




**Global
Entrepreneurship
Monitor 2016/2017**

Report on Switzerland 

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The report is available online at www.gemconsortium.org and at www.heg-fr.ch/GEM. All data used in this report are collected and processed centrally by the GEM consortium. The authors have exclusive responsibility for evaluating and interpreting the data.



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..... Management Summary (EN)

The School of Management Fribourg, member of the University of Applied Sciences and Arts Western Switzerland (HES-SO), in collaboration with the ETH Engineering School in Zurich and SUPSI Manno in Switzerland, collected data for the international Global Entrepreneurship Monitor (GEM). 3500 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 2016/2017 Global Entrepreneurship Monitor Report on Switzerland, supported by the State Secretariat for Economic Affairs (SECO), 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

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• Entrepreneurial Attitudes	11 / 132
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Rating of GEM indicators for Swiss entrepreneurs (2016) *

	Switzerland	Average innovation-driven economies
Perceived Opportunities	41.4 %	41.3 %
Perceived Capabilities	43.3 %	43.8 %
Fear of Failure	31.2 %	39.8 %
Entrepreneurial Intentions	7.9 %	15.4 %
Entrepreneurship as a good career choice	38.9 %	57.6 %
Female / Male TEA Ratio	0.48	0.63
Total early-stage Entrepreneurial Activity Rate (TEA)	8.2 %	9.1 %
Necessity-driven (in % of TEA rate)	14.1 %	17.9 %
Improvement-driven (in % of TEA rate)	72.1 %	55.8 %
Entrepreneurial Employee Activity (EEA)	6.1 %	5.1 %
Established business ownership	11.1 %	6.7 %
International orientation (in % of TEA rate)	33.2 %	25.3 %

* Please see glossary for definitions and references



Entrepreneurial Framework Conditions

The overall entrepreneurial framework conditions in Switzerland, along with those in the Netherlands, 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 government programs. Though the experts see the entrepreneurial framework conditions in a fairly positive light, several points for improvement are mentioned:

- Increasing the funding opportunities in each stage of maturity, from seed capital to series financing, e.g. the banking services in Switzerland, which could extend more to the entrepreneurial community.
- Easing bureaucratic procedures in founding new ventures and their taxation policies.
- Streamlining government programs and achieving higher coordination among various programs, such as CTI and SECO.
- Upgrading fiscal incentives for startup investments and adjusted taxation for startups.
- Introducing entrepreneurship as a pedagogical tool, especially in primary and secondary school

levels and developing competency in leadership, creativity, innovation & entrepreneurship.

- Looking at potential improvements in academy-industry collaboration in technology transfer projects, especially with SMEs.
- Improving startup advisory services (possibly at cantonal level) especially in terms of affordability of such services for young firms/entrepreneurs rather than their availability.

Entrepreneurial Attitudes

In the 2016 census, the **perceived opportunities** (41.4%) to start a business are lower in Switzerland than in 2014 and 2015. Nordic countries (such as Sweden and Finland), Israel, Canada, Australia, Netherlands and the United States remain at the top when it comes to available opportunities.

Switzerland shows, as in previous years, a rather **high perception of capabilities** (43.3%) paired with a low **fear of failure** (31.2%). While Switzerland's perception of capabilities is at least as good as the European benchmark, it still lags behind that of United States, Canada or Australia inhabitants'. The findings regarding opportunities and capabilities could be a signal for the higher self-confidence for entrepreneurial behavior in

Switzerland but the results on entrepreneurial intentions are not so positive.

Entrepreneurial intentions of Swiss inhabitants (7.9%) are on a higher level than in 2015 but under the average (15.4%) for innovation-driven economies. Most remarkable are the differences compared to Korea Republic, Canada, Israel, Portugal, Australia or the United States. The findings related to entrepreneurial intentions shows that there is still a lack of entrepreneurial actions in Switzerland and that fear of failure is an ambiguous indicator for entrepreneurial behavior.

Furthermore, in Switzerland only 38.9% see **entrepreneurship as a good career choice** compared to 77.9% in the Netherlands, 68.8% in Portugal, 65.5% in Canada, or 64.2% in Israel. It seems that an entrepreneurial career is still not established well enough in Swiss society.

Media attention for entrepreneurship in Switzerland is below the average for innovation-driven economies, and the difference to countries like Australia, Canada, Finland or the United States is still remarkable.

Entrepreneurial Activity

Switzerland shows a slightly higher potential in 2016 with regard to creating new jobs via young companies

(Total Early-Stage Entrepreneurial Activity, TEA) and like last year, Switzerland's founding rate (8.2%) stands below average among innovation-based economies (9.1%). Although the Swiss TEA rate tends to be higher than in neighboring countries such as Italy or Germany, among the comparison group, only Canada (16.7), Australia (14.6%), the United States (12.6%), Israel (11.3%) and the Netherlands (11.0%) differ considerably.

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 above average compared with other innovation-driven economies** and the results for **owner-manager of an established business** (more than 3.5 years old) are excellent.

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 expresses 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 behavior as early as during compulsory school years?

A look into the industry profile illustrates the obvious emphasis on knowledge and service-based industries in Europe and North America. The most important sectors of new ventures in Switzerland are created in health, education, government and social services (22.2%). In Switzerland wholesale and retail, cover one fifth of all start-ups. In third position in Switzerland are new ventures in personal services (18.1%), followed by entrepreneurs in information and communications technology (ICT) (7.7%).

The impact of entrepreneurial behavior measured through their growth expectations in terms of jobs, innovation (mostly product- and services-oriented innovation) and international orientation are in general positive for their innovative and international orientation. Switzerland demon-

strates, at least in its intent, an exciting dynamism for business activities where employment expectations are higher than six people. At 25%, Switzerland ranks quite respectably among the nations surveyed, preceded only by the United States (34%) and the United Kingdom (28%). Furthermore, compared with the latest survey, there has been an increase of more than 5% in the number of entrepreneurs planning to employ six or more people over the next five years.

Regional entrepreneurial values, attributes and activities

Perceived opportunities seems to be highly linked to the area in which people live. In the German- and French-speaking parts of Switzerland, the perception of opportunities seems to be equally high on a 40% level whereas the Italian-speaking parts, the number of individuals stating that there might be an interesting business opportunity in the area they live is clearly lower. This seems to demonstrate not only a difference between the language regions but also a factor that is influenced by **urban-rural differences**. We can state a significantly higher value in the Swiss metropolitan areas.

