	**3.52**	*0.16*	2.89	*0.15*	**3.61**	*0.13*	1.96	*0.15*	3.24	*0.13*
Germany	2.89	*0.11*	2.89	*0.11*	2.78	*0.10*	3.57	*0.09*	2.07	*0.09*	2.88	*0.11*
Norway	**2.42**	*0.12*	**2.17**	*0.15*	2.74	*0.17*	2.83	*0.14*	**2.69**	*0.16*	2.90	*0.17*
Singapore	**3.40**	*0.15*	3.51	*0.16*	**4.04**	*0.11*	3.46	*0.12*	2.56	*0.15*	3.14	*0.15*
Sweden	2.52	*0.15*	2.64	*0.14*	2.53	*0.20*	2.99	*0.13*	2.39	*0.18*	**2.47**	*0.18*
Switzerland	3.15	*0.14*	3.35	*0.16*	3.60	*0.20*	3.48	*0.17*	2.30	*0.16*	**3.44**	*0.14*
UK	2.72	*0.21*	2.95	*0.17*	2.77	*0.24*	**2.45**	*0.14*	2.35	*0.17*	2.92	*0.21*
USA	2.97	*0.16*	2.77	*0.14*	**2.24**	*0.19*	2.65	*0.13*	2.15	*0.14*	3.04	*0.17*
Average all Innovation-driven Countries	*2.60*		*2.71*		*2.61*		*2.88*		*2.14*		*2.84*	

	R&D Transfer		Commercial Infrastructure		Internal Market – Dynamics*		Internal Market – Openness		Physical Infrastructure		Cultural and Social Norms	
Austria	2.86	*0.12*	3.62	*0.14*	2.47	*0.15*	**3.36**	*0.12*	4.21	*0.11*	**2.44**	*0.14*
Finland	2.71	*0.14*	3.45	*0.10*	2.78	*0.15*	2.86	*0.13*	4.25	*0.12*	2.77	*0.14*
France	2.72	*0.14*	3.27	*0.12*	3.05	*0.20*	2.74	*0.11*	3.91	*0.12*	2.52	*0.10*
Germany	2.72	*0.09*	3.34	*0.08*	2.91	*0.12*	2.84	*0.13*	**3.87**	*0.10*	2.74	*0.11*
Norway	2.72	*0.11*	3.62	*0.13*	2.78	*0.18*	**2.42**	*0.12*	4.24	*0.11*	2.90	*0.14*
Singapore	2.87	*0.10*	3.25	*0.13*	3.25	*0.18*	2.88	*0.13*	4.40	*0.11*	3.28	*0.13*
Sweden	**2.51**	*0.11*	**2.84**	*0.16*	**3.46**	*0.14*	2.50	*0.17*	4.16	*0.14*	2.67	*0.15*
Switzerland	**3.65**	*0.10*	**3.73**	*0.13*	**2.47**	*0.19*	3.30	*0.12*	**4.70**	*0.11*	3.47	*0.13*
UK	2.72	*0.16*	3.26	*0.11*	3.12	*0.19*	3.12	*0.20*	3.97	*0.13*	2.98	*0.15*
USA	2.75	*0.18*	3.29	*0.13*	2.81	*0.19*	2.69	*0.17*	4.19	*0.12*	**4.12**	*0.15*
Average all Innovation-driven Countries	*2.65*		*3.18*		*2.98*		*2.76*		*4.06*		*2.82*	

Note: Standard errors are set in italic.

country in the comparison group with a positive value (above 3). The country with the second best value for this framework condition is the Netherlands (3.16).
The commercial and legal infrastructure framework conditions relate to the presence of property rights, commercial, accounting, and other legal and assessment services and institutions that support or promote SMEs. In Switzerland, this framework requirement has always been assessed positively. The Swiss value is not topped by any other country.
Internal markets dynamics refers to the level of change in markets from year to year. The Swiss value for market dynamics is 2.47, i.e. in the eyes of the experts it tends to be false that both the markets for B2C and for B2B goods and services change dramatically from year to year. This component of the EFCs has always been valued negatively in Switzerland. However a tendency over the last 5 years towards a more dynamic domestic market can be observed. Internal market openness relates to the extent to which new firms are free to enter existing markets and is valued positively for Switzerland.
The EFC physical infrastructure refers to the presence of and access to available physical resources e.g. communication, utilities, transportation, land or space, at a price that does not discriminate against new, small or growing firms. In 2012, Switzerland had the highest ranking for physical infrastructure (4.70) of all assessed countries.
The cultural and social norms, which describe the encouraging or restraining environment regarding new business activities, are positively assessed in Switzerland (3.47). However, Swiss experts notice that Swiss culture doesn't encourage entrepreneurial risk-taking. This EFC seems to be significantly better than in the countries of the comparison group, especially our neighboring countries but still considerably lower than the value of the United States, to which we like to compare.

5 *Entrepreneurship and Migration*

Migration of people, defined as the human movement from one area of the world to another, has always raised interest in the society and its dimension has been a long topic of debate in various areas of the social sciences. Migration could be broadly classified as emigration and immigration depending on the perspective where the former takes the country of origin as a reference and the latter the country of destination. Since the end of WWII, traditionally Western European policies favored low-skilled immigration through guest worker programs to rebuild war-torn Europe. More recently, most of the Western European countries adopted policies that encourage high-skilled migration[1] (OECD, 2010). The effects of these policies are also visible with initiatives, such as of standardization of European higher educational institutions through the Bologna process, and more importantly, adoption of English as the lingua franca in those institutions, which could be argued as evidence for the pro-migration of skilled labor.

