



Global Entrepreneurship Monitor 2014

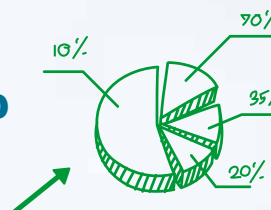
— Report on Switzerland

success

innovation

research

concept





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It is available online at www.gemconsortium.org. 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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Pascal Wild | Pascal Wild is an academic in research projects at the School of Management Fribourg and teaches undergraduate and graduate students. He obtained his Master of Science in Business Administration (orientation Entrepreneurship) at the University of Applied Sciences Western Switzerland and is currently writing his dissertation at the University of Geneva. His research interests are in the areas of international entrepreneurship, global cities and emerging markets.

Fredrik Hacklin | Fredrik Hacklin is research director and junior faculty member at ETH Zurich, heading research activities of the Entrepreneurship group at the Department of Management, Technology and Economics. Fredrik's area of expertise centers around innovation and entrepreneurship in ICT industries. He has been a visiting professor at Keio University, Japan, a visiting scholar at Stanford University, USA, and an associate at Booz & Company. He has published his results in various journals, and is author of the book "Management of convergence in innovation" (Springer 2008). Fredrik holds a PhD in Management from ETH Zurich, and an MSc in Computer Science from KTH Stockholm.

Management Summary (EN)

The School of Management Fribourg, in collaboration with the ETH Engineering School in Zurich, SUPSI Manno in Switzerland and the ZHAW School of Management and Law, collected data for the international Global Entrepreneurship Monitor (GEM). 2000 telephone interviews and 36 talks with experts revealed entrepreneurial attitudes, activities and aspirations, and identified the factors influencing the type and extent of the entrepreneurial activities. The Global Entrepreneurship Monitor Report 2014 on Switzerland illustrates national differences in entrepreneurial activity 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 complements already existing indicators of competitiveness and innovation.

General characteristics of Switzerland as a centre for innovation *

Rank in Doing Business Index	20/189	Global Innovation Index	1/143
Rank in Global Competitiveness Index	1/144	Rank in GEDI Index	68.6 (9/130)
		- Entrepreneurial Attitudes	12/130
Rank in Economic Freedom Index	5/178	- Entrepreneurial Ability	9/130
		- Entrepreneurial Aspiration	10/130

Rating of GEM indicators for Swiss entrepreneurs **

	2014	**		2014	**
Perceived opportunities	43.7	38.8	Total early-stage entrepreneurial activity rate (TEA)	7.1	8.5
Perceived capabilities	41.6	42.0	Necessity-driven (in % of TEA rate)	14.4	37.8
Fear of failure	29.0	37.8	Improvement-driven (in % of TEA rate)	58.1	54.9
Entrepreneurial intentions	7.1	12.3	Nascent entrepreneurship rate	3.4	5.3
Entrepreneurship as a good career choice	42.3	55.1	New business ownership rate	3.8	3.4
Owner-Manager in established business rate	9.1	6.7			

*Please see glossary for definitions and references

**Average innovation-driven economies

Entrepreneurial Framework Condition and Entrepreneurial Activity

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.

Switzerland shows a slightly lower potential in 2014 with regard to creating new jobs via young companies (Total Early-Stage Entrepreneurial Activity, TEA) and in contrast to last year (8.2%) , Switzerland's founding rate stands slightly below average among innovation-based economies. With the exception of 2010, the TEA fluctuated between six and eight percent in the last 10 years. Although the quantitative aspect of 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 behavior 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 TEA with a practically equal woman-to-man ratio. In 2014, like in the previous year, Switzerland ranked in first place of all innovation-based economies.

The age structure of entrepreneurial activity in Switzerland is noteworthy. Entrepreneurial activity among the youth in Switzerland (18-24) is the lowest of all comparable countries, whereas the 35-44 age group shows the highest entrepreneurial activity.

Entrepreneurial Attitudes

In the 2014 census, perceived opportunities to start a business were higher in Switzerland than in previous years and ranks above average of innovation-based countries. What is particularly notable is that fear of failure has clearly lessened in the past few years, and in 2014 was even lower than in the USA.

The data collected on entrepreneurial attitudes corroborate the low rate of founding activity among 18 to 24-year-olds in that this age group regards entrepreneurship to be a good career opportunity and express little fear of failing, but are unsure of their entrepreneurial abilities. These results could be an indication of a lack of self-confidence, or may simply mean that this age group is not necessarily willing to leave behind the comfort zone associated with being an employee. This begs two questions: are entrepreneurial incentives and training introduced too late in Switzerland, and would it be better to impart entrepreneurial spirit and innovative behaviour as early as during compulsory school years?

Language Regions Show Differences

It has been proven that even though fear of failure is low, this does not necessarily contribute to a higher rate of founding activity. Keeping this in mind, analysing entrepreneurial attitudes according to language regions shows very interesting results as seen in the following table. Fear of failing is very low in the German-speaking regions (D-CH), yet intentions to found a company are much lower than the other language regions. In French-speaking Switzerland (F-CH), there are significantly more people with entrepreneurial intentions, although they are more afraid of failing. In contrast, the successful entrepreneur enjoys an extremely positive status there, and an entrepreneurial career is described as attractive. In the Italian-speaking part of Switzerland (I-CH), the high social status of entrepreneurial activity cannot be transferred to intentions to found a business.

Comparison of entrepreneurial indicators across the Swiss language regions

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Entrepreneurship as a good career choice	42.3	36.2	58.5	61.0
High status to successful	65.8	61.1	80.9	61.8

Management Summary (DE)

Die Hochschule für Wirtschaft (HSW) Freiburg hat in Zusammenarbeit mit der ETH Zürich, der SUPSI Manno in der Schweiz sowie der ZHAW School of Management and Law, die Datenerhebung 2014 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 2014 dokumentiert nationale Unterschiede bezüglich unternehmerischer Einstellungen, Aktivitäten und Ambitionen. Im Weiteren werden die Einflussfaktoren erhoben, welche die unternehmerischen Tätigkeiten eines Landes beschreiben. Zudem kann dank des Global Entrepreneurship Monitors das politische Engagement für Unternehmertum analysiert werden. Die GEM-Daten ergänzen bereits bestehende Daten in den Bereichen Wettbewerbsfähigkeit und Innovation.

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* Für Definitionen und Quellenangaben siehe Glossar

** Durchschnitt der innovationsbasierten Volkswirtschaften

Unternehmerische Rahmenbedingungen und Gründungsaktivität unternehmerisches Profil

Die generellen Rahmenbedingungen der Schweiz und Singapur 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.

Die Studie 2014 belegt ein leicht geringeres Potential bezüglich der erwarteten Schaffung neuer Arbeitsstellen durch Jungunternehmen (Total Entrepreneurial Activity, TEA) und die Schweiz liegt im Gegensatz zum vorherigen Jahr mit der Gründungsrate leicht unter dem Durchschnitt der innovationsbasierten Länder.

Abgesehen von den Ergebnissen im 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). 2014 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.

Unternehmerische Einstellungen

Im 2014 wurden mehr unternehmerische Gelegenheiten wahrgenommen als in den vorangehenden Jahren. Auffallend ist ausserdem, dass die Angst vor Scheitern in den letzten Jahren eindeutig gesunken ist und auch 2014 tiefer ausfällt als in den USA. Die Schweiz nimmt mit den USA sogar die Spitzenposition aller innovationsbasierten Volkswirtschaften ein.

Die Erhebungen zu den unternehmerischen Einstellungen untermauert die tiefe Gründungsaktivität der 18-24 jährigen Personen insofern, als diese Altersgruppe Unternehmertum als gute Karrieremöglichkeit betrachten, eine relativ tiefe Angst vor dem Scheitern ausdrücken aber nicht von den eigenen unternehmerischen Fähigkeiten überzeugt sind. Dies kann einerseits ein Indiz für nicht ausgeprägtes Selbstvertrauen sein und andererseits ein Hinweis, dass Personen dieser Altersgruppe nicht unbedingt bereit sind, die Komfortzone einer unselbstständigen Erwerbstätigkeit zu verlassen. Es stellt sich auch die Frage, ob in der Schweiz zu spät mit unternehmerischen Anreizen und Ausbildungen gestartet wird und schon während der obligatorischen Schulzeit fundiert Unternehmerngeist und innovatives Verhalten vermittelt werden sollte.

Unterschiede nach Sprachregionen

International konnte nachgewiesen werden, dass tiefe Angst vor Scheitern nicht unbedingt zu gesteigerter Gründungsaktivität beiträgt. Vor diesem Hintergrund liefert die Analyse der unternehmerischen Einstellungen nach Sprachregionen interessante Resultate. Die Angst vor dem Scheitern ist in der deutschsprachigen Schweiz (D-CH) ausgesprochen tief, aber die unternehmerischen Gründungsabsichten fallen im Vergleich zu den anderen Sprachregionen äusserst tief aus. In der französischsprachigen Schweiz (F-CH) weisen signifikant mehr Personen unternehmerische Absichten auf, obwohl die Angst vor dem Scheitern höher ist. Hingegen ist der Status des erfolgreichen Unternehmers ausgeprägt positiv und die unternehmerische Karriere wird als attraktiv bezeichnet. Die italienischsprachige Schweiz (I-CH) kann die hohe soziale Stellung unternehmerischer Aktivität aber nicht in die Gründungsabsichten transferieren.

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High status to successful	65.8	61.1	80.9	61.8

Management Summary (FR)

En Suisse, la Haute école de gestion Fribourg (HEG-FR) a mené l'enquête 2014 pour le Global Entrepreneurship Monitor (GEM) en collaboration avec l'ETH Zürich, la SUPSI Manno en Suisse italienne et la ZHAW School of Management and Law. Environ 2'000 entretiens téléphoniques et interviews d'experts ont été réalisés afin d'identifier les attitudes, les activités et les aspirations entrepreneuriales, ainsi que les facteurs de succès déterminant la forme et l'ampleur de l'entrepreneuriat.

Le rapport du Global Entrepreneurship Monitor 2014 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.

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*Voir le glossaire pour les définitions et sources des indicateurs

** La moyenne des économies basées sur l'innovation

Conditions-cadre et activité de création d'entreprise du profil entrepreneurial

Les conditions générales pour entreprendre en Suisse et à Singapour sont globalement meilleures que celles qui prévalent dans les autres pays ayant participé à l'enquête, dont l'économie est basée sur l'innovation. La Suisse montre d'excellents résultats dans les domaines de la finance, de l'infrastructure économique, de la formation tertiaire, du transfert de connaissance et technologique, et quant à la stabilité de la dynamique de son marché intérieur.

A l'exception des résultats de l'enquête menée en 2010, le taux d'activité entrepreneuriale (TEA) suisse fluctue généralement entre 6 et 8 pourcents. Bien que l'aspect quantitatif du TEA soit d'un grand intérêt pour les décideurs politiques, une plus grande attention devrait être portée aux aspects qualitatifs (attentes faibles versus élevées en matière d'emploi) et au comportement entrepreneurial. Les résultats suisses liés à l'activité entrepreneuriale des employés se situent en dessous de la moyenne des économies basées sur l'innovation. Par contre, la Suisse jouit de l'une des meilleures positions relative à l'entrepreneuriat féminin (dans le sens du rapport hommes-femmes pondéré). En 2014, 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 le taux de création d'entreprise le plus faible par rapport aux pays comparables, alors que la classe d'âge des 35-44 ans en présente le taux le plus élevé.

Attitudes entrepreneuriales

En 2014, le nombre d'opportunités entrepreneuriales identifiées est en hausse par rapport aux années précédentes. Il est intéressant de constater que ces dernières années, la crainte de l'échec a chuté pour se situer au même niveau que les Etats-Unis. Avec ce dernier pays, la Suisse se situe donc à la pointe de toutes les économies basées sur l'innovation.

Les enquêtes sur les attitudes entrepreneuriales confirment la faiblesse de l'activité de création d'entreprise des 18-24 ans ; ces groupes d'âge considèrent l'entrepreneuriat comme une bonne opportunité de carrière et manifestent une crainte de l'échec relativement faible, mais ne sont pas convaincus de leurs propres compétences entrepreneuriales. Ceci révèle une faible confiance en soi, et laisse penser que les individus de ce groupe d'âge ne sont pas prêts à quitter la zone de confort d'une activité professionnelle salariée. On peut également se demander si, en Suisse, les incitations et les formations à l'entrepreneuriat n'interviennent pas trop tard, et s'il ne serait pas plus fructueux d'initier à l'esprit d'entreprise et aux comportements innovants déjà au cours de la scolarité obligatoire.

Différences selon les régions linguistiques

Sur le plan international, nous avons pu montrer qu'une faible crainte de l'échec ne contribuait pas forcément à l'augmentation de l'activité de création d'entreprise. Dans ce contexte, l'analyse des attitudes entrepreneuriales selon les régions linguistiques a livré des résultats intéressants. La crainte de l'échec est particulièrement faible en Suisse alémanique (D-CH), mais les intentions d'entreprendre tombent à un niveau extrêmement bas en comparaison aux autres régions linguistiques. En Suisse romande (F-CH), plus nombreux sont les individus qui font preuve d'attitudes entrepreneuriales, bien que la crainte de l'échec s'avère plus élevée. Le statut lié à la réussite de l'entrepreneur est considéré comme particulièrement positif et la carrière d'entrepreneur attractive. La Suisse italienne (I-CH) ne semble toutefois pas transférer les effets du statut social élevé lié à l'activité entrepreneuriale dans les intentions de créer une entreprise.

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Management Summary (IT)

La Haute école de gestion (HEG) di Friburgo, in collaborazione con il Politecnico (ETH) di Zurigo, la Scuola universitaria professionale della Svizzera italiana (SUPSI) di Manno e la ZHAW School of Management and Law di Winterthur, ha condotto l'indagine/inchiesta per il 2014 del Global Entrepreneurship Monitor (GEM). Attraverso 2000 inchieste telefoniche e 36 interviste ad altrettanti esperti si sono analizzati gli atteggiamenti, le attività e le aspirazioni imprenditoriali, così come i fattori di successo che determinano la forma e la portata delle attività imprenditoriali.

Il rapporto per la Svizzera del Global Entrepreneurship Monitor 2014 illustra le differenze nazionali tra le economie nelle attitudini, nelle attività e nelle aspirazioni/ambizioni imprenditoriali, rilevando i fattori che determinano la natura ed il livello dell'attività imprenditoriale nazionale e le implicazioni politiche relative alla promozione dello spirito imprenditoriale nel confronto internazionale. I dati GEM integrano i dati già esistenti nei campi della competitività e dell'innovazione.

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*Per le definizioni e le fonti si veda il glossario

** Media delle economie basate sull'innovazione

Condizioni quadro per l'imprenditorialità e profilo dell'attività imprenditoriale

Le condizioni generali per fare impresa in Svizzera e a Singapore risultano complessivamente migliori rispetto a quelle delle economie basate sull'innovazione che hanno partecipato all'inchiesta. La Svizzera ha raggiunto ottimi risultati nel campo finanziario, nell'infrastruttura economica, nell'istruzione e nella formazione terziaria, nel trasferimento della conoscenza e della tecnologia, nonché nella stabilità delle dinamiche del mercato interno.

Dall'inchiesta 2014 si evince, per la Svizzera, un potenziale di creazione di nuovi posti di lavoro da parte delle giovani imprese (Total Entrepreneurial Activity, TEA) leggermente inferiore rispetto agli anni scorsi, mentre le opportunità percepite per avviare una nuova impresa si rivelano superiori rispetto a quello degli ultimi anni. In Svizzera, inoltre, il tasso di creazione d'impresa stesso si situa leggermente al di sotto della media dei paesi basati sull'innovazione.