In metropolitan areas, almost half of the total population **sees business**

opportunities whereas in peripheral rural areas, not even a third recognizes business opportunities. Hence, in an overall comparison, the population in metropolitan areas is clearly ahead of every other type of region

in terms of opportunity recognition. In relation to the perceived opportunities, entrepreneurial intentions are higher in metropolitan areas and agglomerations compared to rural regions.

Individual attributes, societal values and perceptions according to the major Swiss regions (2016)				
	Lake Geneva	Zurich	Ticino	Eastern-CH
Perceived Opportunities	45.1 %	50.3 %	29.6 %	33.8 %
Perceived Capabilities	42.6 %	49.5 %	47.8 %	42.0 %
Fear of Failure	40.7 %	32.0 %	37.5 %	15.5 %
Entrepreneurial Intentions	11.2 %	7.0 %	8.4 %	5.5 %
Entrepreneurship as a good career choice	60.8 %	31.3 %	63.9 %	32.4 %
High status to successful entrepreneurs	81.3 %	60.3 %	71.0 %	62.8 %



..... Management Summary (DE)

Die Hochschule für Wirtschaft (HSW) Freiburg, Mitglied der Fachhochschule Westschweiz (HES-SO), hat in Zusammenarbeit mit der ETH Zürich und der SUPSI Manno in der Schweiz die Datenerhebung 2016 für den internationalen Global Entrepreneurship Monitor (GEM) durchgeführt. Mittels 3500 Telefon- und 36 Experteninterviews wurden die unternehmerischen Einstellungen, Aktivitäten und Ambitionen ermittelt sowie Einflussfaktoren erhoben, die Art und Ausmass der unternehmerischen Tätigkeiten determinieren.

Der Länderbericht Schweiz des Global Entrepreneurship Monitors 2016/2017, unterstützt vom Staatssekretariat für Wirtschaft (SECO), 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.



Unternehmerische Rahmenbedingungen

Die generellen Rahmenbedingungen der Schweiz und Niederlande 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 öffentliche Programme. Obwohl die Experten die Rahmenbedingungen mehrheitlich positiv beurteilen, wurden verschiedene Verbesserungspunkte erwähnt:

- Erhöhung der Finanzierungsmöglichkeiten in jeder unternehmerischen Wachstumsphase, vom «Seed capital» bis zur Wachstumsfinanzierung. Die Banken in der Schweiz sollten ihren Service unternehmerfreundlicher ausgestalten.
- Verbesserung administrativer Prozesse bei der Unternehmensgründung in der Steuerpolitik.
- Bessere Koordination kantonaler und eidgenössischer Programme wie der KTI/Innosuisse und des SECO.
- Unternehmertum als Ausbildungsthema vor allem auf Ebene der Primar- und Sekundarschule um Kompetenzen in Leadership,

Kreativität, Innovation und Unternehmertum zu entwickeln.

- Verbesserung von Beratungsdienstleistungen für Start-ups (vor allem auf kantonaler Ebene), wobei nicht nur der Zugang der Dienstleistungen, sondern die Bezahlbarkeit solcher Dienstleistungen für Jungunternehmen im Fokus stehen muss.
- Verbesserung der Zusammenarbeit zwischen den Fachhochschulen, Universitäten und der Industrie für Technologietransferprojekte, vor allem im Zusammenhang mit KMU.
- Ausbau fiskalischer Anreize, damit Start-ups mehr investierten; grundsätzliche Anpassung des Steuersystems für Start-ups.

Unternehmerische Einstellungen

2016 waren die **wahrgenommenen Gelegenheiten** (41.4%) zur Unternehmensgründung tiefer als die beiden Jahre zuvor, bleiben allerdings auf dem Niveau (41.3%) für innovationsorientierte Volkswirtschaften. Die Länder Nordeuropas (Schweden oder Finnland), Israel, Kanada, Australien, die Niederlande und die USA befinden sich in der Topposition, was die Wahrnehmung von Gründungsgelegenheiten anbelangt.

In der Schweiz kann wie in vorherigen Jahren eine eher hohe **Wahrneh-**

mung von Fähigkeiten (43.3%) kombiniert mit einer tiefen Angst vor dem Scheitern (31.2%) verzeichnet werden. Während die wahrgenommenen Fähigkeiten in der Schweiz zumindest so gut sind wie der europäische Durchschnitt, liegt die Schweiz nach wie vor hinter den Ergebnissen der USA, Kanadas oder Australiens. Die Erkenntnisse bezüglich Gründungsgelegenheiten und Fähigkeiten können als Signal gesteigerten Selbstvertrauens für unternehmerisches Verhalten interpretiert werden, die Resultate bezüglich unternehmerischen Absichten bestätigten diese These hingegen (noch) nicht.

Die **unternehmerischen Absichten** der Schweizer Bevölkerung (7.9%) sind auf einem höheren Niveau als 2015, aber für innovationsorientierte Volkswirtschaften prägnant unterdurchschnittlich (15.4%) zu veranschlagen. Die Ergebnisse hinsichtlich unternehmerischer Absichten belegen, dass in der Schweiz weiterhin ein unternehmerisches Manko existiert, das nicht durch die tiefe Angst vor dem Scheitern wettgemacht wird. Des Weiteren sehen in der Schweiz nur 38.9% der Befragten **Unternehmertum als gute Karrierewahl**. Dies ist im Vergleich zu etwa den Niederlanden (77.9%), Portugal (68.5%), Kanada (65.5%) oder Israel (64.2%) ein ausgesprochen tiefer Wert. Es

scheint, dass die unternehmerische Karriere in der schweizerischen Gesellschaft schlicht der Attraktivität mangelt. Die **mediale Aufmerksamkeit** für Unternehmertum in der Schweiz ist unter dem Durchschnitt der innovationsorientierten Volkswirtschaften, die Divergenz zu Ländern wie Australien, Kanada, Finnland oder den Vereinigten Staaten ist augenscheinlich signifikant.

Unternehmerische Aktivitäten – Gründungsaktivität in der Schweiz

Die Studie 2016/17 belegt ein leicht gehobenes Potential in Sachen Schaffung neuer Arbeitsstellen vonseiten der Jungunternehmen (**Total Entrepreneurial Activity, TEA**). Ferner liegt die Schweiz wie im vorangegangenen Jahr mit der Gründungsrate (8.2%) unter dem Durchschnitt der innovationsbasierten Länder (9.1%). Obwohl die helvetische TEA-Rate diejenige der Nachbarländer wie Italien oder Deutschland übertrifft, sind markante Unterschiede in der Vergleichsgruppe in erster Linie zu Kanada (16.7%), Australien (14.6%), den USA (12.6%), Israel (11.3%) und den Niederlanden (11.0%) zu konstatieren.