If we accept the fact that migration is a current issue, an important socio-economic aspect of this can be regarded in the self-employment of the migrants in the labor market. The entrepreneurial behavior of these migrant groups have created a new phenomenon, "migrant entrepreneurship" (Baycan-Levent & Nijkamp, 2009). The GEM is the world's largest study of entrepreneurship and the special topic of the GEM Global Report 2012 has been dedicated to migrant entrepreneurship.

[1] Unless explicitly stated, migration (and migrant) will refer to immigration (and immigrant) throughout the text

5.1 GEM 2012 Highlights on Switzerland

Putting aside the skill-aspect of the coin, the focus of this chapter is to provide insights on the entrepreneurial activities of migrants in Switzerland. Switzerland has been attracting many foreigners for many years, offering high quality living standards, welfare, and last but not least, competitive education. According to a recent Swiss Labor Force Survey (SLFS), more than one third of the population has an immigration background[2]. Therefore, with little doubt, the entrepreneurial activities of the migrants in Switzerland constitute and deserve major emphasis. To conduct a better analysis and to gain further understanding of the characteristics of migrant entrepreneurship in Switzerland, we will consider two indicators: the prevalence of migrant entrepreneurial activity in Switzerland and the motivations behind it.

Table 5 provides a snapshot of the TEA rate (among adult population) comparisons between migrant and non-migrants of the world regions. (The TEA does not include established business owners. Only nascent & new. See: definition page). One can see that the prevalence of entrepreneurial activity in Switzerland varies across migrants and non-migrants. The Swiss trends are very similar to Western Europe (including Israel). It is observed that among first-generation migrants in Switzerland, 9% engage in entrepreneurial activity as compared to 8% of second-generation migrants.

▸ **Table 5:** TEA-rates of migrants vs. non-migrants in world regions

	1st generation migrants	2nd generation migrants	Non-migrants
WORLD REGION	TEA-rate	TEA-rate	TEA-rate
USA	16.4%	12.3%	12.9%
Western Europe (with Israel)	8.2%	7.9%	6.1%
Eastern Europe, Russia	8.0%	9.9%	8.2%
Asia	11.7%	9.8%	9.4%
South and central America	17.1%	17.5%	18.8%
MENA	10.6%	12.3%	9.3%
Sub-saharan Africa	31.3%	30.4%	26.8%
Switzerland	9.1%	8.0%	5.0%

[2] http://www.bfs.admin.ch/bfs/portal/en/index/themen/01/07/blank/key/04.html

Figure 13 shows a detailed representation of the variance among countries when migrant versus non-migrant entrepreneurship rates are taken into account. For Switzerland, TEA rates for migrants (both first and second generation) are higher than the unweighted average of benchmark innovation-driven economies. It is the opposite trend for the non-migrant TEA rate, where Switzerland is slightly below the average. Generally migrant TEA rates (i.e. percentage of migrants that are involved in TEA) are higher than non-migrants across benchmark economies, with Netherlands being the clear outlier. These results suggest that self-employment is more common among migrants when compared to non-migrants. The possible reasons for this were analyzed in the OECD 2010 report on entrepreneurship and migrants where it is argued that: "The high rates of migrant self-employment may indicate very different situations, as migrant entrepreneurship can be as diverse as migrants themselves. The scope, size and the nature of the businesses created by migrants vary with a migrant's skills and background. Some migrants start a business because they lack other employment alternatives. This tends to be the case for lower-skilled migrants who might have a small store, restaurant, day care, or laundry. Such ventures may not directly provide as much value added. They typically employ less than five people and have limited growth potential. These small businesses also tend to face very high death rates and provide low income. They may also facilitate the isolation of migrants, delaying their integration" (OECD, 2010, p.5). An important caveat is that these findings should not be taken as solid facts but rather as a tendency, since limited sample sizes from a one-year survey do not ensure robust inference (GEM Global Report, 2012). Thus, in order to arrive at a healthy conclusion, many factors should be taken into account, such as business continuity rate, number of jobs created, volume of exports, etc.

Without making the first or second-generation distinction, the TEA rates in migrants (no matter 2nd or 1st generation) in Switzerland are at 8.7%. The overall TEA rate (including migrant and non-migrants) is 5.3%. For example in the Netherlands the trends are the opposite, with migrant TEA at 7.9% and overall TEA at 10.3%. Hence the following figure (Figure 14) looks at the relationship between the migrant TEA (no generation distinction) and overall TEA (no migrant distinction) and taking 23 innovation-driven economies into account.