A parte i risultati del 2010, il tasso di attività imprenditoriale (TEA) si aggira costantemente tra il 6 e l'8 per cento. Anche se l'aspetto quantitativo del TEA è di grande interesse per i decisori politici, maggiore attenzione deve essere rivolta agli aspetti qualitativi (ad esempio aspettative in termini di creazione di posti di lavoro basse, rispettivamente alte, di posti di lavoro), così come al

comportamento imprenditoriale. I risultati per la Svizzera nel campo dell'attività imprenditoriale dei lavoratori dipendenti (intraprenditorialità) si situano al di sotto dei livelli medi riscontrati per le economie basate sull'innovazione. Per contro, la Svizzera dispone di una delle migliori posizioni per quanto attiene l'imprenditorialità femminile (nel rapporto ponderato il rapporto uomo-donna è praticamente equilibrato). Su questo fronte, nel 2014, la Svizzera occupa addirittura la prima posizione rispetto a tutte le economie basate sull'innovazione.

La struttura per età dell'attività imprenditoriale in Svizzera presenta le seguenti peculiarità: i giovani imprenditori (18-24 anni) presentano il tasso di creazione d'impresa più basso nei confronti dei paesi comparabili, mentre la classe d'età 35-44 il tasso più alto.

Attitudini imprenditoriali

Nel 2014 si sono state percepite maggiori opportunità imprenditoriali rispetto agli anni precedenti. Interessante osservare come la paura del fallimento, negli ultimi anni, sia diminuita fino a raggiungere lo stesso livello osservato per gli Stati Uniti. In quest'ambito, la Svizzera condivide con gli Stati Uniti la posizione al vertice di tutte le economie basate sull'innovazione.

Le indagini sulle attitudini imprenditoriali confermano la debolezza nell'attività di creazione di nuove imprese da parte dei giovani tra 18 e 24 anni; questo gruppo d'età, che considera l'imprenditorialità come una buona opportunità di carriera, esprime una paura del fallimento relativamente bassa, ma non è convinto delle proprie capacità imprenditoriali. Questo può essere sintomo di una bassa autostima e può lasciar pensare che gli individui in questa fascia d'età non siano disposti ad abbandonare la zona di comfort garantita dal lavoro dipendente. Ci si può pertanto anche interrogarsi se, in Svizzera, per gli incentivi e la formazione all'imprenditorialità non si intervenga troppo tardi e se non sia più proficuo incentivare e allenare lo spirito imprenditoriale ed un comportamento innovativo già nel corso della scuola dell'obbligo.

Differenze tra le regioni linguistiche

A livello internazionale è stato dimostrato che una minore paura del fallimento non contribuisce necessariamente ad una maggiore attività imprenditoriale. In questo contesto, l'analisi delle attitudini imprenditoriali per regioni linguistiche mostra dei risultati interessanti. La paura del fallimento nella Svizzera tedesca (D-CH) è particolarmente bassa, ma le intenzioni imprenditoriali, in questa regione, scendono ad un livello molto basso rispetto alle altre regioni linguistiche. Nella Svizzera romanda (F-CH) vi sono più persone che denotano un'attitudine imprenditoriale, anche se la paura del fallimento è più alta. Per contro, lo status correlato al successo degli imprenditori è considerato particolarmente positivo e la carriera imprenditoriale è giudicata attraente. La Svizzera italiana (I-CH) non sembrerebbe trasferire e concretizzare gli effetti dell'elevato status sociale associato all'attività imprenditoriale nelle intenzioni di avviare un'impresa.

Comparison of entrepreneurial indicators across the Swiss language regions

	CH	D-CH	F-CH	I-CH
Perceived opportunities	43.7	46.0	38.9	33.4
Perceived capabilities	41.6	42.2	40.4	36.2
Fear of failure	29.0	26.7	35.8	32.7
Entrepreneurial intentions	7.1	5.6	12.2	2.9
Entrepreneurship as a good career choice	42.3	36.2	58.5	61.0
High status to successful	65.8	61.1	80.9	61.8

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1 *Introduction*

1.1 *The GEM Project*

Entrepreneurship has become a term that is increasingly widespread around the world. According to key players in society, including policymakers, academics, entrepreneurs themselves, and the population at large, entrepreneurship tends to be associated with economic development and social well-being. Since its beginning, one of GEM's core principles has been to explore and assess the role of entrepreneurship in national economic growth. This scope is aligned with the "Schumpeterian" view that entrepreneurs are ambitious and spur innovation, speed up structural changes in the economy, introduce new competition and contribute to productivity, job creation and national competitiveness. However, entrepreneurship has many faces and also includes initiatives that are accompanied by less ambitious business activities leading to limited or no growth. It is important to note that different types of entrepreneurship may all have important implications for socio-economic development.

In 2014, more than 206,000 individuals and 3,936 national experts on entrepreneurship participated in the study across 73 economies, collectively representing all regions of the world and a broad range of economic development levels. The samples in the GEM study covered an estimated 72.4% of the world's population and 90% of the world's total GDP.

GEM contributes to the understanding of the role played by new and small businesses in the economy by focusing on the following objectives (Reynolds et al., 1999, p. 3):

- 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 *How GEM Measures Entrepreneurship*

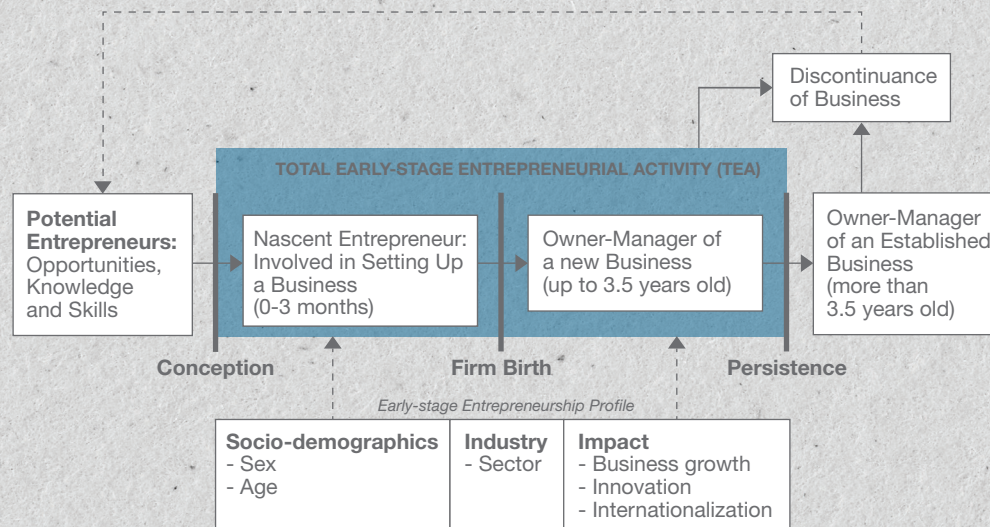
Since its beginning, GEM's focus has been on individuals as units of observation: men and women who are involved in different stages of entrepreneurial dynamics. Entrepreneurship is a process comprising different phases, from intending to start, to just starting, to running new or established enterprises 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. The entrepreneurship process and GEM's operational definitions are illustrated in Figure 1. GEM's conceptualization of entrepreneurship as a multi-phase 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.

1.3 The GEM Conceptual Framework and Methodology

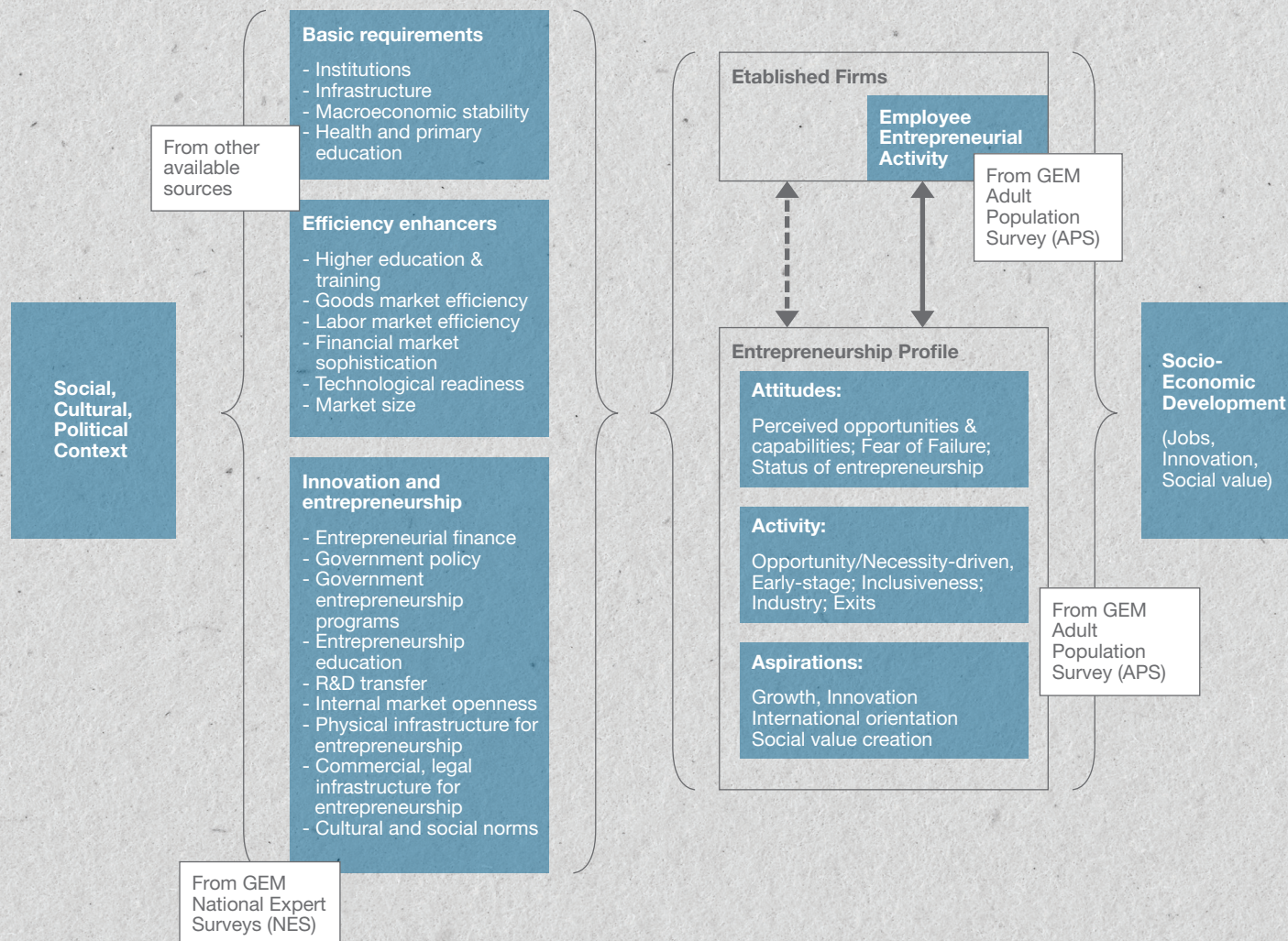
Figure 1:
The Entrepreneurship Process



The GEM model (used in GEM Surveys up to 2014) shown in Figure 2, sets out key elements of the relationship between entrepreneurship and economic growth and the way in which the elements interact. At the same time, it acknowledges that the contribution entrepreneurs make to an economy varies according to that economy's phase of economic development, which to a certain extent drives the institutional setting. It also reflects a nuanced distinction between phases of economic development, in line with Porter's typology of "factor-driven economies", "efficiency-driven economies" and "innovation-driven economies" (Porter et al., 2002), and recognizes that GEM's unique contribution was to describe and measure, in detail, the conditions under which entrepreneurship and innovation can thrive.

Figure 2:

The GEM Conceptual Model
(used in GEM Surveys up to 2014)



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 25 other countries, Switzerland is included in the group of “innovation-driven” economies. The framework incorporates the three main components that capture the multi-faceted nature of entrepreneurship: entrepreneurial attitudes, entrepreneurial activity, and entrepreneurial aspirations. These are included as components of a “black box” that produces innovation, economic growth and job creation, without spelling out in detail how they affect and reinforce each other. Figure 2 also shows how GEM measures different components, such as entrepreneurial framework conditions using the

national expert survey, and the entrepreneurship profiles, encompassing entrepreneurial attitudes, activity and aspirations using the adult population survey.

One of the key purposes of GEM is to provide reliable data on entrepreneurship that will be useful over time 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 the following two main sources.

Adult Population Survey (APS)

Each participating economy conducts a survey of a random representative sample of at least 2,000 adults (aged 18 years and older). 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 start-up 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

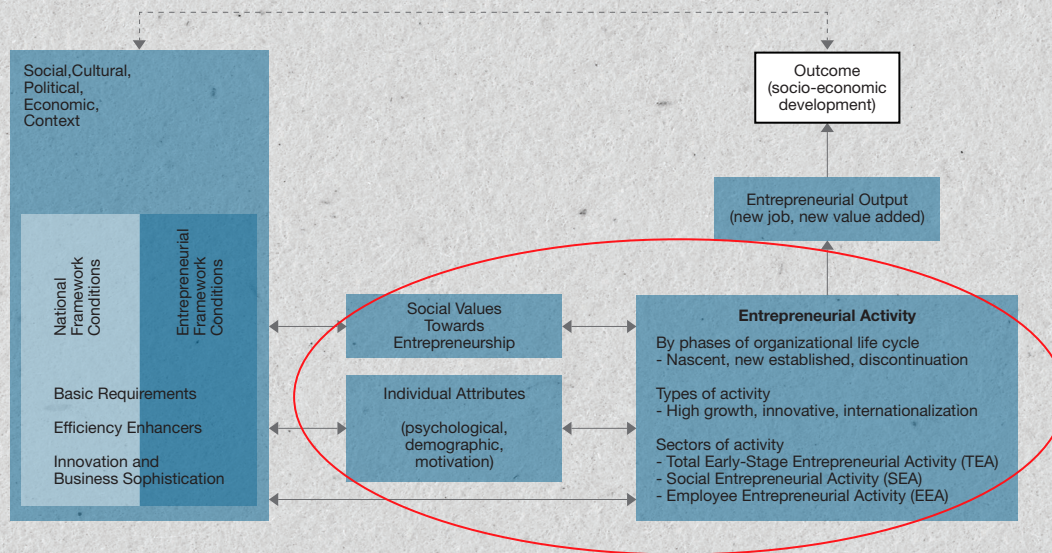
The NES sample comprises a minimum of 36 respondents, with four experts drawn from each of the entrepreneurial framework condition categories. Out of this sample, a minimum of 25% must be entrepreneurs or business owners, and 50% must be professionals.

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 standardized 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.

The revised GEM conceptual framework (Figure 3) opens the “black box” of an Entrepreneurship Profile and tests the characteristics of the assumed relationships between social values, personal attributes and forms of entrepreneurial activity (Singer et al. 2015, 20).

Figure 3:
The revised GEM Conceptual Framework



The social values towards entrepreneurship include the social status of entrepreneurs, how society values entrepreneurship as a good career choice and how media attention to entrepreneurship has an impact on the development of a national entrepreneurial culture. Individual attributes cover demographic factors (gender, age, geographic location), psychological factors (perceived capabilities and opportunities, fear of failure) and motivational aspects (necessity-based versus opportunity-based venturing). Entrepreneurial Activity defines the venture's life cycle phases, the types of activity and the sector of the activity.

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), established businesses, and those after 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 how many would be prevented from exploiting such opportunities due to fear of failure? 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 ad-

ressing 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 perceptions and attitudes to other innovation-driven economies in general and to the comparison group in particular.