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 Jobserwartungen) sowie dem unternehmerischen Verhalten von Mitarbeitern nichtsdestoweniger vermehrt Aufmerksamkeit geschenkt werden. Die Schweizer Ergebnisse im Bereich **unternehmerischer Mitarbeiteraktivität** liegen über dem Durchschnitt der innovationsbasierten Volkswirtschaften und die Resultate für Inhaber/Manager eines etablierten Geschäfts (mehr als 3.5 Jahre alt) sind exzellent.

Die Erhebung der unternehmerischen Einstellungen untermauert die tiefe Gründungsaktivität der 18- bis 24-jährigen Personen insofern, als diese Altersgruppe Unternehmertum als gute Karrieremöglichkeit betrachtet, relativ wenig Furcht vor dem Scheitern zeigt; nichtsdestotrotz ist diese Altersgruppe nicht von den eigenen unternehmerischen Fähigkeiten überzeugt. Dies kann einerseits ein Indiz für wenig ausgeprägtes Selbstvertrauen sein, weist vielleicht andererseits darauf hin, dass diese jungen Leute nicht unbedingt bereit sind, die Komfortzone der unselbstständigen Erwerbstätigkeit zu verlassen. Es stellt sich die sicherlich nicht unberechtigte Frage, ob in der Schweiz zu spät mit unter-

nehmerischen Anreizen und Ausbildungen gestartet wird. Sollte nicht schon während der obligatorischen Schulzeit fundiert Unternehmmergeist und innovatives Verhalten vermittelt werden?

Ein Einblick in das Branchenprofil illustriert die offensichtliche Betonung der wissens- und dienstleistungsorientierten Branchen in Europa und Nordamerika. Die wichtigsten Bereiche für Neugründungen in der Schweiz sind Gesundheit, Erziehung und sozialen Dienstleistungen (22.2%). In der Schweiz fällt ein Fünftel der Gründungen auf den Handel und die Gastronomie. An dritter Position finden sich Neugründungen in den persönlichen Dienstleistungen (18.1%), gefolgt von Unternehmern in der Informations- und Kommunikationstechnologie (ICT) (7.7%).

Die Auswirkungen von unternehmerischem Verhalten gemessen an den Wachstumserwartungen bezüglich der Bildung neuer Stellen, Innovationen (vor allem Produkt- und Prozessinnovation) und internationaler Orientierung sind mit Blick auf Innovation und Internationalisierung für die nächsten fünf Jahre in global positiv. Die unternehmerisch tätigen Personen demonstrieren zumindest die Absicht und den Willen, ihre Geschäftstätigkeiten auszubauen. 25 Prozent der Start-ups möchten

mehr als 6 Personen einstellen. Dieser positive Befund wird allein von den Vergleichsländern Vereinigte Staaten (34%) und Vereinigtes Königreich (28%) überboten.

Regionale Erkenntnisse über Unternehmertum

Wahrgenommene Geschäftsgelegenheiten scheinen vom Wohn- und Lebensort der betreffenden Personen abhängig zu sein. Vor diesem Hintergrund liefert die Analyse der unternehmerischen Einstellungen nach Sprachregionen interessante Resultate. Die Angst zu scheitern ist in der deutschsprachigen (D-CH) und französischsprachigen Schweiz (F-CH) wie die Wahrnehmung von Geschäftsgelegenheiten mit einem 40%-Niveau

gleich hoch, währenddessen sie in der italienischsprachigen Schweiz (I-CH) klar tiefer ist. Aber nicht nur zwischen Sprachregionen ist der Unterschied augenfällig, sondern gleichermaßen zwischen städtischen und peripheren Gebieten. In Metropolgebieten ist diesbezüglich ein flagrant höherer Wert zu verzeichnen. In Metropolräumen nimmt beinahe die Hälfte der Befragten Geschäftsgelegenheiten wahr, während in **peripheren** Gebieten nicht einmal ein Drittel Möglichkeiten zu erkennen vermag. Die Unterschiede bezüglich der wahrgenommenen Fähigkeiten sind geglättet, Effekte der Sprachregionen sind offenbar nicht zu unterschätzen.

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High status to successful entrepreneurs	81.3%	60.3%	71.0%	62.8%



..... Management Summary (FR)

La Haute école de gestion Fribourg (HEG-FR), membre de la Haute école spécialisée de Suisse occidentale (HES-SO), en partenariat avec l'ETH Zürich et la SUPSI Manno du Tessin, a mené le volet helvétique de l'étude internationale Global Entrepreneurship Monitor (GEM). 3500 entretiens téléphoniques et 36 interviews d'experts ont été réalisés afin d'identifier les attitudes, les activités et les aspirations entrepreneuriales de la population, ainsi que les facteurs de succès déterminant la forme et l'ampleur de l'entrepreneuriat.

Le rapport du Global Entrepreneurship Monitor 2016/2017 pour la Suisse, soutenu par le Secrétariat d'Etat à l'économie (SECO), illustre les différences au sein des différentes régions en termes d'attitudes, d'activité et d'aspirations entrepreneuriales. Il relève également les facteurs qui déterminent la nature et le niveau de l'activité entrepreneuriale nationale. Il permet finalement d'identifier les implications politiques liées à l'encouragement de l'entrepreneuriat en Suisse. Les données du GEM complètent les indicateurs de compétitivité et d'innovation déjà existants.

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* Voir le glossaire pour les définitions et les sources des indicateurs.

Conditions de l'entrepreneuriat

Les conditions pour entreprendre en Suisse et au Pays-Bas sont globalement meilleures que celles qui prévalent dans les autres pays ayant participé à l'étude GEM et dont l'économie est basée sur l'innovation. En

Suisse, les résultats sont excellents dans les domaines de la finance, des infrastructures économiques, de la formation tertiaire, du transfert de connaissances et de technologie, ainsi que pour les programmes gouvernementaux.