Figure 13:
TEA rates among migrants (first & second generation) vs. non-migrants

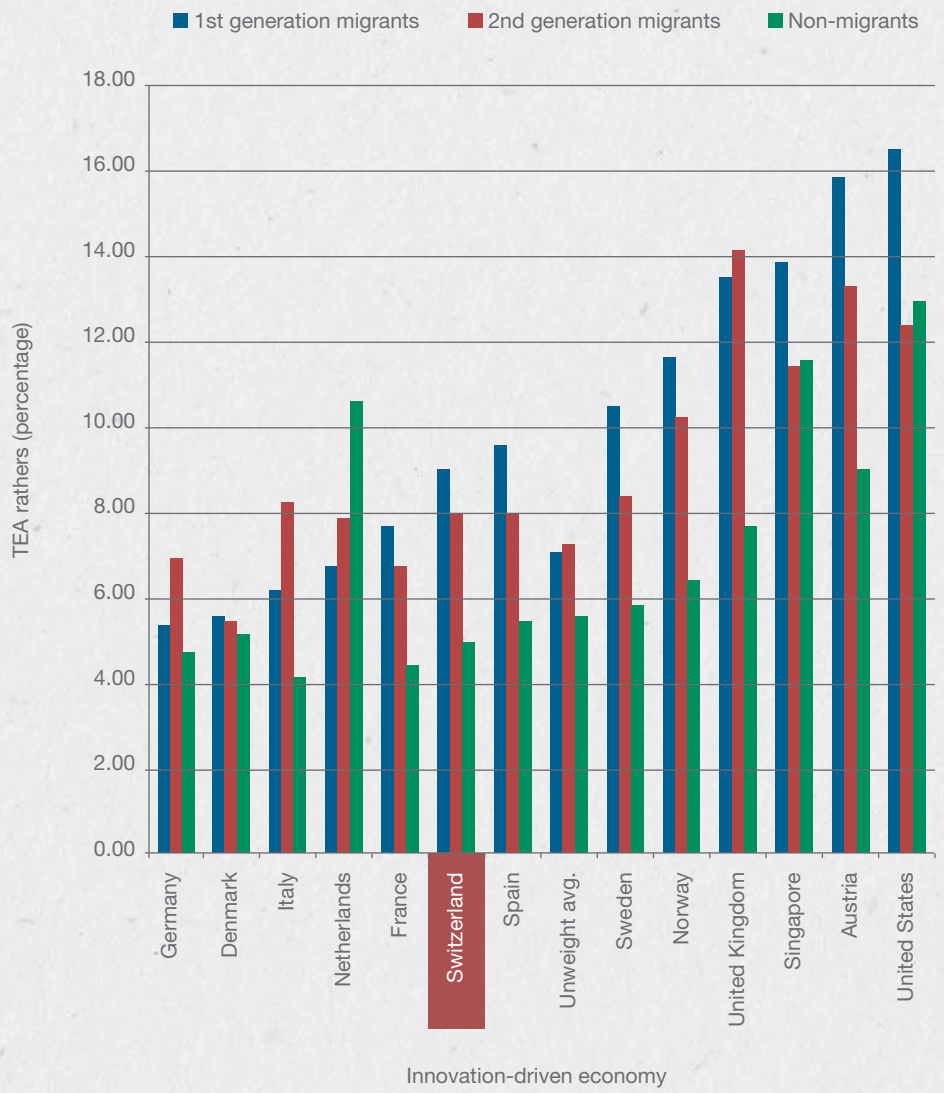
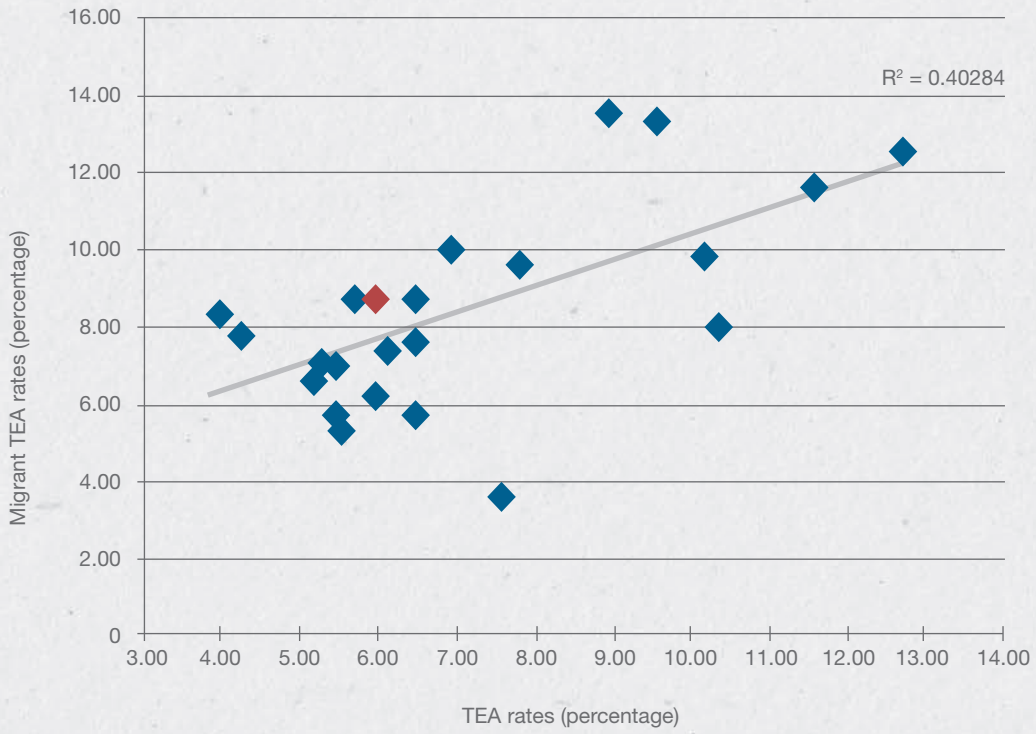


Figure 14:
Immigrant TEA vs Overall TEA
in innovation-driven economies



It is observed that Switzerland (red diamond) lies above the regression line when migrant TEA rates are regressed on overall TEA rates. Here it can be argued that, on average, more migrants are involved in entrepreneurial activity given the overall Swiss rate of entrepreneurial activity. For example, in the case of Taiwan, the country has the lowest migrant TEA rate compared to the overall TEA of Taiwan. This might be explained by the entrepreneurial framework conditions of Switzerland, which have arguably similar effects both on migrant and non-migrant entrepreneurship. In countries such as UK and Austria, the migrant TEA rates show a higher than expected trend when compared to the overall TEA of their economies.

Previously, we discussed the TEA rate within migrants in various economies. In this section, we will examine the role of migrants in the overall TEA of Switzerland. Therefore, another interesting observation is the percentage of migrants within the Swiss TEA. Generally in the Western economies, migrants play a major role in overall entrepreneurial activity (GEM Global Report 2012).