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	44.4	48.7	34.9	8.1	-	-	-
Belgium	35.9	30.4	49.4	10.6	52.4	51.7	50.8
Canada	55.5	49.0	36.5	12.0	57.2	69.7	67.7
Finland	42.4	34.9	36.8	7.9	41.2	84.4	66.9
France	28.3	35.4	41.2	14.2	59.0	70.4	39.0
Germany	37.6	36.4	39.9	5.9	51.7	79.1	51.4
Italy	26.6	31.3	49.1	11.4	65.1	72.1	48.3
Luxembourg	42.5	37.6	42.0	11.9	40.7	68.2	43.5
Netherlands	45.6	44.3	34.8	9.3	79.1	67.8	55.7
Norway	63.5	30.5	37.6	5.0	58.2	83.5	-
Singapore	16.7	21.4	39.4	9.4	51.7	62.9	79.1
Sweden	70.1	36.7	36.5	8.5	51.6	70.9	60.3
Switzerland	43.7	41.6	29.0	7.1	42.3	65.8	50.4
United Kingdom	41.0	46.4	36.8	6.9	60.3	75.0	58.4
United States	50.9	53.3	29.7	12.1	64.7	76.9	75.8
Average (unweighted)	38.8	42.0	37.8	12.3	55.1	68.2	60.3

► **Table 1:** Percentage of People with Specific Entrepreneurial Perceptions, Intentions and Societal Attitudes in selected Innovation-Driven Economies, 2014

* fear of failure assessed among those seeing opportunities

** Respondent expects to start a business within three years; currently not involved in entrepreneurial activity.

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) only applies to these individuals who want to start a business. 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, cultural differences and business-cycle patterns are an important explanation for the differences in perceptions across countries.

In the 2014 census the perceived opportunities (43.7%) to start a business are higher in Switzerland than in 2013 (41.5%) and higher than the average (38.8%) for innovation-driven economies. Canada, the United States and Nordic countries, such as Sweden, Norway, and Finland, 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 (29.0%). 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 (7.1%) are lower than in 2013 (9.8%) and under the average (12.3%) for innovation-driven countries. Most remarkable are the differences between Switzerland, the United States, Germany, and France. While in Germany only 5.9% of the individuals expect to start a business in the next three years, almost 12.1% of the individuals in the United States and 14.2% in France 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 the 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.

2.2.1 Total Early-Stage Entrepreneurial Activity (TEA)

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 4 shows the TEA rates for innovation-driven economies. The 95% confidence intervals help to interpret the differences between countries. 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 (13.8%) and Singapore (11.0%) differ 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 (7.1%).

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)	Driven opportunity (% of TEA)
Austria	5.8	3.1	8.7	9.9	2.7	11.0	37.4
Belgium	2.9	2.5	5.4	3.5	2.3	30.7	43.1
Canada	7.9	5.6	13.0	9.4	4.2	15.7	63.3
Finland	3.4	2.3	5.6	6.6	2.3	15.6	63.1
France	3.7	1.7	5.3	2.9	1.7	16.1	69.2
Germany	3.1	2.3	5.3	5.2	1.7	23.2	53.7
Italy	4.9	2.3	7.1	3.7	2.6	11.8	59.8
Luxembourg	4.9	2.3	7.1	3.7	2.6	11.8	59.8
Netherlands	5.2	4.5	9.5	9.6	1.8	15.7	62.8
Norway	2.8	3.0	5.7	5.4	1.9	3.5	69.0
Singapore	6.4	4.8	11.0	2.9	2.4	11.4	70.8
Sweden	4.9	1.9	6.7	6.5	2.1	7.9	56.2
Switzerland	3.4	3.8	7.1	9.1	1.5	14.4	58.1
United Kingdom	6.3	4.5	10.7	6.5	1.9	12.9	52.7
United States	9.7	4.3	13.8	6.9	4.0	13.5	66.9
Average (unweighted)	5.3	3.4	8.5	6.7	2.7	18.0	54.9

Table 2: Percentages of Entrepreneurial Activity in selected Innovation-Driven Economies, 2014

2.2.1 Total Early-Stage Entrepreneurial Activity (TEA)

Figure 4:

Early-Stage Entrepreneurial Activity (TEA) in selected Innovation-Driven Economies, 2014

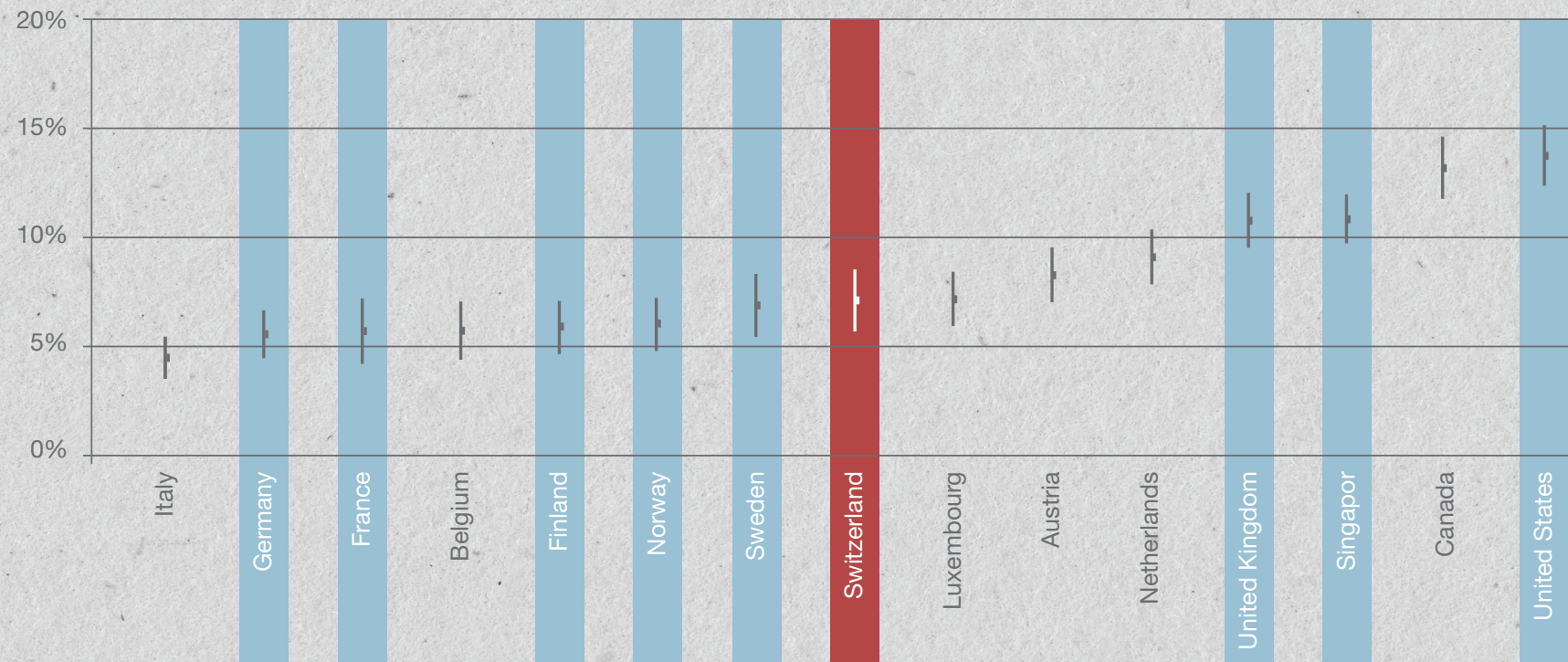
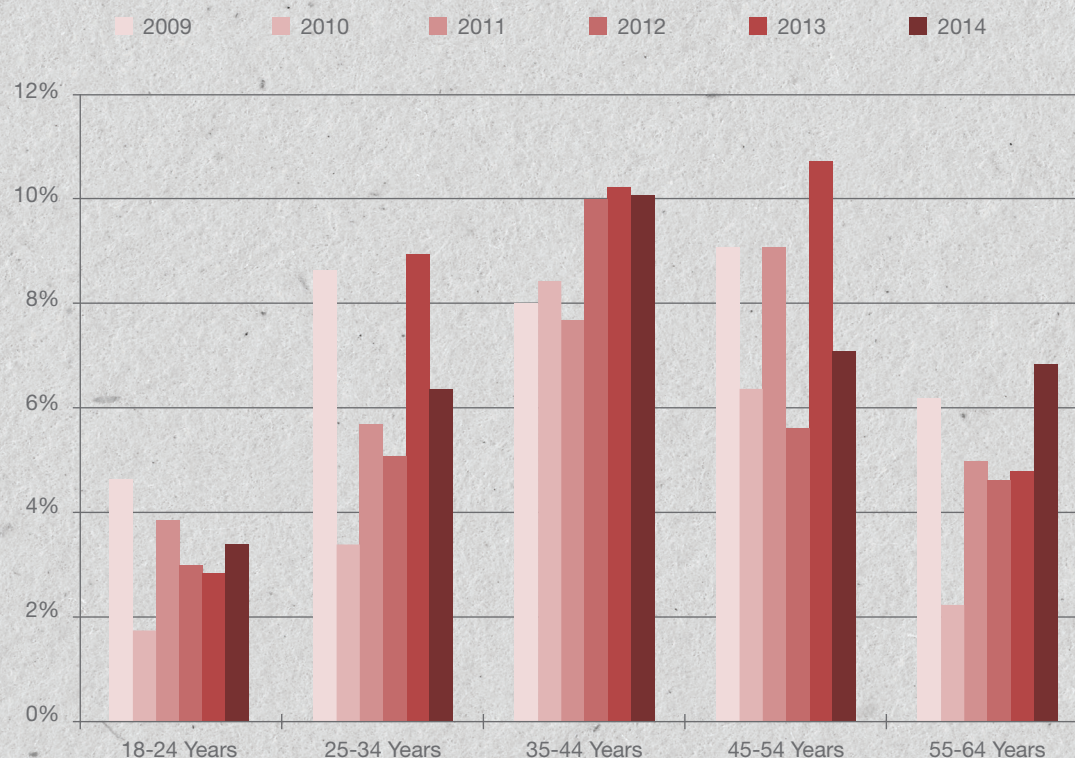


Figure 5:

Total Early-Stage Entrepreneurial Activity (TEA) in Switzerland by Age, 2009-2014



This rebound in entrepreneurial activities in Switzerland is reflected across most of the different age categories (Figure 5). 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 10.1%, 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 18-24 age group is, at 3.4%, the lowest and is clearly below average (7.4%) and 10.1% for entrepreneurs between 35-44 years (10.2% innovation-driven economies). The TEA rate for people older than 55 years (so-called senior entrepreneurs) is, at 6.8 %, also above the average of innovation-driven countries (5.0%).

The following figures correlated the TEA rate to the perceived opportunities, perceived capabilities and fear of failure for the selected innovation-driven economies. The early-stage entrepreneurial activity (TEA) correlates strongly and positively with capabilities (Figure 7) and perceived opportunities (Figure 6). The results show Switzerland's lower correlation regarding the TEA rate compared to countries like the United States or Canada.

Figure 6:

Correlation of Perceived Opportunities with the level of TEA, 2014

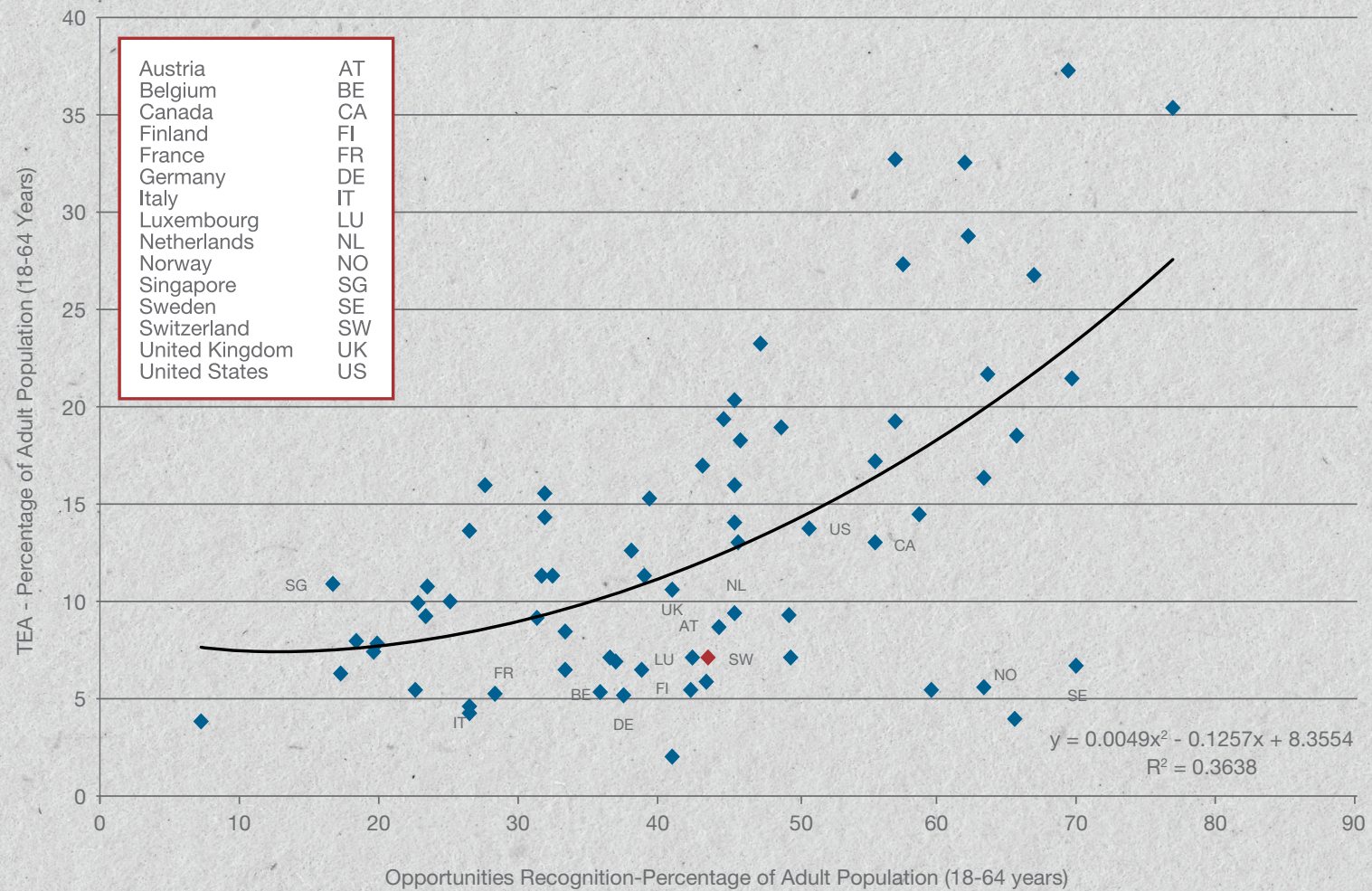


Figure 7:

Correlation of Perceived Capability (skills) with the level of TEA, 2014

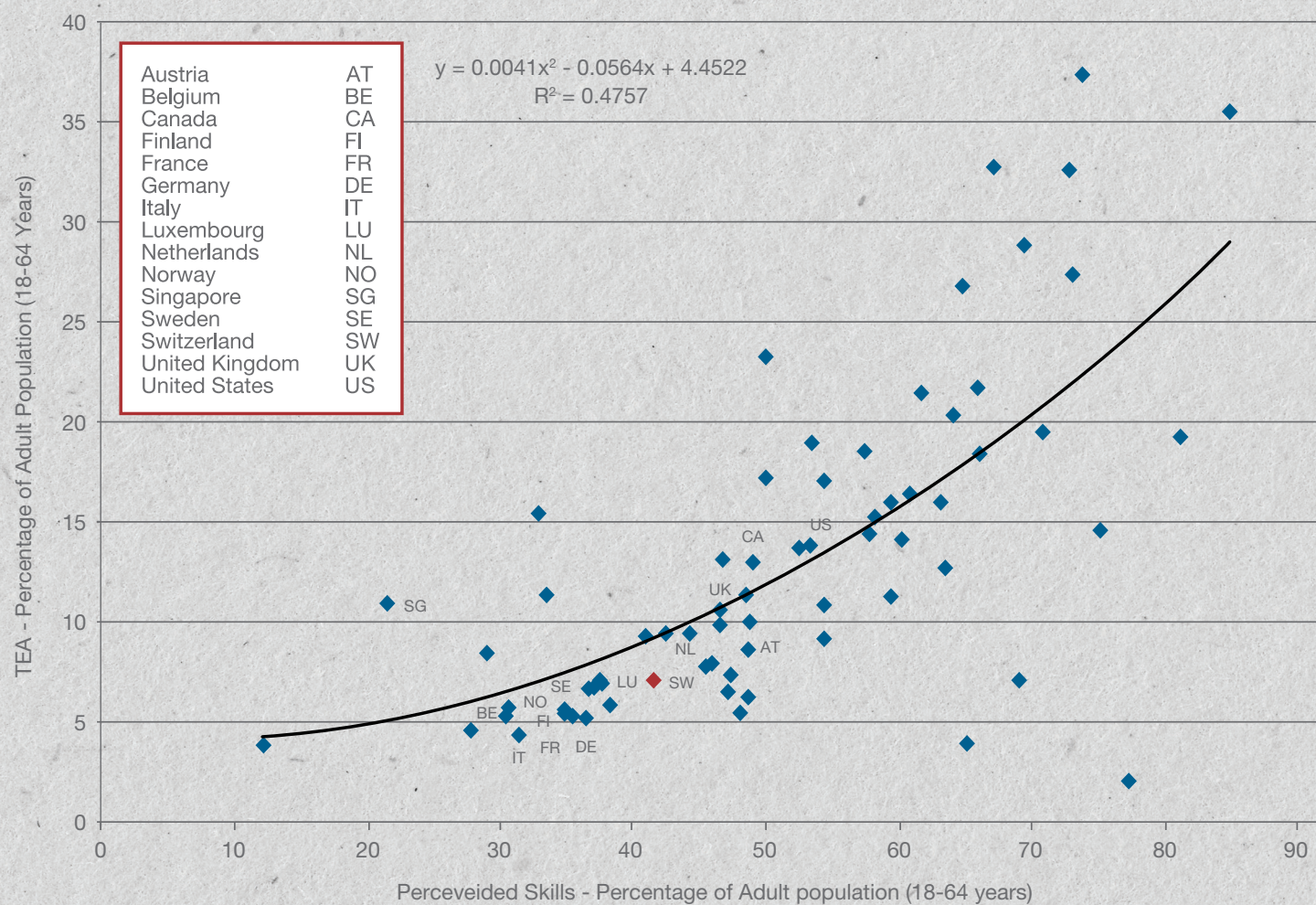
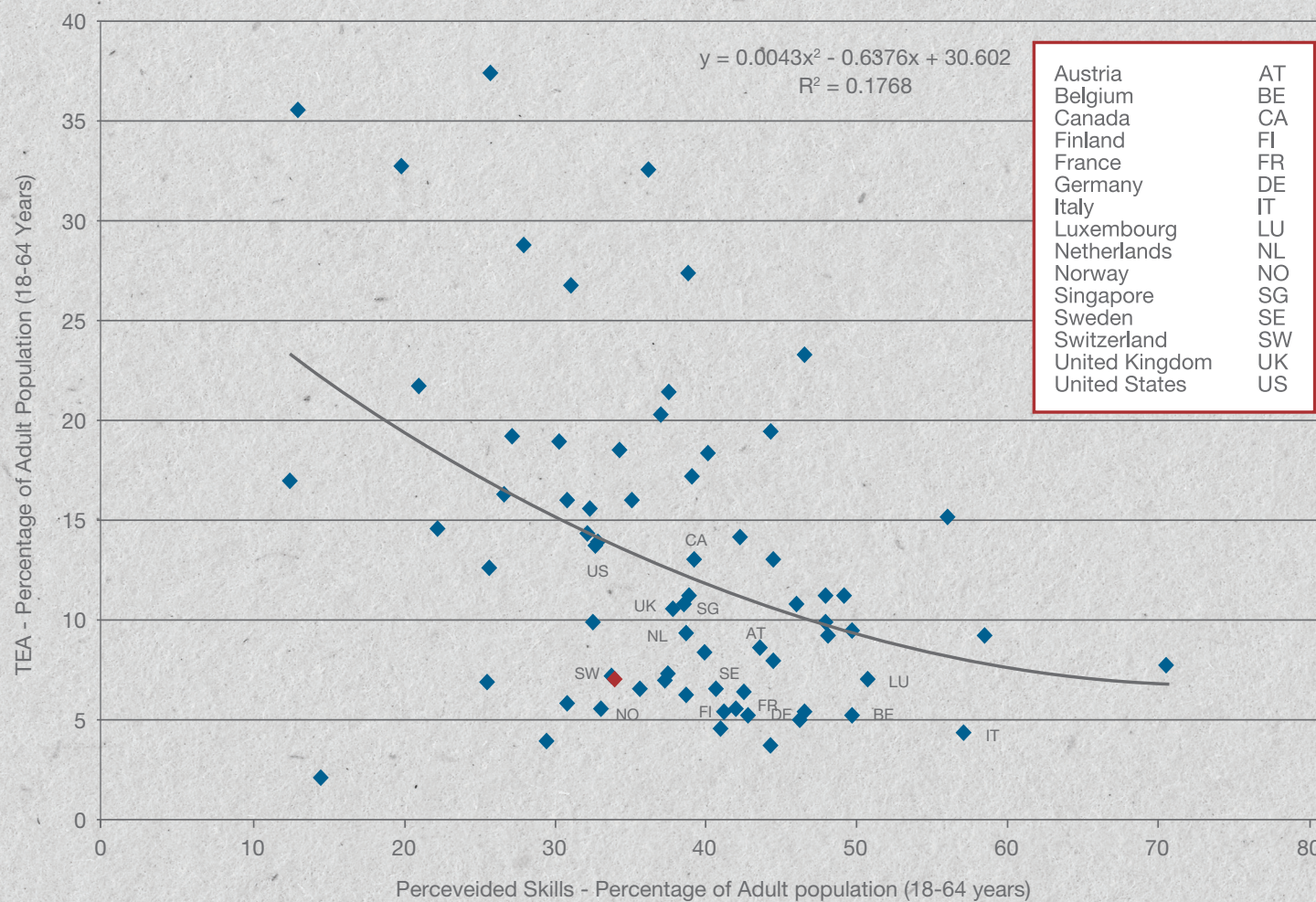


Figure 8:

Correlation of Fear of Failure with the level of TEA, 2014

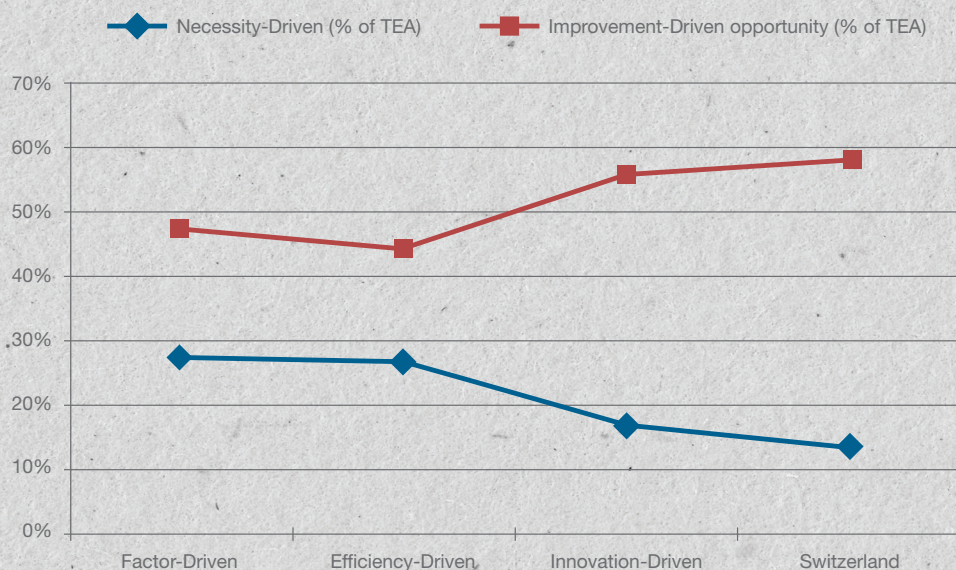


Fear of failure and early-stage entrepreneurial activity correlate negatively but the correlation is not strong, as is shown in Figure 8. Accordingly, the relationship between a low level of fear of failure and TEA is unproven, especially for Switzerland, and other approaches to increasing entrepreneurial activity should be examined.

Other factors affect the entrepreneurial activities, such as the labor market situation and social values towards entrepreneurs and entrepreneurship. These considerations are interesting because the fear of failure in the French part of Switzerland differs significantly from the German part.

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 differentiating between 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 who indicate that they see an opportunity to improve their livelihoods and thus their motivation is linked to either earning more money or being more independent, as opposed to maintaining income.

As figure 9 shows, entrepreneurs in factor-driven economies are driven only slightly less by necessity as compared to 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 9:**

Percentage of Early-Stage Entrepreneurs motivated by Necessity and Improvement-Driven Opportunity, 2014

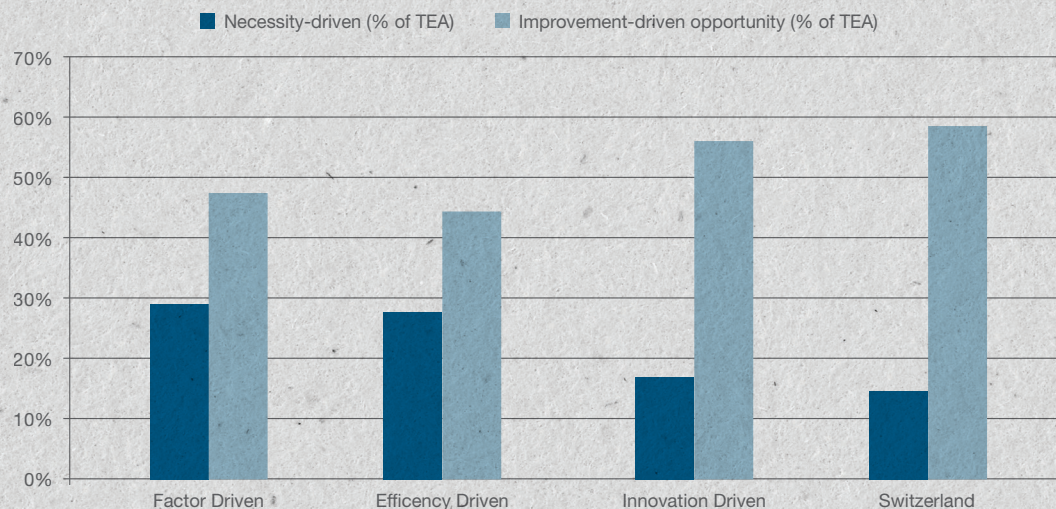


Figure 10:
Percentage of Entrepreneurs motivated by Necessity and Opportunity by Phase of Economic Development and Switzerland



2.2.3 Established Business Ownership

While it is important to have early-stage entrepreneurs to generate 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 2014 (Figure 11) than in 2013. It is notable that the proportion of early entrepreneurial activity and established business remained almost the same as in 2012 and 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.

◀ **Figure 11:**
TEA Rates and Established Business Rates from 2003-2014 in Switzerland

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.

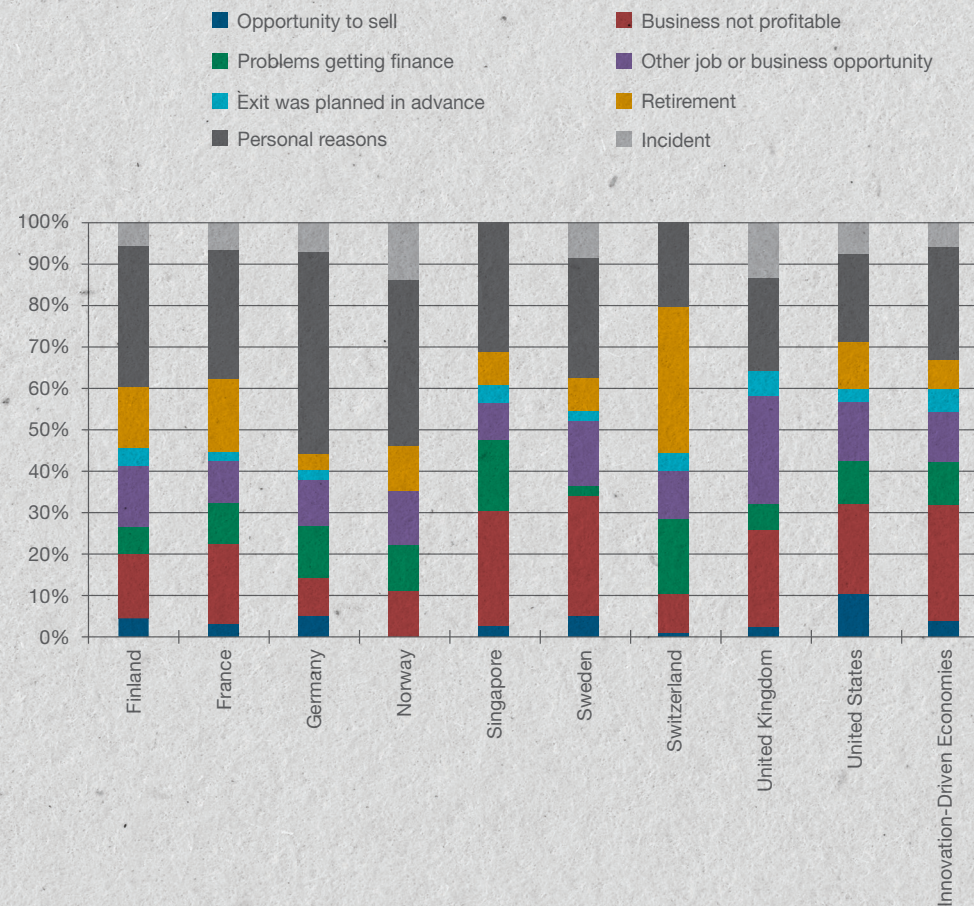
Financial difficulties and unprofitable businesses are considered 'negative' reasons for abandoning a business. In Switzerland, these two reasons account for 28% of business discontinuance. 18% of all businesses were stopped due to financial reasons in Switzerland. Figure 12 shows that the average for innovation-driven countries is lower in all countries and in Finland, Norway, and Sweden finances are a less important reason for stopping a business. 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 16.1% (compared to 40% in 2013) of all discontinuations in Switzerland. The opportunity to sell the business as the reason to discontinue merits attention. In 2014, 14% of businesses that ceased trading were sold (Figure 12), compared to 9% in 2011 and 12% in 2012. Among innovation-driven economies, Switzerland has the highest number.

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 2014 reveals that retirement is an important reason why 35.2 % of all businesses were stopped in the last 12 months. On average one of five entrepreneurs stopped their business due to personal reasons. Personal reasons have higher importance especially in Germany (49.5%), Finland (34.6%) or Norway (32.4%).