Bien que les experts jugent le contexte entrepreneurial comme globalement positif, plusieurs points pourraient encore être améliorés :

- Augmentation des possibilités de financement à chaque étape du cycle de vie d'une entreprise, du capital de départ au financement à long terme. Les services bancaires en Suisse pourraient, par exemple, s'adresser davantage à la communauté entrepreneuriale.
- Facilitation des procédures administratives et de l'imposition fiscale pour la création de nouvelles entreprises.
- Rationalisation des programmes gouvernementaux et coordination plus forte entre les différents programmes de soutien tels que CTI et SECO.
- Amélioration des incitations fiscales pour les investissements initiaux et imposition ajustée pour les startups.
- Considération de l'entrepreneuriat en tant qu'outil pédagogique, en particulier dans les écoles primaires et secondaires. Développement chez les jeunes des compétences en leadership, en créativité, en innovation et en entrepreneuriat.
- Amélioration potentielle de la collaboration entre le milieu académique et l'industrie afin de favoriser les projets de transfert de

technologie, en particulier avec les PME.

- Amélioration des services de conseil aux startups (par exemple au niveau cantonal), en particulier en termes d'accessibilité et de disponibilité de ces services pour les jeunes entreprises/entrepreneurs.

Attitudes entrepreneuriales

En 2016, la **perception d'opportunités** pour démarrer une activité entrepreneuriale (41.4%) est plus faible en Suisse qu'en 2014 et 2015, mais est au niveau de la moyenne des économies basées sur l'innovation (41.3%). Les pays nordiques (à l'instar de la Suède et de la Finlande), Israël, le Canada, l'Australie, les Pays-Bas et les États-Unis restent en tête en ce qui concerne le nombre d'opportunités entrepreneuriales identifiées.

Les Suisses, comme les années précédentes, ont **une perception assez élevée de leurs capacités** (43.3%) associée à une faible peur de l'échec (31.2%). Tandis que la perception de nos compétences est au moins aussi bonne en Suisse que la moyenne européenne, nous restons à la traîne par rapport aux États-Unis, au Canada et à l'Australie. Ce constat devrait concourir à augmenter la confiance en soi des Suisses et

influer sur leur comportement entrepreneurial. Toutefois, les intentions entrepreneuriales en Suisse restent pour l'instant faibles.

Les **intentions entrepreneuriales** de la population suisse (7.9%) se situent à un niveau supérieur par rapport à 2015 (7.0%), mais restent inférieures à la moyenne des économies basées sur l'innovation (15.4%). En effet, la différence est importante entre la Suisse, la Corée du Sud, le Canada, Israël, le Portugal, l'Autriche ou les États-Unis. Les résultats liés aux intentions entrepreneuriales démontrent un manque d'actions entrepreneuriales en Suisse, ainsi que l'ambiguïté de la peur de l'échec en tant qu'indicateur du comportement entrepreneurial d'une population.

Par ailleurs, en Suisse, seuls 38.9% de la population considèrent **l'entrepreneuriat comme un bon choix de carrière**, par rapport à 77.9% de la population aux Pays-Bas, 68.8% au Portugal, 65.5% au Canada et 64.2% en Israël. Il semble qu'une carrière entrepreneuriale n'a toujours pas une aura assez positive au sein de la population helvétique.

Enfin, on constate que **l'attention médiatique** portée à l'entrepreneuriat est moins intense en Suisse qu'en moyenne dans les économies basées sur l'innovation. L'écart est notamment important avec l'Aus-

tralie, le Canada, la Finlande ou les États-Unis.

Activités entrepreneuriales

L'étude 2016 montre un potentiel légèrement plus élevé de créations de nouveaux emplois par les jeunes entreprises (taux d'activité entrepreneuriale des 18–64 ans, TEA). La Suisse, avec un taux de création d'entreprises de 8.2%, se situe, comme l'année dernière, en-dessous de la moyenne des économies basées sur l'innovation (9.1%). Ce taux (TEA) a tendance à être plus élevé en Suisse que dans les pays voisins, tels que l'Italie ou l'Allemagne. Cependant, il diffère considérablement du Canada (16.7%), de l'Australie (14.6%), des États-Unis (12.6%), d'Israël (11.3%) et des Pays-Bas (11.0%).

À l'exception des résultats de l'enquête menée en 2010, le taux d'activité entrepreneuriale (TEA) en Suisse a fluctué généralement entre six et huit pour cent au cours des 10 dernières années. Bien que la caractéristique quantitative 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 aux comportements entrepreneuriaux des employés. Les résultats suisses liés à l'activité entrepreneuriale

des employés sont supérieurs à la moyenne des économies basées sur l'innovation et les résultats pour les propriétaires-dirigeants d'une entreprise établie (depuis plus de 3.5 ans) sont excellents.

Par ailleurs, les données récoltées sur les attitudes entrepreneuriales confirment la faiblesse de l'activité de création d'entreprises des jeunes entre 18 et 24 ans. Ce groupe d'âge considère l'entrepreneuriat comme une bonne opportunité de carrière et manifeste une crainte de l'échec relativement faible, mais n'est cependant pas convaincu de ses propres compétences entrepreneuriales. Ces résultats pourraient être une indication d'un manque de confiance en soi, ou tout simplement que ce groupe d'âge n'est pas prêt à quitter sa zone de confort et son statut d'employé. Deux questions sont ainsi soulevées : les incitations et formations entrepreneuriales sont-elles mises en place trop tardivement en Suisse ? Et doit-on favoriser l'esprit entrepreneurial et un comportement d'innovateur durant les années de scolarité obligatoire ?

Un aperçu des profils industriels nationaux démontre l'importance des domaines de la connaissance et des services en Europe et en Amérique du Nord. Les secteurs qui génèrent le plus grand nombre de nouvelles entreprises en Suisse sont la santé,

l'éducation, les services gouvernementaux et sociaux (22.2%). En Suisse, le commerce de gros et de détail couvre un cinquième de toutes les startups. En troisième position, on trouve les services aux professionnels (18.1 %), suivis de nouvelles entreprises liées au secteur des technologies de l'information et de la communication (TIC) (7.7 %).

L'impact du comportement entrepreneurial, mesuré par les anticipations de croissance en termes d'emplois, d'innovations et d'orientation internationale, est de manière générale positif pour l'innovation et l'internationalisation des entreprises helvétiques. L'impact se révèle cependant plus négatif en termes de création d'emplois.

La Suisse démontre, au moins dans l'intention, un dynamisme intéressant avec des perspectives de création d'emplois supérieures à 6 personnes pour 25% des entreprises naissantes dans un horizon de 5 ans. Dans cette perspective optimiste, la Suisse occupe une position assez respectable parmi les pays interrogés, précédés uniquement par les États-Unis (34 %) et le Royaume-Uni (28 %). Par ailleurs, en comparaison avec la dernière enquête du GEM, on constate une augmentation de plus de 5% du nombre d'entrepreneurs qui déclarent envisager employer six

personnes ou plus au cours des cinq prochaines années.