Table 6:
Percentage of migrants in overall entrepreneurial activity (TEA)

Region or country	% of migrants
USA	27.6%
Western Europe (with Israel)	26.8%
SWITZERLAND	34.9%

Figure 15: :
Percentage of TEA immigrants in benchmark economies who start up for opportunity motivation

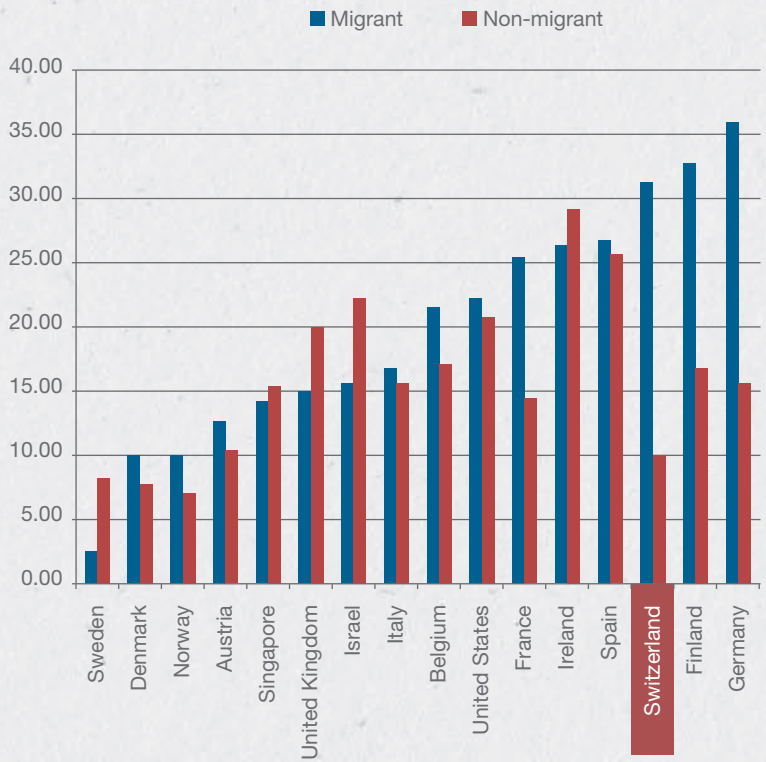
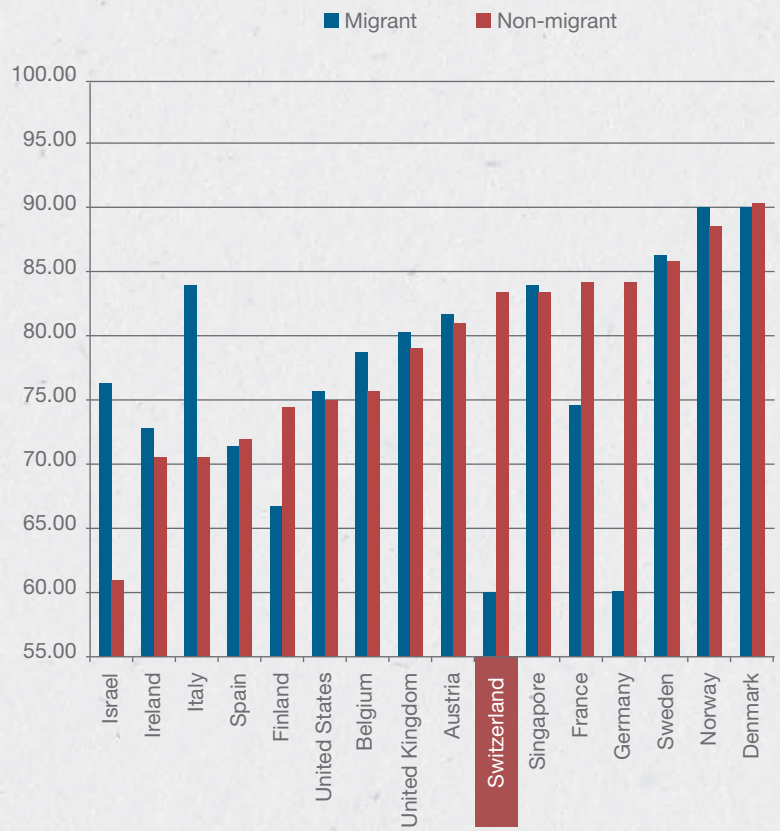


Table 6 shows that, in Switzerland, more than one third of the population that are involved in TEA are migrants. If we compare this figure with the US and Western Europe (including Israel), it can be observed that migrants in Switzerland show a higher degree of entrepreneurial prevalence. One more time, this data suggest a substantial role of migrants in western economies and especially in Switzerland.

As we covered the prevalence of migrant entrepreneurial activities, it is also interesting to assess the motivational aspects of these activities to gain further understanding of the phenomenon. As we see in Figure 15 and 16, the motivations of engaging in TEA could be either opportunity-based or necessity-based (see: definitions). These two figures are complementary in that if one motive is higher then the other has to be lower. In Switzerland, 60% of migrant entrepreneurial activity is based on improvement-driven opportunity (IDO) motivation and 31% based on necessity motivation. For non-migrants in Switzerland, the improvement-driven opportunity motivation in early stage entrepreneurial activity corresponds to 83%, whereas necessity-based motivation is leveled at 10%. The Swiss results show resemblance with German results to a great extent. Among the benchmark economies, Italy sticks out, with 83% opportunity-based motivation for migrants to 70% same motivation for non-migrants when compared.