Figure 12:

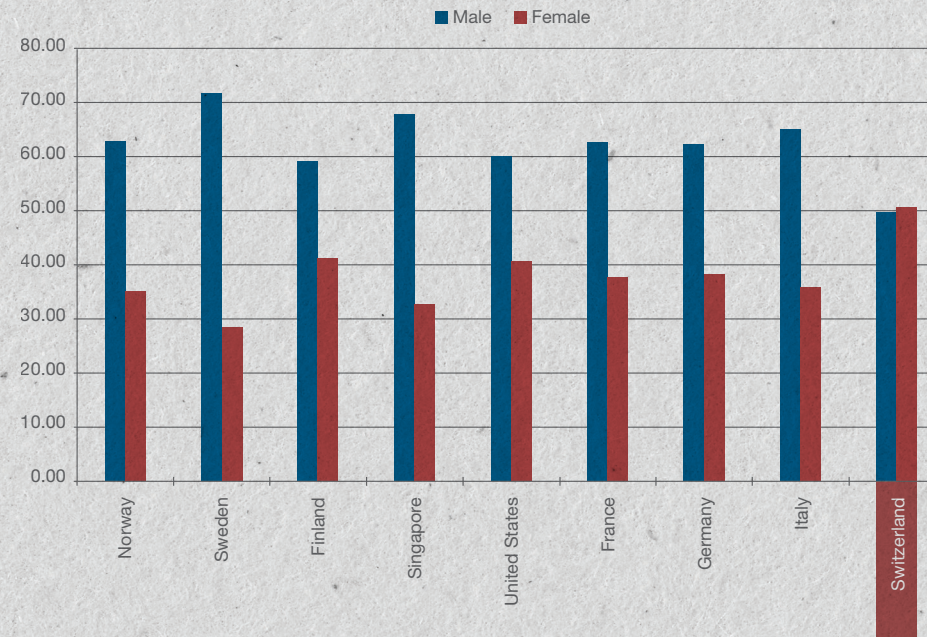
Reasons for Discontinuing a
Business, selected Innovation-
Driven Countries, 2014



2.2.5 Box: Women's Participation in Entrepreneurship

Not only do structure and nature of entrepreneurial activities vary across countries or over time, but gender, too, plays a determining role in such activities (Acs et al., 2008). 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, 2015). However, as a global trend, the number of females engaged in entrepreneurial activity is historically lower than for their male counterparts in most countries, 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 majority is obvious.

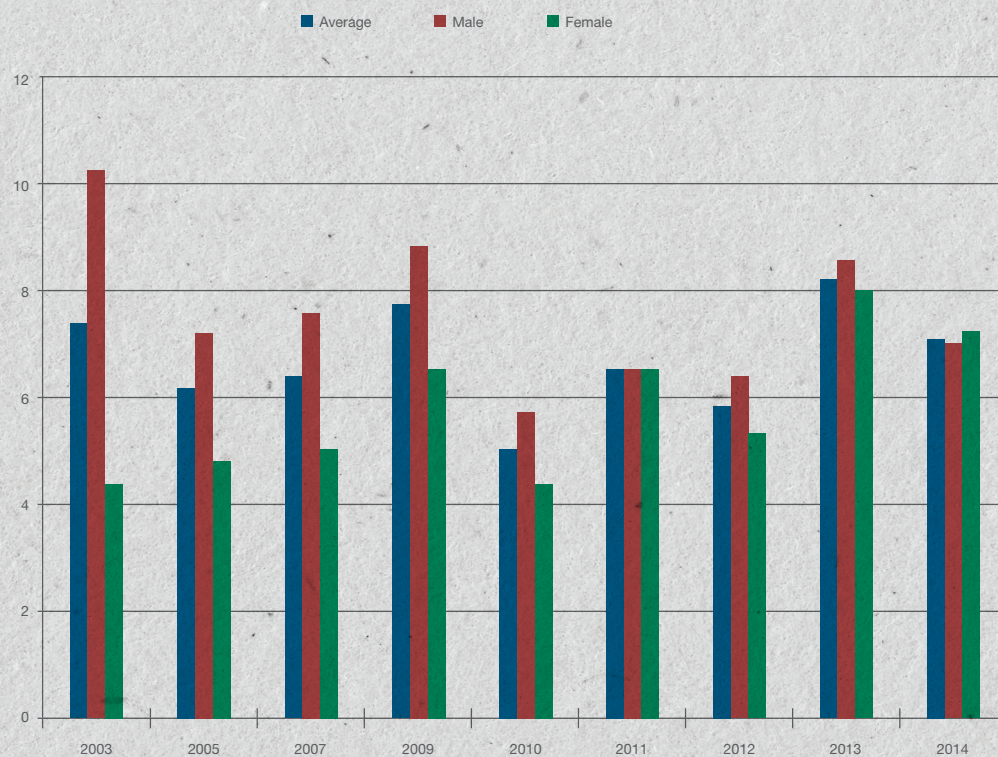
Figure 13:
Male and Female Early-Stage
Entrepreneurial Activity 2014
in selected Innovation-Driven
Economies



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, Northern Europe and the USA. In addition to 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 contributions to economic growth, such as job creation and the increased GDP that the global economy urgently needs (OECD Report, 2014). This category also includes Switzerland, which is very good news for this innovation-driven economy.

Currently, 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, Austrian and even U.S. economies (Figure 13 and 14). In other words, whereas the female-to-male ratio in Sweden or Singapore is 1:2, the ratio in Switzerland is 1:1.

In 2003 founding activity in Switzerland was still predominantly male, but this has become increasingly balanced over the last four years. The result of female entrepreneurship in Switzerland is remarkable because the portion of companies set up out of necessity is significantly lower than in other countries. This can be interpreted, on one hand, as a sign of women's strong position in economic activities combined with growing socio-economic equality, and on the other, as an indication of Switzerland's positive overall economic situation.



A further reason could lie in the above-average quota of working women (79.1%) and the high proportion of part-time work (59%) on an international scale (Eurostat 2015). To maintain or raise the level of entrepreneurial activities carried out by women as far as possible, it is absolutely crucial to expand social support systems and encourage acceptance and promotion of women as entrepreneurs. Efforts of this kind require a change in society, and therefore also long-term goals.

Figure 14:
Relation Male and Female Early-Stage Entrepreneurial Activity in Switzerland, 2003-2014

3 Impact – Growth, Innovation, and Internationalization

Entrepreneurship is increasingly perceived as playing a vital role in economic development (Wennekers & Thurik, 1999) (Minniti & Lévesque, 2008). Indeed, entrepreneurship is instrumental in generating, adopting, and disseminating innovative ideas and projects, more competition among firms, more productivity, not to mention job creation – all of which helps economic growth. This chapter looks at entrepreneurial aspirations. Quite a few studies have been seeking to identify and quantify the socio-economic variables behind entrepreneurial aspirations, as well as the motivational, behavioural and personal factors that make a firm grow. Over the years, researchers have gradually come to realise that aspirations matter because they have a different impact on the development of a territory, whether a region or a nation (Autio, 2007). For instance, in some countries, job creation is mostly the result of a small number of enterprises inspired by strong ambitions and growth aspirations. Over half a century ago, Penrose (1959) was already stressing the extent to which human decisions and motivations mattered to the growth process of an organisation. Corporate growth, essentially, depends on the will of managers and entrepreneurs to catch any opportunities arising and make the most of them. The

GEM provides a measure of the impact of entrepreneurship through the aspirations of entrepreneurs. In particular, it measures their growth expectations in terms of jobs, innovation (mainly product- and services-oriented) and international orientation. These forms of entrepreneurial aspiration have indeed been positively associated with the economic development of a nation or a region (Bosma & Schutjens, 2011).

3.1 *Growth Orientation*

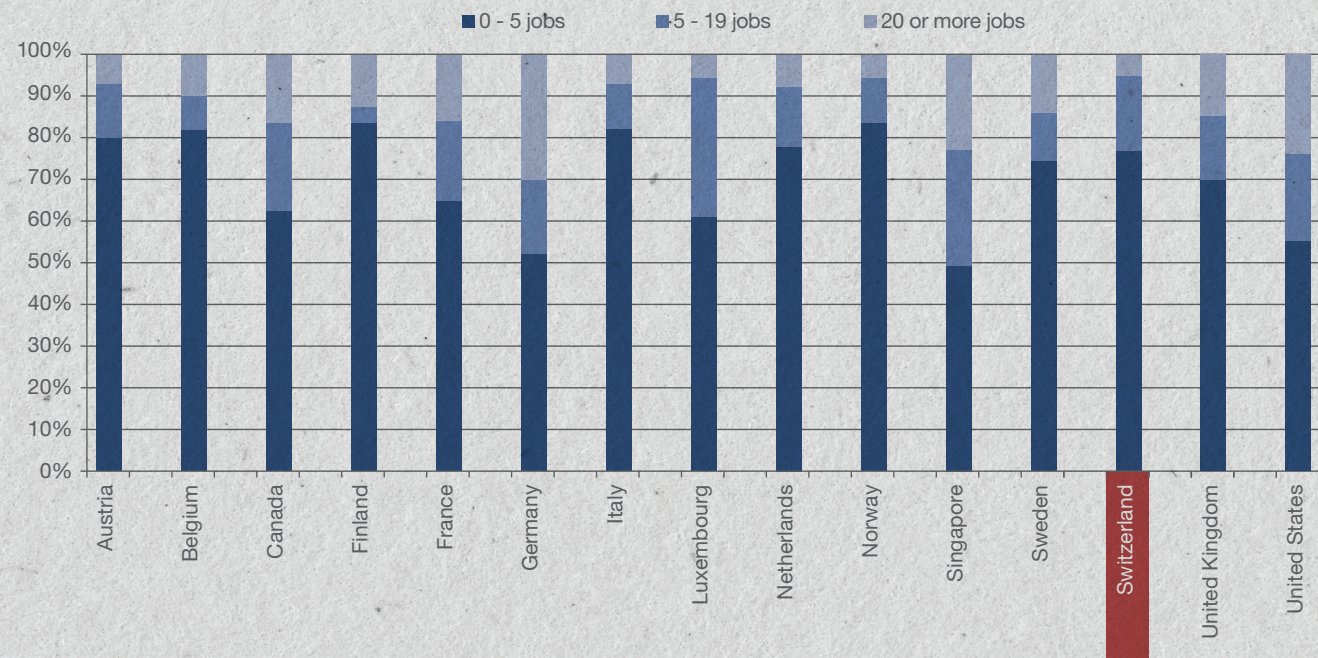
Entrepreneurship contributes to creating new jobs and it is estimated that in the last ten years, in OECD countries, new businesses have accounted for between 1% and 6% of employment (OECD, 2010). High-growth companies play a particularly relevant role, especially considering that 10% of these companies, which started out as small- and medium-sized enterprises (SMEs), have helped to create 50%-60% of new jobs over a five- to ten-year period. Entrepreneurs (defined according to the GEM criteria) were asked to indicate their payroll totals at the time of the survey and the payroll totals they expected in five years' time. Figure 15 illustrates the total early-stage Entrepreneurial Activity (TEA) sorted by growth expectations in terms of job numbers.

Switzerland's TEA, at 7.1% for 2014, is made up as follows: nearly 77% are entrepreneurial activities with low growth expectations, with a rise in workforce headcount of 5 at most over the next five years. About 18% are average-growth activities (5 - 19 jobs) and the remaining 6% are activities with an estimated headcount increase of 20. Compared to 2013 data, we notice an increase in activities with medium-to-high growth expectations. For this

year, however, these expectations have turned out to be generally lower compared to competitor countries. Leaving aside the United States and Singapore, which are characterised by a high percentage of high-growth expectation activities, 24% and 23% respectively, the figures registered in Switzerland are about 8-10 percentage points lower.

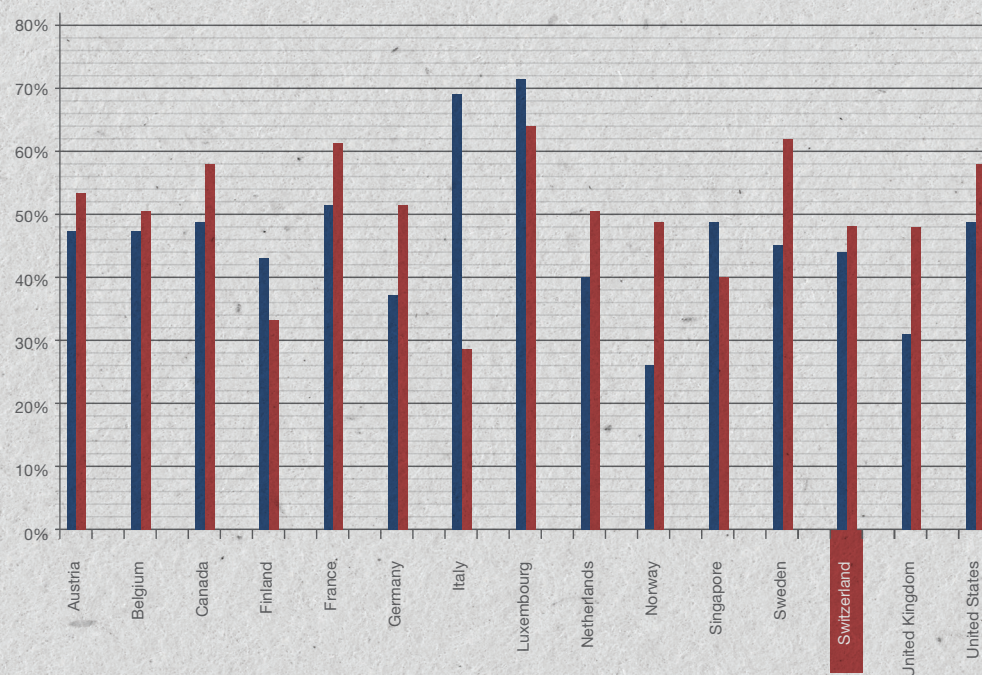
Figure 15:

Job Growth Expectations for
Early-Stage Entrepreneurship
Activity (in selected Innovation-
Driven Economies)



3.2 *Innovative Orientation*

Firms are more and more confronted with emerging and disruptive technologies, with changes in the socio-economic and political context, and with alternative business models (Christensen, 1999). The life-cycle of products is shrinking; consequently, time-to-market is decreasing, too. What we are witnessing is a form of cross-influence between diverse disciplines and sectors (Goodier, Austin, Soetanto, & Dainty, 2010), which can give rise to truly radical innovation. Against this backdrop, innovation, in all of its forms (product/service, process, organizational, on the markets, in the business model) and typologies (incremental, radical, unhooking, social), is a necessary condition for the survival and the competitiveness not only of the enterprise, but for the entire national economic system. To borrow Haour's phrase, "Innovate or Evaporate" (Haour, 2004). Figure 16 shows the percentage of early-stage entrepreneurs oriented towards innovation. Two gauges have been used: the percentage of early-stage enterprises (TEA) claiming to have introduced a new product or service for some or all their customers, and the percentage of enterprises, still early-stage (TEA), with a market innovation.

**Figure 16:**

Percentage of Total Early-Stage Entrepreneurial Activity, New Product Market Combination
(in selected Innovation-Driven Economies)

The findings for Switzerland are slightly lower than the average recorded for European Union countries. The percentage of firms having launched a product/service innovation stands at 43.5%, while the average for European Union countries is 47%. Likewise, in market innovation, Switzerland comes up a little under the European average of 50%, which is in fact a slightly better figure than in 2013. As shown in the triennial survey of innovative processes conducted by the Swiss Economic Institute (of the Federal Institute of Technology, Zurich), the proportion of Swiss firms having introduced an innovation has remained relatively unchanged over the past two periods surveyed (ETH-KOF, 2014). An increase in innovative capacity seems to be observed only for high-tech firms. Although, the GEM survey ranks Switzerland within the average. Switzerland has ranked top in terms of competitiveness and innovation, as shown by the Global Competitiveness Index and the Global Innovation Index.