Caractéristiques des activités entrepreneuriales régionales

En Suisse, la perception d'opportunités entrepreneuriales semble fortement liée à la région dans laquelle on vit. Dans les régions germanophones et francophones suisses, l'identification des opportunités est plus élevée (40 %) qu'en Suisse italienne où moins d'individus affirment distinguer des opportunités de développement d'activités entrepreneuriales. Cette différence n'est pas uniquement une question de région linguistique, mais plus particulièrement de disparités entre les zones urbaines et les zones rurales. La perception d'opportunités

entrepreneuriales est ainsi significativement plus grande pour la population résidant dans les régions métropolitaines suisses.

Dans les régions métropolitaines, près de la moitié de la population voit des opportunités d'affaires alors que dans les régions périphériques, à peine un tiers identifie des perspectives de développement d'activités entrepreneuriales. Ainsi, de manière générale, les Suisses qui résident dans une région métropolitaine sont significativement avantagés, notamment en termes de reconnaissance d'opportunités. De même, les intentions entrepreneuriales des Suisses sont plus élevées dans les zones métropolitaines et les agglomérations que dans les régions rurales.

Individual attributes, societal values and perceptions according to the major Swiss regions (2016)

	Lake Geneva	Zurich	Ticino	Eastern-CH
Perceived Opportunities	45.1 %	50.3 %	29.6 %	33.8 %
Perceived Capabilities	42.6 %	49.5 %	47.8 %	42.0 %
Fear of Failure	40.7 %	32.0 %	37.5 %	15.5 %
Entrepreneurial Intentions	11.2 %	7.0 %	8.4 %	5.5 %
Entrepreneurship as a good career choice	60.8 %	31.3 %	63.9 %	32.4 %
High status to successful entrepreneurs	81.3 %	60.3 %	71.0 %	62.8 %

..... Management Summary (IT)

La Haute école de gestion (HEG) di Friburgo, membro della University of Applied Sciences and Arts Western Switzerland (HES-SO), in collaborazione con il Politecnico (ETH) di Zurigo e la Scuola universitaria professionale della Svizzera italiana (SUPSI) di Manno, si è occupata del rapporto svizzero dello studio internazionale del Global Entrepreneurship Monitor (GEM). 3500 interviste telefoniche e 36 interviste ad esperti sono state realizzate al fine d'identificare le attitudini, le attività e le aspirazioni imprenditoriali della popolazione, nonché i fattori di successo che de-

terminano la natura e la dimensione delle attività imprenditoriali.

Il rapporto svizzero del Global Entrepreneurship Monitor 2016/2017, sostenuto dal Segretariato di Stato dell'economia (SECO), illustra le differenze tra le diverse regioni nelle attitudini, nelle attività e nelle aspirazioni imprenditoriali, rilevando nel contempo i fattori che determinano la natura ed il livello dell'attività imprenditoriale nazionale e le implicazioni politiche relative alla promozione dell'imprenditorialità. I dati GEM integrano i dati già esistenti nei campi della competitività e dell'innovazione.

General Characteristics of Switzerland as a centre for innovation

Rank in Doing Business Index 2017	31 / 190
Rank in Global Competitiveness Index 2016–2017	1 / 138
Rank in Economic Freedom Index 2016	4 / 178
Rank in Global Innovation Index 2016	1 / 128
Rank in GEDI Index	2 / 132
• Entrepreneurial Attitudes	11 / 132
• Entrepreneurial Ability	3 / 132
• Entrepreneurial Aspiration	2 / 132

Rating of GEM indicators for Swiss entrepreneurs (2016) *

	Switzerland	Average innovation-driven economies
Perceived Opportunities	41.4 %	41.3 %
Perceived Capabilities	43.3 %	43.8 %
Fear of Failure	31.2 %	39.8 %
Entrepreneurial Intentions	7.9 %	15.4 %
Entrepreneurship as a good career choice	38.9 %	57.6 %
Female / Male TEA Ratio	0.48	0.63
Total early-stage Entrepreneurial Activity Rate (TEA)	8.2 %	9.1 %
Necessity-driven (in % of TEA rate)	14.1 %	17.9 %
Improvement-driven (in % of TEA rate)	72.1 %	55.8 %
Entrepreneurial Employee Activity (EEA)	6.1 %	5.1 %
Established business ownership	11.1 %	6.7 %
International orientation (in % of TEA rate)	33.2 %	25.3 %

* Per le definizioni e le fonti si veda il glossario.



Condizioni quadro per l'imprenditorialità

In Svizzera, le condizioni quadro per fare impresa, analogamente a quelle dei Paesi Bassi, sono risultate complessivamente migliori rispetto alle economie basate sull'innovazione che hanno partecipato all'inchiesta. La Svizzera ha ottenuto ottimi risultati nel campo finanziario, nell'infrastruttura commerciale, nella formazione terziaria, nel trasferimento di conoscenze e di tecnologia, nonché nei programmi governativi a sostegno dell'imprenditorialità. Anche se gli esperti considerano positive le condizioni quadro per l'imprenditorialità, sono state comunque menzionate alcune criticità e alcuni margini di miglioramento:

- Aumentare le opportunità di finanziamento in tutti gli stadi del ciclo di vita dell'impresa, dal «Seed capital» fino ai finanziamenti a lungo termine. Gli istituti finanziari svizzeri, ad esempio, potrebbero dedicarsi maggiormente alla comunità imprenditoriale.
- Facilitare le procedure amministrative e la tassazione per la creazione di nuove imprese.
- Razionalizzare i programmi federali e rafforzare il coordinamento delle iniziative federali di sostegno, quali la CTI e la SECO.
- Migliorare gli incentivi fiscali per

gli investimenti iniziali e l'imposizione fiscale delle start-up.

- Considerare l'imprenditorialità come strumento educativo-pedagogico, in particolare nelle scuole primarie e secondarie. Sviluppare tra i giovani le competenze di leadership, così come quelle legate alla creatività, all'innovazione e all'imprenditorialità.
- Migliorare il potenziale collaborativo tra il mondo accademico e industriale, al fine di promuovere progetti di trasferimento tecnologico, soprattutto con le PMI.
- Migliorare i servizi di consulenza alle start-up (per esempio a livello cantonale), in particolare in termini di disponibilità e accessibilità dei servizi per le giovani imprese/imprenditori.