Figure 16:
Percentage of TEA immigrants in benchmark economies who start up for necessity motivation



In Scandinavian economies, migrant and non-migrant opportunity motivation for early stage entrepreneurship are almost equal at around 90%. There could be some potential for Switzerland in this regard. First of all, the likelihood for migrants to start for IDO-reasons could be raised to the levels of non-migrants through initiatives that support skilled-labor, people who are arguably more likely to sense and seize opportunities. A good example in this context can be seen in the Neirynck initiative[3] of 2010, which grants foreign graduates who hold a Swiss-university level diploma easier access to the labor market. This initiative does not directly support migrant entrepreneurship; however, it positively feeds the population of skilled-migrants of which a portion will engage in entrepreneurial activities in Switzerland (Kloosterman, 2010). Swiss policy makers already recognize the value migrants can provide in creating jobs and globalizing the business environment. In addition, economies of origin should make every effort to build and support connections to those that have immigrated to Switzerland to facilitate integration and more importantly to benefit from the diaspora though transfer of business and technological know-how, information exchange and remittances (GEM, Global Report 2012).

[3] http://www.bfm.admin.ch/content/bfm/en/home/themen/arbeit/nicht-eu_efta-angehoerige/hochschulabgaenger.html (accessed in March, 2013)

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GLOSSARY

Table 7:
Main GEM measures used in this Report

Measure	Description
Entrepreneurial Attitudes and Perceptions	
Perceived Opportunities	Percentage of 18-64 age groups who see good opportunities to start a firm in the area where they live
Perceived Capabilities	Percentage of 18-64 age groups who believe to have the required skills and knowledge to start a business
Entrepreneurial Intention	Percentage of 18-64 age groups (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years
Fear of Failure Rate	Percentage of 18-64 age groups with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business
Entrepreneurship as Desirable Career Choice	Percentage of 18-64 age groups who agree with the statement that in their country, most people consider starting a business as a desirable career choice
High-Status Successful Entrepreneurship	Percentage of 18-64 age groups who agree with the statement that in their country, successful entrepreneurs enjoy high status
Media Attention for Entrepreneurship	Percentage of 18-64 age groups who agree with the statement that in their country, they will often see stories in the public media about successful new businesses
Entrepreneurial Activity	
Nascent Entrepreneurship Rate	Percentage of 18-64 age groups who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages or any other payments to the owners for more than three months
New Business Ownership Rate	Percentage of 18-64 age groups who are currently an owner-manager of a new business, i.e. owning and managing a running business that has paid salaries, wages or any other payments to the owners for more than three months, but not more than 42 months
Total Early-Stage Entrepreneurial Activity (TEA)	Percentage of 18-64 age groups who are either a nascent entrepreneur or owner-manager of a new business (as defined above)
Established Business Ownership Rate	Percentage of 18-64 age groups who are currently owner-manager of an established business, i.e. owning and managing a running business that has paid salaries, wages or any other payments to the owners for more than 42 months

Measure	Description
Business Discontinuation Rate	Percentage of 18-64 age groups who have, in the past 12 months, discontinued a business, either by selling, shutting down or otherwise discontinuing an owner/management relationship with the business. Note: This is not a measure of business failure rates.
Necessity-Driven Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in total early-stage entrepreneurial activity (as defined above) who are involved in entrepreneurship because they had no other option for work
Improvement-Driven Opportunity Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in total early-stage entrepreneurial activity (as defined above) who (i) claim to be driven by opportunity, as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income
Entrepreneurial Aspirations	
Solo/Low Job Expectation early-stage Entrepreneurial Activity (SLEA)	Percentage of 18-64 age groups who are either a nascent entrepreneur or owner-manager of a new business (as defined above) AND expect to provide fewer than 5 jobs five years from now. Based on 2009-2011 data.
Medium/High Job Expectation early-stage Entrepreneurial Activity (MHEA)	Percentage of 18-64 age groups who are either a nascent entrepreneur or owner-manager of a new business (as defined above) AND expect to provide 5 or more jobs five years from now. Based on 2009-2011 data.
New Product-Market Oriented Early-Stage Entrepreneurial Activity: Relative Prevalence	Percentage of total early-stage entrepreneurs (as defined above) who indicate that product or service is new to at least some customers and indicate that not many businesses offer the same product or service. Based on 2009-2011 data.
International Orientation early-stage Entrepreneurial Activity	Percentage of total early-stage entrepreneurs (as defined above) with more than 25% of the customers coming from other countries. Based on 2009-2011 data.
Entrepreneurial Employee Activity	
Entrepreneurial Employee Activity (EEA)	Percentage of 18-64 age groups who are currently involved in developing new entrepreneurial activities for their employer and fulfill a leading role in this activity.
Private Sector Entrepreneurial Employee Activity (PEEA)	Percentage of 18-64 age groups who are currently involved in developing new entrepreneurial activities for their employer, active in the private sector, and fulfill a leading role in this activity. Hence the PEEA measure constitutes a subset of the EEA measure.
Employers' Support for Entrepreneurial Employee Activity	Percentage of 18-64 employees indicating that their employer provides at least some support when employees come up with new ideas