3.3 *International Orientation*

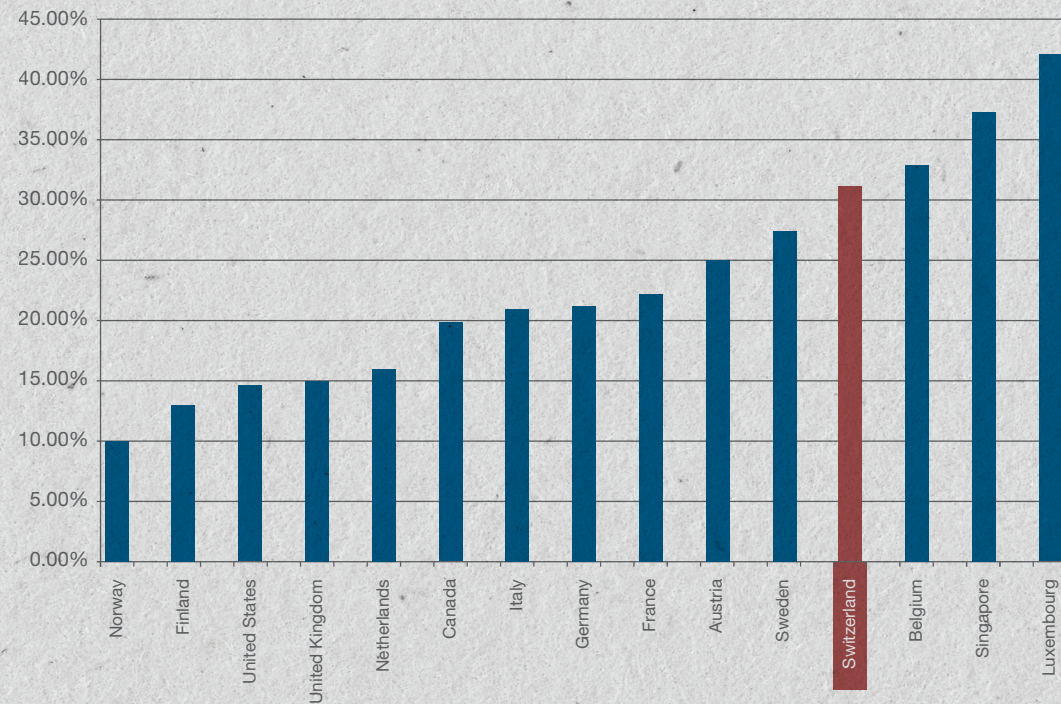
Over the years, internationalisation has become an exciting research topic in the disciplinary area of international management (Covin & Miller, 2014). In particular, researchers have tried to look into and understand the modalities with which enterprises explore and make the most of opportunities for entrepreneurship and business in foreign markets. Internationalization is being viewed as one of the major factors of growth for a company (Sapienza, Autio, George, & Zahra, 2006). The GEM measures the degree of internationalization based on the share of customers outside the country of origin. In the international comparison, international orientation of early-stage enterprises in Switzerland appears to be high, as shown in the following figure 17.

The share of early-stage entrepreneurs with at least 25% foreign clients is 31% in Switzerland, one of highest rates within innovation-driven countries. Compared to the year before, moreover, Switzerland has recorded an increase of 3 percentage points, which puts it back to its 2012 levels. In general, economies with small domestic markets tend to value internationalization far more than economies with large domestic markets. On the road to internationalization, firms (either newly set up or consolidated) can encounter several hurdles. Several of these hurdles are domestic and include: limited information in identifying

and analysing foreign markets, insufficient managerial time to devote to the international market, shortage of capital to fund exports, lack of experience in discovering business opportunities abroad, shortage of human resources and inadequate training devoted to the internationalization process, and ineptitude in contacting potential customers and consumers (OECD, 2009). Hence, here lies the importance of facilities, organizations, and agencies which assist and assure their support during the internationalization process. One such agency is Swissnex, a network overseen by the State Secretariat for education, research and innovation (SEFRI), whose aim is to promote and provide firms, and academic and research institutes in Switzerland with alternative guidance and support. Another is Switzerland Global Enterprise, which offers its backing to export-oriented small- and medium-sized Swiss enterprises and facilitates the construction of networks between firms, know-how holders and organizations worldwide.

Figure 17:

Percentage of TEA with more than 25% of Customers from abroad (in selected Innovation-Driven Economies)



4 *Entrepreneurial Framework Conditions*

Entrepreneurial Framework Conditions (EFCs) assess the climate which defines inputs and outputs of entrepreneurial activity. The GEM model 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 EFCs and are illustrated and described in Table 3 below. 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 the Swiss entrepreneurial environment. The responses are measured on a 5-point Likert scale where a score of 1=completely false and 5=completely true.

-
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 support 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) and,
 - 4b. Entrepreneurship Education at post-secondary levels (higher education such as vocational, college, business schools, etc.).
 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.** This EFC 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.
-

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 indicate that the expert regarded the factor as somewhat negative for entrepreneurship. Table 3 displays the assessed values of the nine EFCs in Switzerland as well as the values of selected innovation-driven countries (benchmark economies) 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. Experts evaluate Switzerland's financial environment for entrepreneurship and innovation positively (3.23/5), especially compared to other benchmark economies: only Singapore (3.56/5) and Belgium (3.38/5) offer a better financial framework. For further improvement, experts emphasize the potential in leveraging the existence of considerable economic capital (equity) in the Swiss Banking Industry and other corporate programs to promote the start-up scene in the country. 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. Historically, this framework requirement is valued positively in Switzerland. This year Switzerland also lies clearly above the average of all innovation-driven economies; however, Swiss experts see a potential for improvement in bureaucracy, especially reducing the amount of administrative processes for founding new enterprises. 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 government programs to support new and growing firms positively (3.48/5). Here, only Singapore (3.68/5) and Austria (3.58/5) have comparatively higher ratings. As for the potential area for improvement, experts make a point of emphasizing the necessity of higher coordination both among cantonal initiatives, and also between cantonal and federal initiatives. 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. Here, Switzerland is ranked above the average of innovation-driven economies; however, this is one of the EFCs that experts see major potential for improvement. The experts

criticize the lack of attention that is given to leadership, creativity, innovation & entrepreneurship in primary and secondary education. This is also the case for other innovation-driven economies and not only pertinent to Switzerland, as only Denmark (3.10) and Singapore (3.02) have ratings above 3 in this EFC. On the other hand, Swiss experts evaluate the post-secondary education (colleges, university and professional education) more positively. Here, Switzerland (3.42/5) is rated above all other benchmark economies but slightly below Denmark (3.43/5):

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. Experts rate Switzerland quite positively (3.57/5), especially when compared to the benchmark economies; all other innovation-driven economies are rated below three, with the exception of Singapore. 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. Last year (2013), the Swiss value was not topped by any other country in this framework requirement; however this year it is still rated quite posi-

tively (3.51/5) but surpassed by Denmark (3.56/5), Netherlands (3.68/5), and Belgium (3.74/5). Experts see areas of improvement in start-up advisory services (possibly at cantonal level) especially for the first five years of the new ventures. Entry regulation EFC has two components; internal market openness and internal market dynamics. Internal market openness relates to the extent to which new firms are free to enter existing markets and is valued positively for Switzerland. On the other hand, internal market dynamics refers to the level of dramatic change in markets from year to year. This EFC has an inverse scaling, hence smaller values are regarded more positively. The Swiss economy was stable in 2014 without many drastic changes in goods & services in B2B and B2C markets. Experts rate Switzerland at (2.34/5), just slightly higher than Canada (2.31/5) among the benchmark economies. 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 2014, Switzerland ranked among the highest for physical infrastructure (4.45/5) of all assessed countries, just slightly behind Netherlands (4.82) and Denmark (4.49). The cultural and social norms, which describe the encouraging or restraining environment regarding new business

activities, were viewed positively in Switzerland (3.40/5). This EFC seems to be significantly better than in the countries of the comparison group, especially in neighboring countries but it is still considerably lower than the value of the United States (3.75/5) and Netherlands (3.58/5), both of which Switzerland often compares itself too. Experts see huge potential areas of improvement, especially in changing the mindset towards becoming more risk-taking and the developing a society that encourages entrepreneurship, despite the risk of failure. It is suggested that the culture of “celebrating failures” should be instilled, so that failure is seen not as the end of everything but as a good chance for a second try.

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

	1	2a	2b	3	4a	4b
	Financial environ- ment related with entrepreneurship	Government concrete policies, priority and sup- port	Government poli- cies bureaucracy, taxes	Government Programs	Entrepreneurial education at Primary and Sec- ondary levels	Entrepreneurial education at Vocational and Professional levels
Austria	2.51	2.46	2.60	3.58	1.66	3.02
Belgium	3.38	2.62	1.98	2.71	1.95	2.75
Denmark	2.73	3.33	3.31	3.43	3.10	3.43
Finland	2.82	3.17	2.95	2.77	2.28	2.70
France	2.77	2.99	2.96	3.17	1.75	2.92
Germany	2.84	2.93	2.87	3.46	2.13	2.81
Italy	2.55	2.40	1.50	2.08	1.68	2.33
Luxembourg	2.76	3.41	3.22	3.47	2.13	2.90
Netherlands	2.81	2.59	3.13	3.15	2.85	3.17
Norway	2.58	2.49	3.18	3.18	2.48	2.56
Singapore	3.56	3.48	3.98	3.68	3.02	3.34
Sweden	2.63	2.74	2.53	3.00	2.55	2.75
United Kingdom	2.77	2.90	2.33	2.62	2.44	3.02
Canada	3.10	2.50	2.85	2.86	2.32	3.14
United States	2.99	2.69	2.33	2.61	2.21	2.87
Average of all innovation driven economies	2.74	2.69	2.65	2.90	2.19	2.89
Switzerland	3.23	3.08	3.70	3.48	2.56	3.42

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

	5	6	7a	7b	8	9
	R&D level of transfer	Access to professional and commercial infrastructure	Internal market dynamics	Internal market burdens	Access to physical infrastructure and services	Cultural and social norms, social support
Austria	2.82	3.40	2.49	3.33	4.12	2.46
Belgium	2.99	3.74	2.50	3.19	3.79	2.15
Denmark	2.77	3.56	2.43	3.44	4.49	2.82
Finland	2.61	3.20	3.23	2.72	4.25	2.76
France	2.73	3.06	3.02	2.34	4.04	2.14
Germany	2.75	3.34	2.84	2.81	3.82	2.65
Italy	2.18	2.83	3.50	2.61	2.92	2.22
Luxembourg	2.98	3.50	2.76	3.05	4.04	2.56
Netherlands	2.88	3.68	2.85	3.40	4.82	3.58
Norway	2.78	3.42	2.59	2.64	4.43	2.86
Singapore	3.17	3.23	3.42	3.04	4.45	3.16
Sweden	2.65	3.28	3.13	2.80	4.25	3.07
United Kingdom	2.20	2.95	3.28	2.73	3.54	2.83
Canada	2.57	3.49	2.31	2.95	4.28	3.28
United States	2.64	3.12	3.30	2.67	3.98	3.75
Average of all innovation driven economies	2.64	3.18	2.94	2.79	3.99	2.82
Switzerland	3.57	3.51	2.34	2.97	4.45	3.40

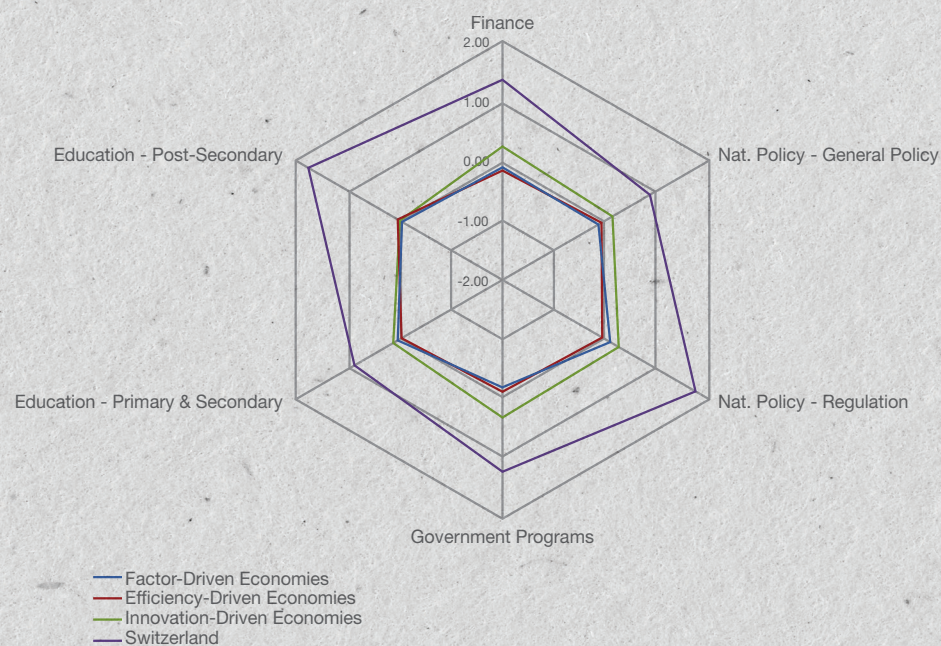
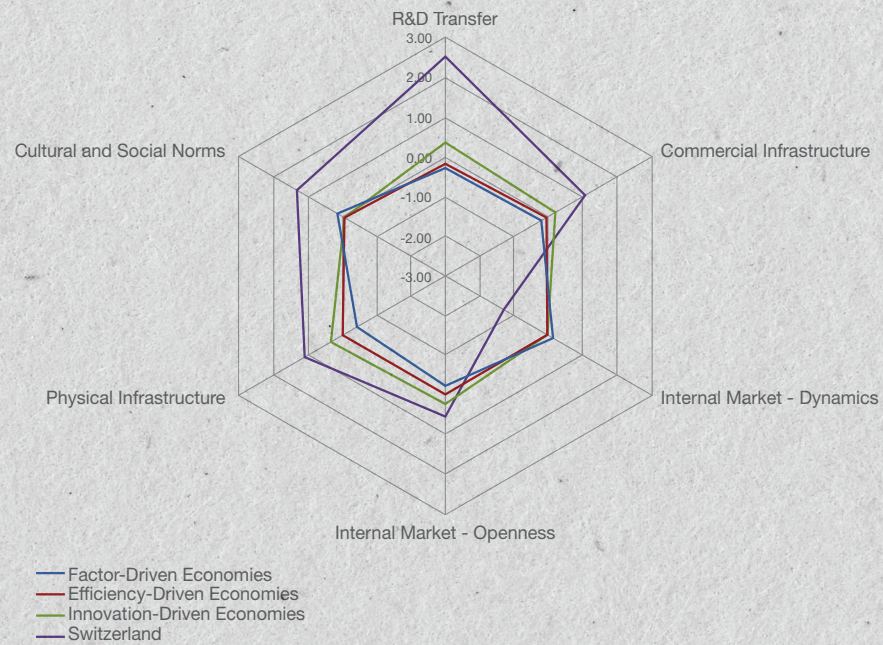


Figure 18 clearly shows that, when compared to all three groups of economies, experts emphasize the EFC in primary & secondary education, and the necessity of early leadership and entrepreneurship training as a major area of improvement. On the other hand, Figure 19 shows Switzerland's clear edge in the EFC with regard to research & development, which could be leveraged by instilling the culture of risk-taking and supporting entrepreneurial activities: these, experts believe, are still very closely linked to creating awareness of entrepreneurship in the early years of education.

Figure 18:

Composite indicators on Entrepreneurship Framework Conditions, by stage of development compared to Switzerland

Figure 19:
Composite Indicators on
Entrepreneurship Framework
Conditions, by Stage of
Development compared to
Switzerland¹



¹Note: Values of indicators are based on averaging the Z-scores (standardized values) for the economies in each of the three phases of economic development. Also, internal market – dynamics is inversely scaled.

5 *GEM Highlights in Switzerland*

5.1 *Regional Differences in Switzerland*

Spacially oriented entrepreneurship research is a topic of growing interest for many scholars (Acs et al., 2008; Acs & Storey, 2004; Feldman, 2001). Entrepreneurial decisions and entrepreneurial behavior of individuals as well as the success or failure of a start-up is influenced, besides others, by factors related to the region where the start-up and the individuals are located. This kind of regional impact is often stronger than the national or even continental impact (Acs et al., 2008). Within the global community of GEM researchers, several efforts have already been made to shift from a simple country comparison to a more regional approach. Some studies with GEM data on regional dimensions have been interregional such as the GEM Euro-ace Report, composed of the regions Alentejo and Center in Portugal and Extremadura in Spain. Other efforts have been made to compare entrepreneurship in Global Cities and their related hinterlands (Acs et al., 2008) or a specific region within a country (e.g. specific due to the spoken language and the related culture) such as the Quebec, British Columbia and Ontario reports in Canada. For Switzerland, comparative investigations on the en-

trepreneurial behavior of individuals between the urban and rural areas as well as among the five metropolitan areas of Switzerland (Zürich, Geneva-Lausanne, Basel, Bern and Ticino Urbano; Swiss statistics, 2014) showed no significant results. We think this is due to the fact that the distances between the cities as well as between urban and rural areas are very short and individuals living in a specific area with its own attributes may work in another area with other characteristics. On the other hand we can observe various significant differences between the three main language regions of Switzerland: the Italian-speaking, French-speaking and German-speaking parts.