Attitudini imprenditoriali

Nel 2016, in Svizzera, la **opportunità percepita** per avviare un'attività imprenditoriale (41.4%) sono più basse rispetto al 2014 e al 2015, ma leggermente al di sopra della media delle economie guidate dall'innovazione (41.3%). I Paesi Nordici (come la Svezia, la Norvegia e la Finlandia), Israele, Canada, Australia, Paesi Bassi e Stati Uniti restano ai vertici per quanto concerne le opportunità percepite.

Come negli anni precedenti, la Svizzera presenta una **percezione sulle**

capacità di fare impresa piuttosto elevata (43.3%), abbinata ad una bassa paura del fallimento (33.8%). Mentre le capacità percepite in Svizzera sono in linea, o anche migliori, rispetto agli altri paesi europei, vi è comunque un certo ritardo nel confronto con gli Stati Uniti. Questi risultati possono essere sintomo di una forte fiducia in sé stessi per quanto attiene il comportamento imprenditoriale. Tuttavia, le intenzioni imprenditori in Svizzera rimangono, per ora, basse.

Le **intenzioni imprenditoriali** degli svizzeri (7.9%) si situano ad un livello superiore rispetto al 2015 (7.0%), ma sotto la media dei paesi guidati dall'innovazione (15.4%). In effetti, la differenza è significativa tra la Svizzera e la Corea del Sud, Canada, Israele, Portogallo, Australia o Stati Uniti. I risultati associati alle intenzioni imprenditoriali degli svizzeri mostrano una certa lacuna imprenditoriale, così come la paura del fallimento risulta un indicatore ambiguo del comportamento imprenditoriale degli svizzeri.

In Svizzera solo il 38.9% dei rispondenti vede nell'imprenditorialità una **buona scelta di carriera**, rispetto al 77.9% dei Paesi Bassi, il 68.8% del Portogallo, il 65.5% del Canada e il 64.2% di Israele. Sembra che la carriera imprenditoriale non sia ancora

vista abbastanza positivamente tra la popolazione svizzera.

Infine, si constata come **l'attenzione dei media** svizzeri per l'imprenditorialità sia inferiore a quanto rilevato per le economie guidate dall'innovazione. Lo scarto risulta importante, in particolare con l'Australia, il Canada, la Finlandia e gli Stati Uniti.

Attività imprenditoriali

Lo studio ha evidenziato un potenziale leggermente più elevato di creazione di nuovi posti di lavoro da parte delle attività imprenditoriali ai primi stadi (Total Entrepreneurship Activity, TEA). La Svizzera, con un tasso di attività imprenditoriale dell'8.2%, si situa, come l'ultimo anno, al di sotto della media delle economie guidate dall'innovazione (9.1%). Questo tasso (TEA) tende ad essere più elevato in Svizzera rispetto ai paesi limitrofi, come Italia o Germania. Tuttavia, differisce considerevolmente dal Canada (16.7%), Australia (14.6%), Stati Uniti (12.6%), Israele (11.3%) e Paesi Bassi (11.0%).

Con l'eccezione dei risultati dell'inchiesta condotta nel 2010, negli ultimi 10 anni il TEA svizzero oscilla tra il sei e l'otto 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 basse,

rispettivamente alte, aspettative di posti di lavoro), così come al comportamento imprenditoriale dei dipendenti. I risultati per la Svizzera nel campo dell'attività imprenditoriale dei dipendenti (intraprenditorialità) si situano al di sopra dei livelli medi riscontrati per le economie guidate dall'innovazione, mentre quelli dei proprietari di imprese esistenti (attive da più di 3.5 anni) sono eccellenti. I dati raccolti sulle attitudini imprenditoriali confermano il basso tasso di attività imprenditoriale tra i giovani di 18–24 anni; questo gruppo di 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 interrogare 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. L'analisi dei settori economici evidenzia l'importanza dei servizi ba-

sati sulla conoscenza per l'Europa e l'America del Nord. I settori che generano il maggior numero di nuove imprese in Svizzera sono la sanità, l'educazione, la pubblica amministrazione ed i servizi sociali (22.2%). In Svizzera, il commercio all'ingrosso e al dettaglio copre un quinto di tutte le start-up. Al terzo posto si trovano i servizi professionali (18.1%), seguiti dalle nuove imprese attive nel settore delle ICT (7.7%).

L'impatto del comportamento imprenditoriale, misurato attraverso le aspettative di crescita in termini di nuovi posti di lavoro, l'innovazione e l'orientamento internazionale, è generalmente positivo per quest'ultimi due fattori, ma meno per quanto attiene l'occupazione.

La Svizzera presenta, almeno nelle intenzioni, una dinamica interessante per quanto concerne la creazione d'impiego superiore a 6 persone nei prossimi 5 anni, con il 25% delle start-up. In questa prospettiva ottimistica, la Svizzera si situa in una posizione di tutto rispetto nel confronto con gli altri Paesi, preceduta solo dagli Stati Uniti (34%) e Regno Unito (28%). Rispetto all'ultima inchiesta GEM, vi è inoltre un aumento di oltre cinque punti percentuali del numero di imprenditori che prevedono di occupare sei o più persone nel corso dei prossimi cinque anni.

Caratteristiche delle attività imprenditoriali a livello regionale

In Svizzera le opportunità percepite sembrano fortemente connesse alla regione in cui viviamo. Nelle regioni svizzere di lingua tedesca e francese, l'individuazione delle opportunità sono più alte (40%) rispetto alla Svizzera italiana, dove un minor numero di individui afferma di percepire le opportunità imprenditoriali. Questa differenza non è solo una questione di regioni linguistiche, ma è anche legata alle disparità tra aree urbane e zone rurali. Le opportunità percepite sono infatti maggiori per gli individui

residenti nelle aree metropolitane svizzere.

Nelle aree metropolitane, quasi la metà della popolazione vede delle opportunità imprenditoriali, mentre nelle regioni periferiche solo un terzo identifica queste opportunità. Ciò significa che gli svizzeri che vivono in un'area metropolitana sono più propensi a riconoscere le opportunità imprenditoriali rispetto a coloro che vivono in altre regioni svizzere. Allo stesso modo, le intenzioni imprenditoriali degli svizzeri sono più elevate nelle aree metropolitane e nelle città rispetto alle zone rurali.