Table 8:
Measures from other Data Sources used in this Report

Measure	Source	Description
Economic Freedom Index	Heritage Foundation	The Economic Freedom index uses 10 specific freedoms, some as composites of even further detailed and quantifiable components. Each of these freedoms is weighted equally and turned into an index ranging from 0 to 100, where 100 represents the maximum economic freedom. Cross section data 2002.
Employment protection deters employees from starting business	GEM National Expert Survey	Statement assessed by experts in the 2011 GEM National Expert Survey (mean values per economy; based on the likert scale 1-5).
Entrepreneurs have much lower access to social security than employees	GEM National Expert Survey	Statement assessed by experts in the 2011 GEM National Expert Survey (mean values per economy; based on the likert scale 1-5).
GDP Per Capita (PPP)	IMF World Development Indicators, October 2011.	GDP per capita in Purchasing Power Parities (PPP), US Dollars, 2011
Gender Gap Index	World Economic Forum Gender Gap 2011 Report	All scores are reported on a scale of 0 to 1, with 1 representing maximum gender equality. The study measures the extent to which women have achieved full equality with men in five critical areas: economic participation, economic opportunity, political empowerment, educational attainment and health & well-being.
Global Entrepreneurship Index (GEI):	Acs, Z., Szerb, L. (2012) Global Entrepreneurship & Development Index	The GEI combines measures of activity, aspiration, and attitudes with relevant measures of the favorability of the environment for entrepreneurship. The GEI is simply the average of three sub-indices: one for attitudes, one for activity, and one for aspiration. Similarly, each sub-index is the average of four or five normalized indicator scores, after adjustment for “bottlenecks”, or the weakest indicator in a country.
Income inequality (Gini index)	World Bank World Development Indicators	Gini measure of economic inequality, where greater values represent greater inequality. Data are based on primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from the Luxembourg Income Study database.
Informal investment prevalence rate	GEM Adult Population Survey	Percentage of 18-64 groups who have personally invested funds in business start-ups in the past three years
Investment Freedom Index	Heritage Foundation	This factor scrutinizes each country’s policies toward foreign investment, as well as its policies toward capital flows internally, in order to determine its overall investment climate. The county’s investment freedom ranges between 0 and 100, where 100 represents the maximum degree of investment freedom. Cross section data 2002.

Measure	Source	Description
Old age, disability and death benefit index	Botero, Djankov, La Porta, López-de-Silanes & Shleifer (2004) Regulation of Labor Data	Measures the level of old age, disability and death benefits as the average of the following four normalized variables: (1) the difference between retirement age and life expectancy at birth, (2) the number of months of contributions or employment required for normal retirement by law, (3) the percentage of the worker's monthly salary deducted by law to cover old-age, disability, and death benefits, and (4) the percentage of the net pre-retirement salary covered by the net old - age cash-benefit pension. Cross section data covering the 1997-2002 period.
Political Stability	World Bank Governance Indicators	Political Stability combines several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism. Cross section data covering 2002-2006.
Secular-rational (versus traditional) values	World Value Survey; Inglehart and Baker (2000)	Principal components factor index based on religiousness, autonomy, abortion attitudes, respect for authority and national pride.
Social security laws index	Botero, Djankov, La Porta, López-de-Silanes & Shleifer (2004) Regulation of Labor Data	Measures social benefits as the average of the three variables: Old Age, Disability and Death Benefit Index; and Unemployment Benefits Index. Cross section data covering 1997-2002.
Unemployment benefits index	Botero, Djankov, La Porta, López-de-Silanes & Shleifer (2004) Regulation of Labor Data	Measures the level of unemployment benefits as the average of the following four normalized variables: (1) the number of months of contributions or employment required to qualify for unemployment benefits by law, (2) the percentage of the worker's monthly salary deducted by law to cover unemployment benefits, (3) the waiting period for unemployment benefits, and (4) the percentage of a one-year unemployment spell. Cross section data covering the 1997-2002 period.

Country List

Country / *Intcode*

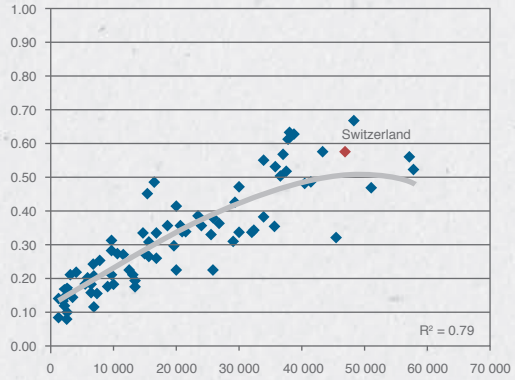
Algeria	*DZ*	El Salvador	*SV*	Macedonia	*MK*	Slovakia	*SK*
Angola	*AO*	Estonia	*EE*	Malawi	*MW*	Slovenia	*SI*
Argentina	*AR*	Ethiopia	*ET*	Malaysia	*MY*	South Africa	*ZA*
Austria	*AT*	Finland	*FI*	Mexico	*MX*	Spain	*ES*
Barbados	*BB*	France	*FR*	Namibia	*NA*	Sweden	*SE*
Belgium	*BE*	Germany	*DE*	Netherlands	*NL*	Switzerland	*SW*
Bosnia & Herzegovina	*BA*	Ghana	*GH*	Nigeria	*NG*	Taiwan	*TW*
Botswana	*BW*	Greece	*GR*	Norway	*NO*	Thailand	*TH*
Brazil	*BR*	Hungary	*HU*	Pakistan	*PK*	Trinidad & Tobago	*TT*
Chile	*CL*	Iran	*IR*	Palestine	*PS*	Tunisia	*TN*
China	*CN*	Ireland	*IE*	Panama	*PA*	Turkey	*TR*
Colombia	*CO*	Israel	*IL*	Peru	*PE*	Uganda	*UG*
Costa Rica	*CR*	Italy	*IT*	Poland	*PL*	United Kingdom	*UK*
Croatia	*HR*	Japan	*JP*	Portugal	*PT*	United States	*US*
Denmark	*DK*	Korea	*KR*	Romania	*RO*	Uruguay	*UY*
Ecuador	*EC*	Latvia	*LV*	Russia	*RU*	Zambia	*ZM*
Egypt	*EG*	Lithuania	*LT*	Singapore	*SG*		