Table 5:

Individual Attributes and Perceptions of Social Values toward Entrepreneurship in selected Innovation-Driven Economies and Swiss regions in 2014 (% of population aged 18-64)

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
Finland	42,4	34,9	36,8	7,9	41,2	84,4	66,9
France	28,3	35,4	41,2	14,2	59,0	70,4	39,0
Germany	37,6	36,4	39,9	5,9	51,7	79,1	51,4
Norway	63,5	30,5	37,6	5,0	58,2	83,5	
Singapore	16,7	21,4	39,4	9,4	51,7	62,9	79,1
Sweden	70,1	36,7	36,5	8,5	51,6	70,9	60,3
Switzerland	43,7	41,6	29,0	7,1	42,3	65,8	50,4
Swiss German Region	46,0	42,2	26,7	5,6	36,2	61,1	50,7
Swiss French Region	38,9	40,4	35,8	12,2	58,5	80,9	48,6
Swiss Italian Region	33,4	36,2	32,7	2,9	61,0	61,8	54,5
United Kingdom	41,0	46,4	36,8	6,9	60,3	75,0	58,4
United States	50,9	53,3	29,7	12,1	64,7	76,9	75,8
Average Innovation Driven Economies (unweighted and without CH regions)	38,8	42,0	37,8	12,3	55,1	68,2	60,3

* fear of failure assessed among those seeing opportunities

** Respondent expects to start a business within three years; currently not involved in entrepreneurial activity.

Table 5 shows the variables regarding individual attributes and social values related to entrepreneurship of the three language regions in comparison with other innovation driven economies. Here we can observe that the Swiss German individuals indicate a higher perception of business opportunities and their fear of failure is much lower not only within Switzerland but for most of the other economies. For 2014, 46% of the Swiss-German workforce indicated that they see good opportunities to start a business within the next 6 months in the area they live. With this value, they are way ahead of the Swiss French (38.9%) and the Swiss Italian (33.4%) population and would be placed in the first third of the innovation driven economies that have an average of 38.8% (see table 20).

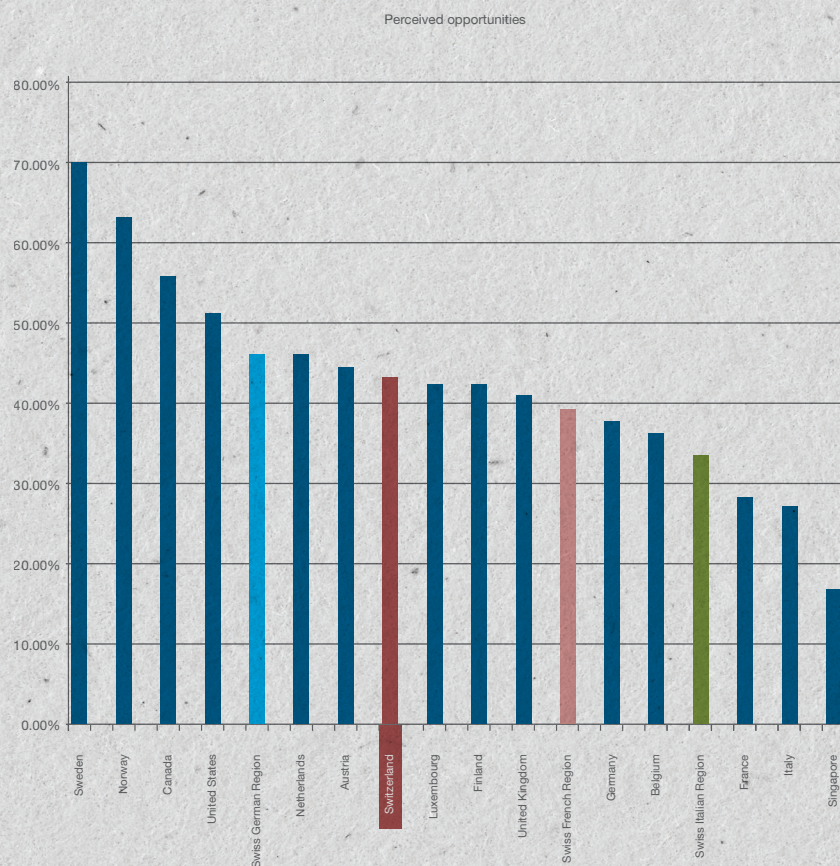


Figure 20:
Perceived Opportunities in
Selected Innovation Driven
Economies and the Swiss
Language Regions

Considering that the fear of a failure does prevent many future entrepreneurs from undertaking their projects, we can state that this indicator is generally low throughout Switzerland but the lowest in Swiss-German parts: among innovation-based economies, only the very distant economies Trinidad&Tobago, Puerto Rico and Qatar indicate an even lower fear than Swiss Germans.

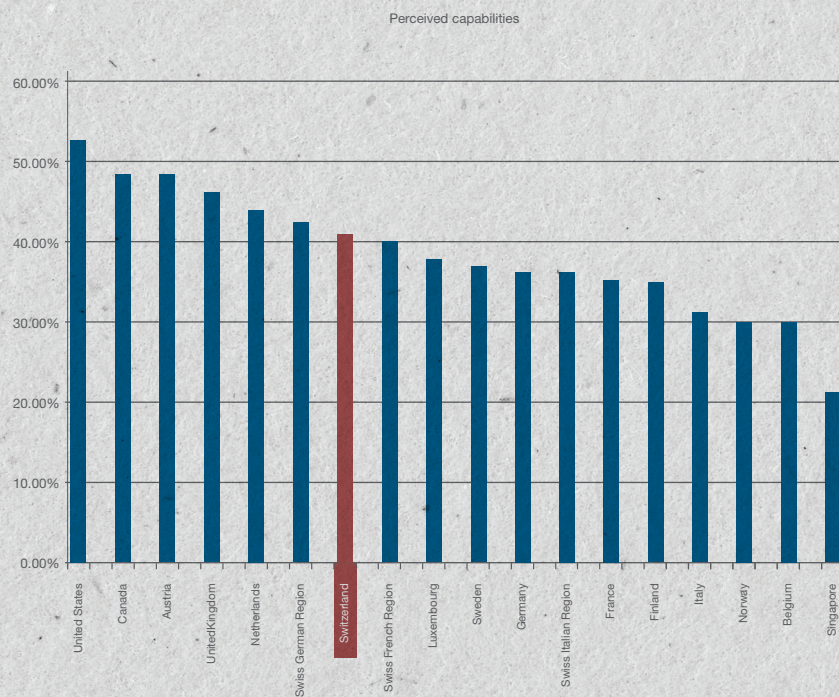


Figure 21:
Perceived Capabilities in
Selected Innovation Driven
Economies and the Swiss
Language Regions

On the other hand, Swiss French and Swiss Italian individuals show above-average social values towards successful entrepreneurs. They indicated that they consider entrepreneurship to be a good career choice and report high entrepreneurial intentions when it comes to mid-term entrepreneurial projects (i.e. starting a business within the next three years).

In order to get more statistical precision, we merged the data from the past three studies (2013-2015). The average across all language regions is set at zero and the standard deviation language regions equals one. By applying this method we can consider any differences between these regions or from the mean zero as substantial.

Figure 22:
Individual Attributes compiled
by 2012-2014 data, Linguistic
Regions in Switzerland

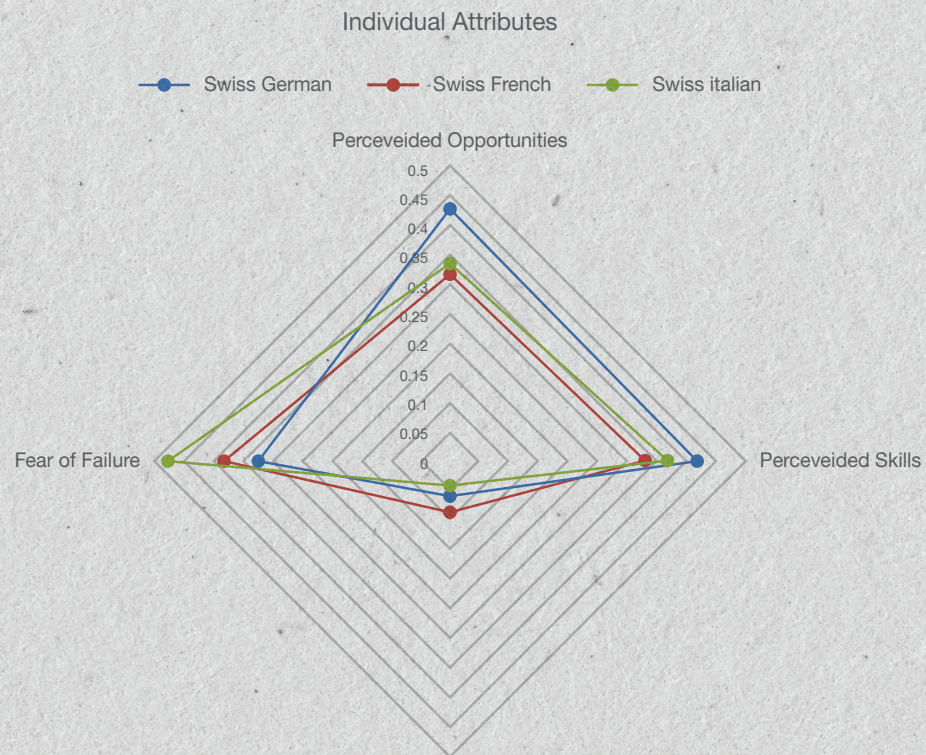
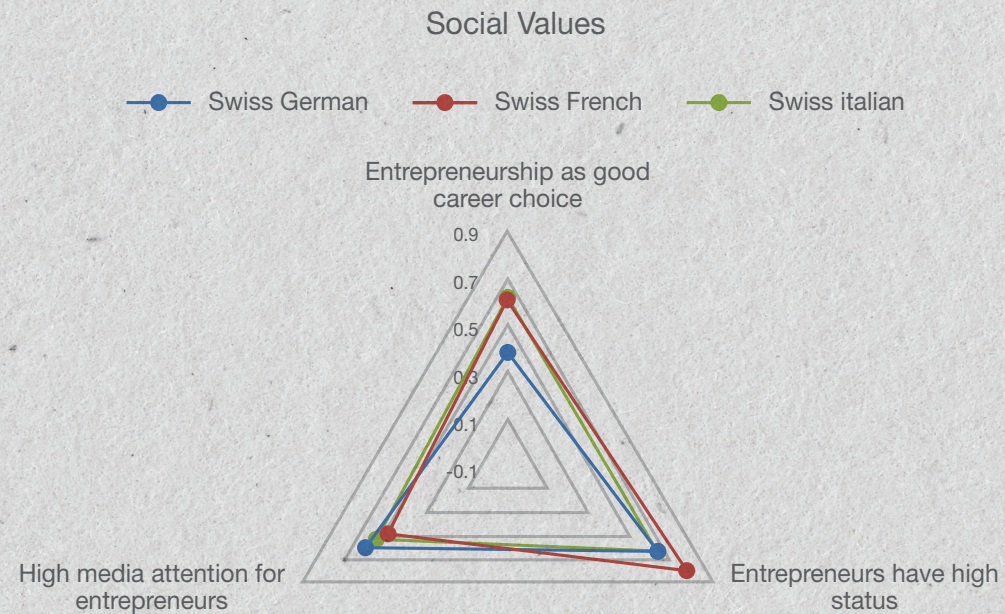


Figure 23:
Perceptions of Social Values
toward Entrepreneurship
compiled by 2012-2014,
Linguistic Regions in Switzerland



With these standardized z-scores we can confirm the immense differences between attitudes and values among the three language regions. Swiss Germans, with a much higher opinion regarding business opportunities and their related skills and knowledge, give massively lower social values towards entrepreneurs and entrepreneurship in general. Swiss Italians and Swiss French give entrepreneurship much higher social values than the Swiss Germans: i.e. they consider Entrepreneurship to be a good career choice, and the Swiss French also think that Entrepreneurs enjoy a high status in the region they live in. Summing up, we can say that the residents of the Swiss German regions have much higher entrepreneurial attributes, especially when it comes to perceiving opportunities in the area where they live. They are also much more confident and think they have the required skills and knowledge to start a company. The fear of a possible failure will not prevent them from doing so. Swiss French and Swiss Italian seem to be very weak in these attributes but give entrepreneurs a much higher social value.

5.2 *GEM Ticino*

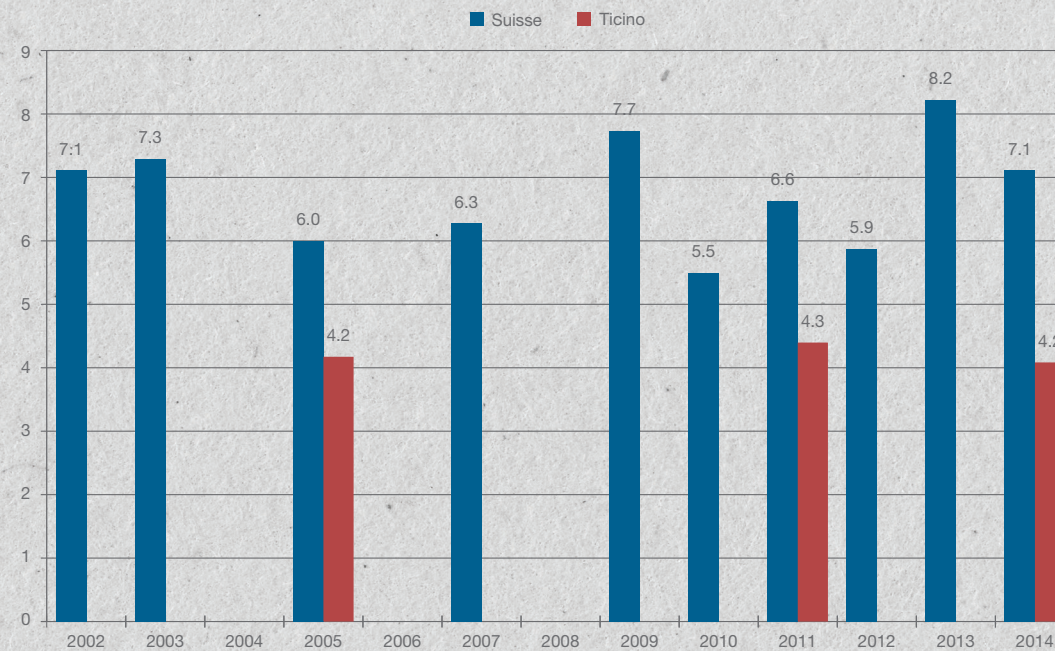
From the Structural Business Statistics of the Federal Statistical Office we gather that in Canton Ticino, in 2011, 32,169 enterprises employed a total of 209,545 employees; nearly three in four of these work in the tertiary sector. Ticino's enterprises make up 7.6% of the nation's total number of businesses, and 4.3% of the nation's payroll total. The branches that define Canton Ticino's economic specialization or vocation, i.e. the branches that employ more people than the National average, include trade (wholesale and retail), construction, the financial sector and, finally, accommodation and catering in the services sector. A recent survey shows that Canton Ticino is a very dynamic region (BAK Basel, 2014). Indeed the number of people employed and the economy of Ticino expanded considerably between 2002 and 2012, compared to the average for Western Europe. A comparison with the Swiss average highlights the fact that payroll numbers in Ticino grew faster, in particular as a result of a powerful influx of cross-border workers from neighbouring Italy. Nonetheless, if we look at labour productivity, its trend in Ticino has performed less well than the Swiss average.