Individual attributes, societal values and perceptions according to the major Swiss regions (2016)

	Lake Geneva	Zurich	Ticino	Eastern-CH
Perceived Opportunities	45.1%	50.3%	29.6%	33.8%
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Fear of Failure	40.7%	32.0%	37.5%	15.5%
Entrepreneurial Intentions	11.2%	7.0%	8.4%	5.5%
Entrepreneurship as a good career choice	60.8%	31.3%	63.9%	32.4%
High status to successful entrepreneurs	81.3%	60.3%	71.0%	62.8%

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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 policy-makers, 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 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 2016, 65 economies participated in the study, collectively representing all regions of the world and a broad range of economic development levels.

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;
- 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.

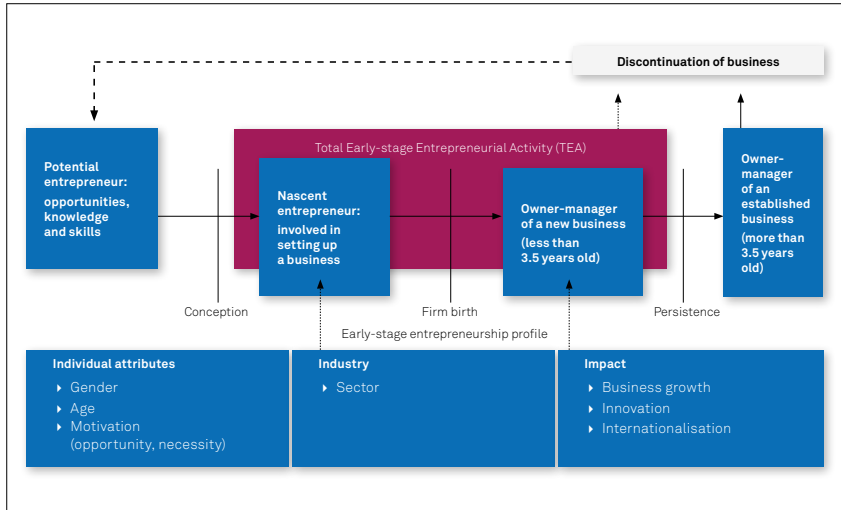
Given that the context and conditions that affect entrepreneurship in different economies are diverse and complex, it is not possible to conclude that one phase inevitably leads to the next. The entrepreneurship process and GEM's operational definitions are illustrated in Figure 1. GEM's conceptualization of entrepreneurship as a multiphase process is useful for assessing the state of entrepreneurship at different points. This process starts with the involvement of potential entrepreneurs – those individuals who believe they possess the capabilities to start businesses, who see opportunities for entrepreneurship, and who would not be dissuaded from doing so for fear of failing. For some potential entrepreneurs, their intentions to start businesses are underpinned by the perceptions society holds of entrepreneurs, the status these individuals enjoy in their society, and whether the media positively represents entrepreneurs.

The next phase is nascent entrepreneurial activity – i.e. those start-

ing 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 re-enter entrepreneurship (serving as serial entrepreneurs) or they may join established companies and enact their entrepreneurial ambitions as employees.

Figure 1 GEM model of business phases and entrepreneurship characteristics



1.3 The GEM Conceptual Framework and Methodology

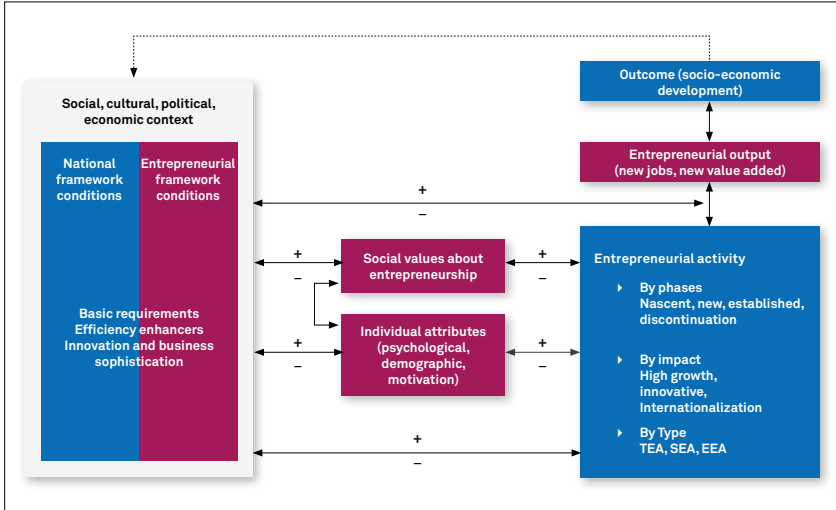
The GEM model shown in Figure 1 sets out key elements of the relationship between entrepreneurship and economic growth and the way in which the elements interact. At the same time, it acknowledges that the contribution entrepreneurs make to an economy varies according to that economy's phase of economic 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. 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 extra-active in nature, while efficiency-driven economies exhibit scale intensity as a major driver of development. At the innovation-driven stage of development, econ-

omies are characterized by the production of new and unique goods and services that are created via sophisticated, and often pioneering, meth-

ods. Together with 26 other countries, Switzerland is included in the group of «innovation-driven» economies.

Figure 2 The GEM Conceptual Framework



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 en-

trepreneurial 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:

- Entrepreneurial finance
- Government policies: support and relevance
- Government policies: taxes and bureaucracy
- Government entrepreneurship programs
- Entrepreneurial education at school stage
- Entrepreneurial education at post school stage

- R&D Transfer
- Commercial and legal infrastructure
- Internal market dynamics

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 GEM conceptual framework 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.

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 and 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 economies. 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 addressing the (socio-) economic impact of entrepreneurial behavior. Of particular interest are those entrepreneurs who expect to create jobs, to be involved in international trade, and/or to contribute to society by offering new products and services.

2.1 Entrepreneurial Attitudes

Fostering entrepreneurial awareness and positive attitudes toward entrepreneurship is high on Switzerland's policy agenda. The idea is that evolving attitudes and perceptions toward entrepreneurship could affect those individuals wishing to venture into entrepreneurship. However, the key factor that determines whether someone progresses to entrepreneurship is not the perception of opportunities for start-ups or of (matching) personal capabilities:

context also plays a role. Factors such as the availability of (good) job alternatives in an economy can make a difference for those who perceive market opportunities and have confidence in their own entrepreneurial capabilities, and help to determine whether they engage in independent entrepreneurial activity or not. So, while in some societies positive attitudes and perceptions toward entrepreneurship may be instrumental in achieving new (high-value) entrepreneurial activities, in many others they are certainly not, on their own, sufficient reason for people to choose to engage in entrepreneurial activity. For example, there may be other excellent options available to individuals. Bearing this in mind, we can see in Table 1 how Switzerland compares in terms of entrepreneurial perceptions and attitudes to other innovation-driven economies in gen-

eral and to the comparison group in particular.