Global Entrepreneurship Index (GEDI) and Switzerland

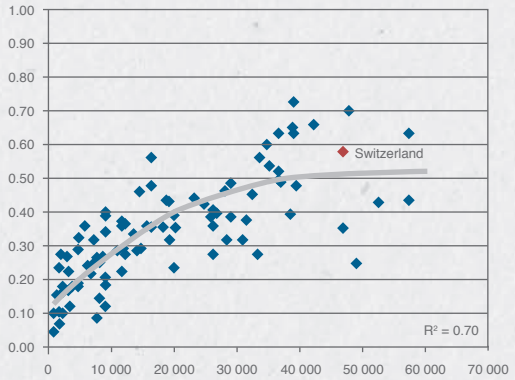
Size of population 2012 (in million)	7.87
Per capita GDP in international US$ 2010 (PPP, World Bank)	46'215
Cluster membership	5
Rank in Doing Business Index 2011-2012	26/183
Rank in Global Competitiveness Index 2011-2012	1/142
Rank in Economic Freedom index 2011-2012	43/179
Global Entrepreneurship and Development Index rank (point)	8 (0.56)
Entrepreneurial Attitudes sub-index rank (point)	10 (0.58)
Entrepreneurial Ability sub-index rank (point)	14 (0.58)
Entrepreneurial Aspirations sub-index rank (point)	7 (0.53)
Weakest pillar to improve (value)	High Growth (0.32)
Weakest variable to improve (value)	Gazelle (0.19)

The relative position of Switzerland in the Global Entrepreneurship and Development Index and in the sub-index level

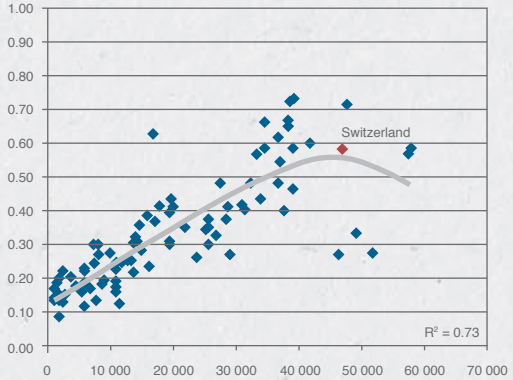
Global Entrepreneurship and Development Index



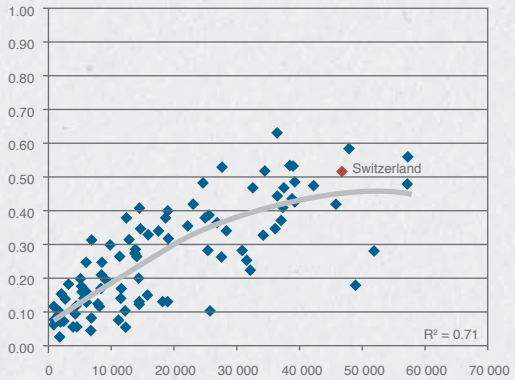
Entrepreneurial Attitudes Sub-index



Entrepreneurial Action Sub-index



Entrepreneurial Aspiration Sub-Index



The relative position of Switzerland in the pillar level

Entrepreneurial Attitudes

Institutional variables		Individual variables		Pillars	
Market Agglomeration	0.54	Opportunity Recognition	0.43	Opportunity Perception	0.42
Tertiary Education	0.51	Skill Perception	0.41	Start-up Skills	0.39
Business Risk	1.00	Risk Acceptance	0.69	Nonfear of Failure	0.88
Internet Usage	0.88	Know Entrepreneurs	0.25	Networking	0.58
Corruption	0.91	Career Status	0.60	Cultural Support	0.90

Entrepreneurial Ability

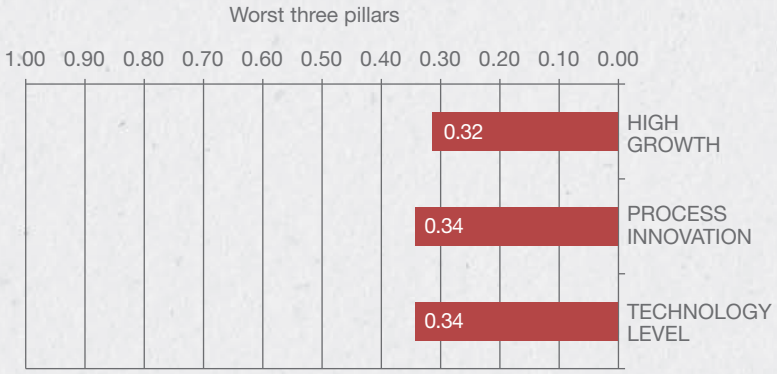
Institutional variables		Individual variables		Pillars	
Economic Freedom	0.71	Opportunity Motivation	0.82	Opportunity Startup	0.67
Tech Absorption	0.90	Technology Level	0.32	Technology Level Quality of Human Resources	0.34
Staff Training	0.93	Educational Level	0.52	Resources	0.63
Market Dominance	0.95	Competitors	0.76	Competition	0.88