1,130 new firms started operating in Ticino in 2012, generating 2,235 new positions in total (just over 1,600 full-time jobs). Compared with the previous year, these data indicate a strong rise, very much like in the whole of Switzer-

land. The overall trend is positive, a feature that characterizes all the economic sectors of Canton Ticino, with the exception of the financial and insurance sectors. The GEM survey sampled 500 people resident in Canton Ticino: its findings indicate a TEA rate 4.1%, three percentage points lower than for Switzerland (see Figure 24). In the longitudinal analysis, the figure does not vary significantly from previous measurements taken in 2005 and 2011, and where the TEA was 4.2% and 4.3% respectively.

Figure 24:

Rate of TEA, in Switzerland and in Canton Ticino, 2002 to 2014.

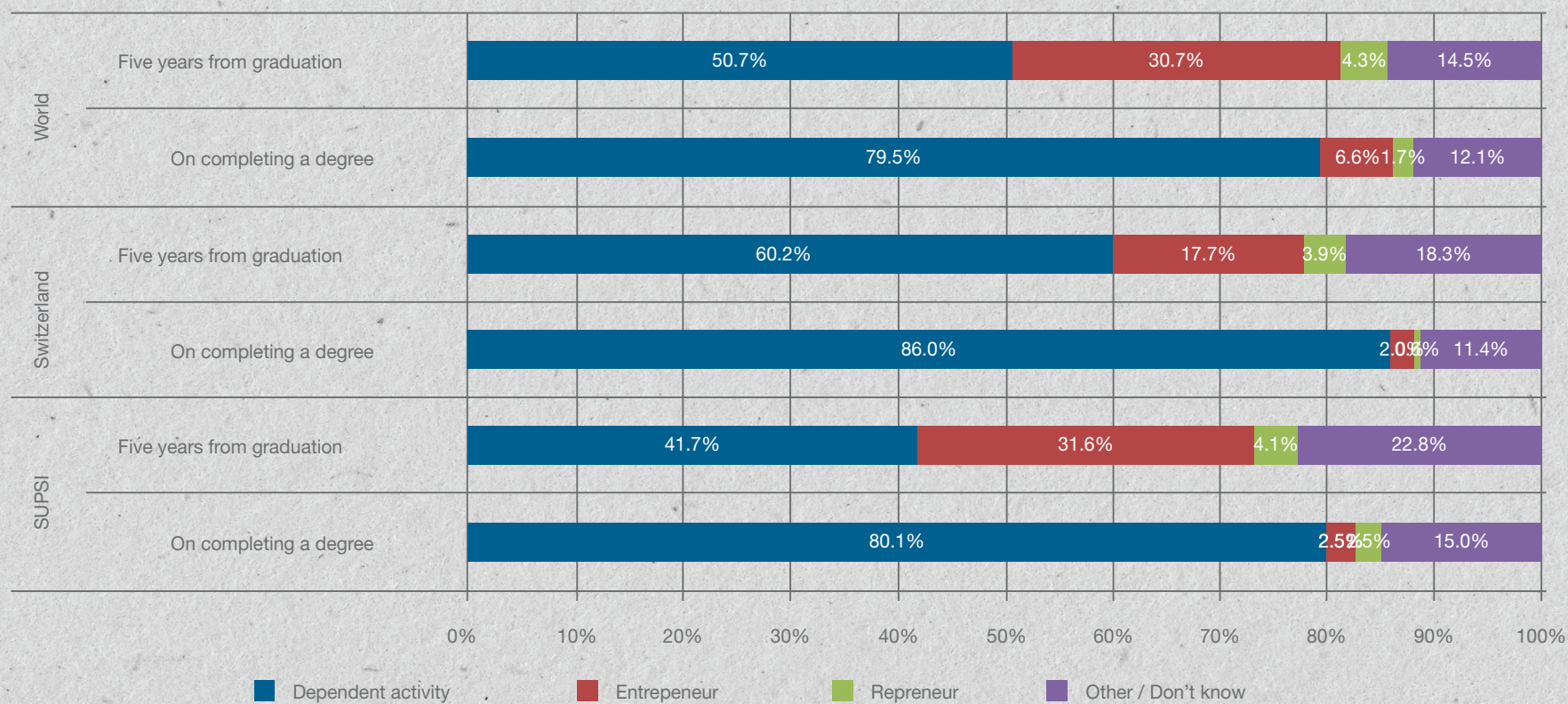


In Canton Ticino, the metrics for the social values associated with entrepreneurship, defined according to GEM criteria, and describing the context where an entrepreneur operates, appear to be in line with the national average, if not higher. What stands out in particular is the role of 'entrepreneurship as a good career choice', with one of the highest rates within innovation-driven economies. This suggests that an awareness has emerged in Canton Ticino, according to which one can be entrepreneurial -- something virtually non-existent until a few years ago. This may be due to the efforts made over the years in Ticino, to assist and support entrepreneurship; equally, it may stem from the awareness that the dependent labour market has been increasingly dominated by tensions, uncertainty, and competition. Despite an apparently favourable environment, and compared with the other regions, the canton still suffers from a relatively limited percentage of people genuinely keen to embark on the entrepreneurial journey. A certain fear still prevails, it seems, at the idea of launching a new entrepreneurial activity, a fear combined with a dread of failure. Given Ticino's current socio-economic climate, characterised by great uncertainty in dependent employment (explanatory factors include the abolition of the minimum Swiss Franc-Euro rate of exchange, as well as the rising number of cross-border workers), we ought to expect, if economic theories are to be believed, an increase in inde-

pendent activities. Not the case in Canton Ticino, yet, where entrepreneurship apparently continues to be underexploited. Nevertheless, if we look at the propensity of university students to pursue an entrepreneurial career, we will discover encouraging signals. This is what a recent study shows, which was conducted in the framework of the international research project Global University Entrepreneurial Spirit Students' Survey/GUESSS (Sieber et al., 2014). The survey is designed to measure, every two years, the entrepreneurial attitudes, activities and intentions of university students in 34 countries and in more than 700 universities. In 2013, SUPSI, Ticino's University of Applied Arts and Sciences, joined this major International project, and did so through its Centre of competence inno3. The results show that approximately 80% of SUPSI respondents, having completed their degree studies, tend to prefer dependent employment. Generally speaking, students will in fact opt for an entrepreneurial career only after they have acquired and secured sound skills and the aptitude needed to build a new entrepreneurial activity, as well as having gained experience in a dependent capacity. 2.5% of (male and female) respondents, however, want to become entrepreneurs, a higher percentage compared to national figures.

Figure 25:

Career intentions of university students on completion of their degree studies and 5 years after graduation, year 2013.



If you examine the percentage of students with a declared intention to become entrepreneurs five years after they graduated, you will see that SUPSI students demonstrate an interesting entrepreneurial attitude. Indeed, 31.6% of respondents declare that they wish to take up entrepreneurship five years after graduating. Figure 25 is well above the national level (17.7%), though in line with data observed at the international level (30.7%). Although these data reveal a certain interest in entrepreneurship on the part of students, there is nonetheless a certain discrepancy between ambitions and actual behaviour. It is a discrepancy that needs looking into if Canton Ticino is to develop the correct policy measures necessary to put it right.

Seeing today's levels of entrepreneurship, constantly below the Swiss average, we may well wonder whether all that has been attempted – financially and humanly – in the last fifteen years to foster entrepreneurship in Canton Ticino has “merely” succeeded in maintaining, or at least not deteriorating further, a situation that was in itself poor and inadequate. Some careful thinking is now in order. There is a need to assess the real impact of instruments and measures for motivating entrepreneurship, developed and implemented over time, not so much for their intrinsic quality or strength (the instruments and measures are the same as those in force elsewhere, in Switzerland and in Europe, though not only), but

rather more in terms of the time needed to implement them. Promoting and boosting entrepreneurship in adults, though admittedly not irrelevant, may be too late. If Canton Ticino wishes to strengthen the spirit of enterprise, it must begin with young people, or even the very young (primary school). The initiatives put in operation in Scandinavian countries in recent years are beginning to yield fruit, and so corroborate the validity of these projects. It would seem crucial not only to prepare the ground for enterprises to be born and grow, but also, and primarily, to disseminate across all levels and kinds of schools an entrepreneurial and innovative culture on which a dynamic economy can be founded. This culture is built on courage, tenacity, perseverance, optimism, creativity, resilience, enthusiasm and the ability to convert ideas into actions. To make sure that this is achieved, fundamentally, the inhabitants of Canton Ticino must endeavour to develop a mental habit grounded in the steady, systemic and systematic management of change, and in solving socio-economic, technological, cultural, environmental, and politico-institutional problems which, by their nature and magnitude, are very complex and will be so in future.

5.3 Youth Entrepreneurship

Rank	Country	18-24 age category within the TEA
1.	Slovakia	24.3
2.	Greece	21.6
3.	Netherlands	18.6
4.	Germany	16.8
5.	United States	14.9
6.	Denmark	14.5
7.	Belgium	13.4
(...) 27.	Switzerland	6.2

Table 6 :
18-24 age Category within the TEA rate (in %) in selected
Innovation-Driven Economies

The CIA World Factbook evaluates the Swiss economy as peaceful and prosperous, with a highly skilled workforce, a low unemployment rate and a per Capita GDP among the highest in the world (CIA World Factbook, 2015). The youth benefit greatly from these favorable economic conditions. While the European Union reports an unemployment rate of between 22% and 24% (Eurostat), the most recent survey in 2013 (Swiss Statistics, youth unemployment) shows Swiss youth unemployment at 3.4%. The country is known for its high quality vocational education system and upper secondary schools with many options to access higher federal diplomas and universities of applied sciences. Furthermore, university fees for Swiss citizens remain relatively low (even for top universities, such as the prestigious ETH Zurich).

Regarding youth entrepreneurship, the country is one of the least active among the innovation-driven economies (see Table 6). Within total entrepreneurial activities, only 6.2% can be allocated to the age category of 18 to 24-year-olds. Only Finland and Japan indicate a lower youth entrepreneurial activity rate than Switzerland. Germany and the United States report more than double as many youth entrepreneurs as Switzerland and also neighboring countries such as France, Austria, and Italy report considerably higher youth activity regarding entrepreneurship. Taking a more dynamic view, this variable shows no trends. For the last five years, about 2% to 4% of the Swiss population in the age of 18 to 24 have been involved in entrepreneurial projects and activities.

Table 7 :

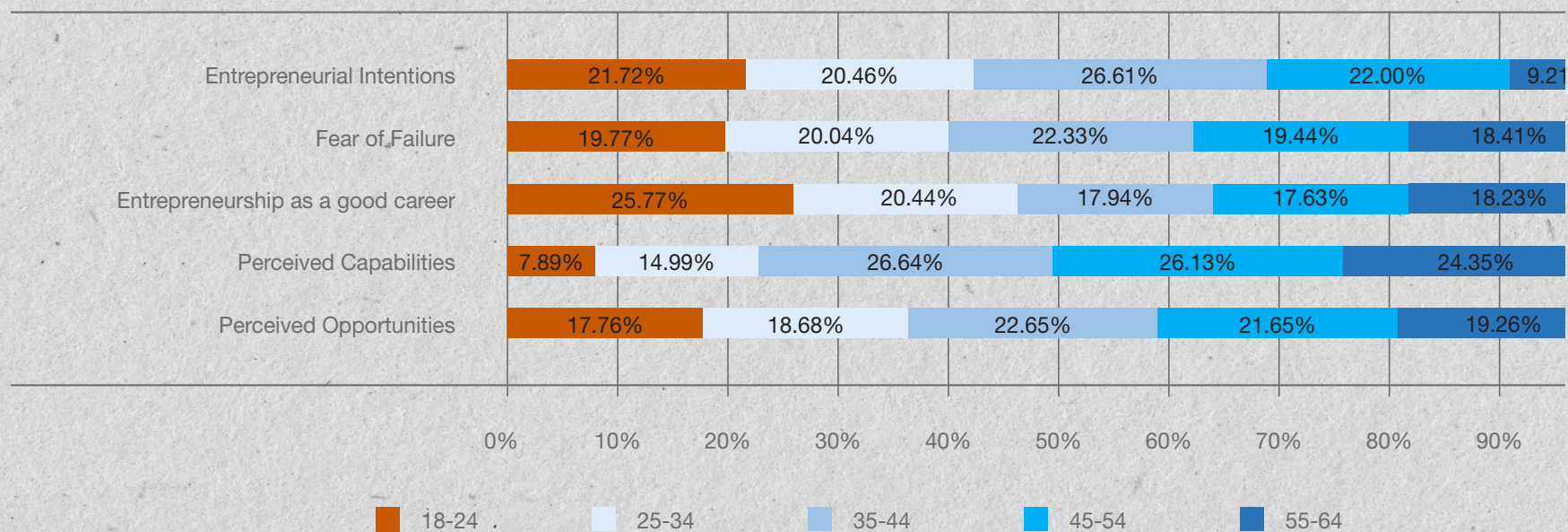
Individual Attributes and Social Values toward
Entrepreneurship from the Age Group 18-24 and the Age
Group 25-64, in Percentage from the Total Population

	Age groups	
	18-24	25-64
Perceived opportunities	38.3%	44.5%
Perceived capabilities	15.5%	45.6%
Entrepreneurship as a desirable career choice	55.9%	40.2%
Fear of failure	34.5%	35.1%
Entrepreneurial intentions	9.5%	8.7%

Why, despite the good economic conditions, are so few young adults willing to undertake entrepreneurial projects? By taking a closer look to the individual attributes and social values towards entrepreneurship we can get a clearer picture. It seems that this young age group, much more than every other age group considers entrepreneurship to be a desirable career choice. Furthermore, the fear of failure reaches its peak much later, between the ages of 35 to 44 (an understandable fact considering that the typical individual at this age has to take on responsibilities for a family and/or a mortgage). On the other hand, perceiving opportunities and having the knowledge, skill and experience to put an idea into practice and start a new business is indispensable for becoming an entrepreneur. This is then presumably the main reason for low entrepreneurial activity among young entrepreneurs. Perceived capabilities to start a business are more than three times higher among the 35 to 44 year-olds than for the 18 to 24 age-group.

Figure 26 :

Individual Attributes toward
Entrepreneurship among the Age
Groups, in Percentage within the
Positive Responses



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GLOSSARY

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 they 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 nascent entrepreneurs, 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
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

	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.
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

Country List

Country / Intcode

Angola	AO	Ecuador	EC	Luxembourg	LU	Sweden	SE
Argentina	AR	El Salvador	SV	Malaysia	MY	Switzerland	SW
Australia	AU	Estonia	EE	Mexico	MX	Taiwan	TW
Austria	AT	Finland	FI	Netherlands	NL	Thailand	TH
Barbados	BB	France	FR	Norway	NO	Trinidad & Tobago	TT
Belgium	BE	Georgia	GE	Panama	PA	Uganda	UG
Belize	BZ	Germany	DE	Peru	PE	United Kingdom	UK
Bolivia	BO	Greece	GR	Philippines	PH	United States	US
Bosnia and Herzegovina	BA	Guatemala	GT	Poland	PL	Uruguay	UY
Botswana	BW	Hungary	HU	Portugal	PT	Vietnam	VN
Brazil	BR	India	IN	Puerto Rico	PR		
Burkina Faso	BF	Indonesia	ID	Qatar	QA		
Cameroon	CM	Iran	IR	Romania	RO		
Canada	CA	Ireland	IE	Russia	RU		
Chile	CL	Italy	IT	Singapore	SG		
China	CN	Jamaica	JM	Slovakia	SK		
Colombia	CO	Japan	JP	Slovenia	SI		
Costa Rica	CR	Kazakhstan	KZ	South Africa	ZA		
Croatia	HR	Kosovo	XK	Spain	ES		
Denmark	DK	Lithuania	LT	Suriname	SR		

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