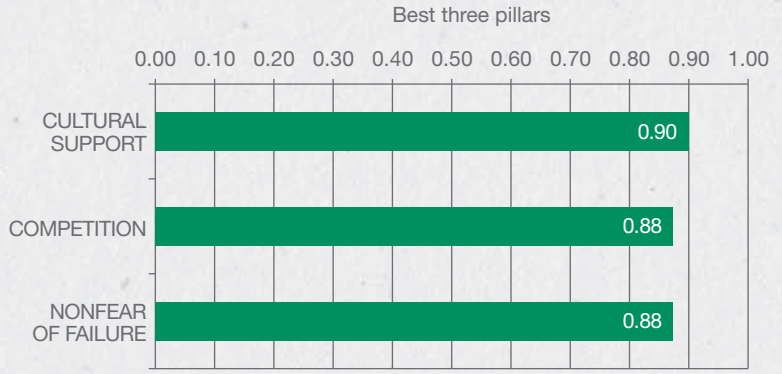
Entrepreneurial Aspirations

Institutional variables		Individual variables		Pillars	
Technology Transfer	0.97	New Product	0.48	Product Innovation	0.75
GERD	0.71	New Tech	0.21	Process Innovation	0.34
Business Strategy	0.89	Gazelle	0.19	High Growth	0.32
Globalization	0.79	Export	0.71	Internationalization	0.68
Venture Capital	0.58	Informal Investment	0.61	Risk Capital	0.72

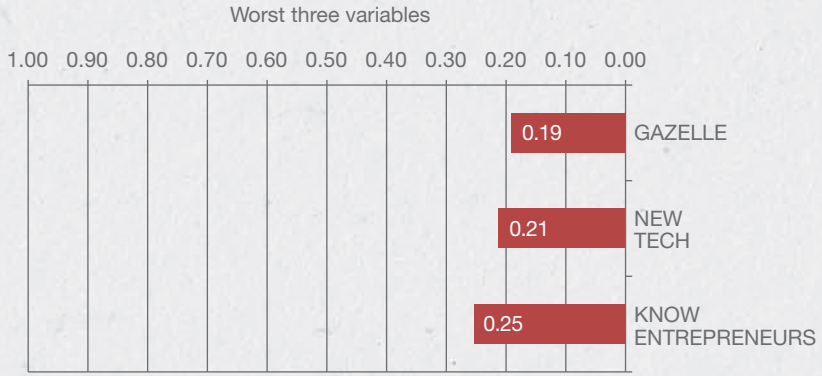
Institutional	0.80	Individual	0.50	GEDI	0.56

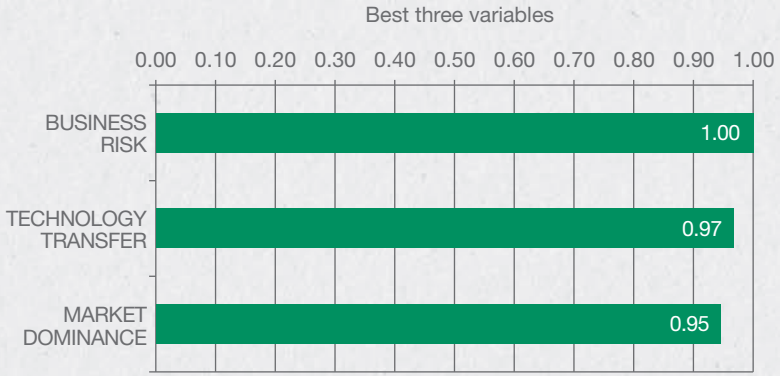
The strengths and weaknesses of Switzerland at the pillar level





The best and worst three variables of Switzerland





List of Experts

Thomas Binggeli
Founder and CEO of Thoemus AG and CEO of BMC Racing
Silvio Bonaccio
Head of Technology Transfer, ETH Zurich
Tom Brooks
International Promoter and Communicator
Silvano Cometta
Owner of CONSULTit and Biotechnology and Life Science Business Consultant
Denis Crottet
CEO and Board Member of Smixin AG
Alberto De Lorenzi
Entrepreneur and Venture Capital and Private Equity Consultant
Matthias Etter
Founder and CEO of Cuboro AG
Fritz Fahrni
Professor emeritus ETH, Professor HSG
Beat Fasnacht
Founder and President of the Institut St. Josef Guglera
Gregory Gerhardt
CEO and Founder of Amazee Labs
Dietmar Grichnik
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Georges Haour
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Andreas Hungerbühler
Director at Dun & Bradstreet Switzerland
Sebastien Jeanneret
Founder and CEO of DeLafée International Switzerland and vernalis.ch
Urs Jordi
Head of Coop City
Noemi Madian
CEO and Founder of Madian International Ltd.
Elmar Mock
CEO and Founder of Creaholic AG, Co-Inventor of the Swatch
Thomas Moll
Investment Responsible at a Swiss Media House
Jordi Montserrat
Co-Managing Director at Venture Kick, Regional Manager at Venturelab Switzerland
Hans-Ulrich Müller
Regional Manager at Credit Suisse, President of the Swiss Venture Club

Alfred Münger
CEO of Loomis SA
Alberto Petruzella
Managing Director at Credit Suisse, Member of the Jury at Swiss Venture Club
Roberto Poretti
Coordinator at VentureLab Ticino
Hannes Rohner
Researcher for Innovation and futurology, founder and CEO of B4U.ch
Gerhard Roth
Independant Investigator of the Swiss Financial Market and Financial Market Supervisor
Patrick Roth
Managing Director at CCMT Competence Center for Medical Technology
Giselle Rufer
Founder and Managing Director of Delance Swiss Watches AG
Faris Sabeti
Entrepreneur, Founder of BlueOcean Ventures, Member of the Commission of Technology and Innovation CTI
Jean-Michel Sahut
Professor for Business and R&D at the University of Applied Sciences in Geneva
Gianni Soldati
Director of a Molecular Diagnostics Lab
Esther Thahabi
Managing director at the Chamber of Commerce of the Region of Biel
Arthur Vayloyan
Head of Private Banking Switzerland at Credit Suisse
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Director of the SME Institute of the University of St. Gallen
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