Table 1 reflects the percentage of individuals who believe there are opportunities to start a business in the area they live in. Perceived capabilities reflect the percentages of individuals who believe they have the required skills and knowledge to start a new business. The measure of fear of failure (when it comes to starting your own business) only applies to those 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.

Table 1 Percentage of People with Specific Entrepreneurial Perceptions, Intentions and Societal Attitudes in selected innovation-driven economies, 2016

Selected 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
Australia	49.3	52.3	42.9	12.3	54.2	71.5	74.3
Canada	59.0	54.1	39.0	14.0	65.5	73.5	72.6
Finland	49.1	35.8	37.6	10.4	40.3	83.0	71.4
France	28.6	36.3	40.3	15.7	57.1	69.0	45.2
Germany	37.6	37.4	41.0	6.2	51.8	78.9	50.5
Israel	53.7	41.1	48.7	20.6	64.2	85.5	53.8
Italy	28.6	31.2	49.4	10.1	63.3	69.7	52.3
Korea Republic	35.3	45.1	31.5	27.5	45.3	60.2	67.8
Netherlands	54.3	41.2	37.9	7.4	77.9	60.2	57.3
Portugal	29.5	42.4	38.1	13.3	68.8	63.4	68.8
Spain	25.6	46.7	38.9	5.1	53.7	50.7	49.6
Sweden	78.5	35.5	40.8	8.4	53.6	69.9	62.0
Switzerland	41.4	43.3	31.2	7.9	38.9	66.0	58.3
United Kingdom	42.3	48.0	35.2	9.1	58.8	77.2	61.1
USA	57.3	55.0	33.3	11.7	63.7	74.4	72.4
Average (Innovation-driven economies)	41.3	43.8	39.8	15.4	57.6	69.6	62.2

* fear of failure assessed among those seeing opportunities.

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

In the 2016 census, the **perceived opportunities** in Switzerland (41.4%) to start a business are on the same level compared to the average (41.3%) for innovation-driven economies. While in Switzerland the perceived opportunities have decreased slightly since 2014, the average in the innovation driven countries have increased in the last years (39.8% in 2015, 38.8% in 2014). Canada, the United States, Netherlands, Israel, Australia and Nordic countries (such as Sweden, Finland), remain at the top when it comes to available opportunities.

Switzerland shows, as in previous years, a rather **high perception of capabilities** (43.3%) paired with a low fear of failure (31.2%). While Switzerland's perception of capabilities is as good as the European benchmark, it still lags behind the United States (55.0%) inhabitants' very strong belief in their own capacity to start a business or people in Canada, Australia and Austria. The low fear of failure in Switzerland is remarkable. Normally, fear of failure is higher in the innovation-driven economies than for the factor- and efficiency-driven economies. Fear of failure tends to be more common in developed economies, where the greater prevalence of alternative career options can create the impression that

people have more to lose by forgoing these other opportunities. The impact of the experience of fear on individual cognition and behavior can be beneficial as well as detrimental. Despite this dualistic nature, to date, fear is examined as only a barrier to entrepreneurial behavior. Thus, a low fear of failure is not always directly linked to the creation of new ventures (Cacciotti, Hayton, 2015).

The findings regarding opportunities, capabilities and fear of failure could be a signal for the higher self-confidence for entrepreneurial behavior in Switzerland but the results on entrepreneurial intentions are not so positive. The **entrepreneurial intentions** of Swiss inhabitants (7.9%) are slightly higher than in 2015 but under the average (15.4%) for innovation-driven economies. It is important to mention that the average for innovation-driven economies increased in a significant way last year. Most remarkable are the differences between Switzerland, the Korea Republic, Canada, Australia and two European countries, namely France and Portugal. While in Germany only 6.2% of the individuals expect to start a business in the next three years, almost 27.5% of the individuals in the Korea Republic, 20.6% in Israel, 15.7% in France,

14.0% in Canada, 13.3% in Portugal, 12.3% in Australia and 11.7% in the United States are thinking about setting up a new business.

In the factor-driven and efficiency-driven economies, two-thirds of adults, on average, think entrepreneurship is a good career choice. In the innovation-driven economies, 57.6% have this belief. Only 38.9% in Switzerland see entrepreneurship as a good career choice compared to 77.9% in the Netherlands, 68.8% in Portugal, 65.5% in Canada, 64.2% in Israel or 63.7% in the United States. It seems that the entrepreneurial career is still not established well enough in Swiss society. Media attention for entrepreneurship has increased in Switzerland (2014: 50.4%) and is, at 58.3%, now on the same level as the average for innovation-driven economies.

Two countries from innovation-driven economies (USA, Canada), exhibit high levels on all three indicators, with three-fourths or more of people stating that entrepreneurs receive high status, are represented positively in the media, and that entrepreneurship is a good career choice.

2.2 Entrepreneurial Activities

GEM conceptualizes entrepreneurship as a continuous process that includes nascent entrepreneurs involved in setting up a business, en-

trepreneurs 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 illustrates the entrepreneurial activity by phases of organizational life cycle on the one hand (nascent, new established and discontinuation), and on the other hand by sectors of entrepreneurial activities (early-stage entrepreneurial activity, entrepreneurial employee activity, established business ownership).

In this section, we elaborate on these phases of entrepreneurial activity. Most attention is paid to the situation in Switzerland, its development over the last years, and the comparison with innovation-driven economies.

Table 2 shows a low rate of discontinuation of business (1.8%) in Switzerland and a high-established business ownership rate (11.1%) compared to the average of innovation driven economies. Furthermore, entrepreneurial employee activity is on a higher than average level. Thus, we are quite positive about the situation in the more mature stage of the entrepreneurial process in Switzerland. However, what is the setting regarding early entrepreneurial activity in Switzerland?

Table 2 Percentages of Entrepreneurial Activity in selected innovation-driven economies, 2016

Selected innovation-driven economies	Nascent entrepreneurship rate	New business ownership rate	Early-stage entrepreneurial activity (TEA)	Entrepreneurial Employee Activity (EEA)	Established business ownership rate	Discontinuation of businesses
Australia	8.8	6.2	14.6	9.0	11.3	3.5
Austria	6.0	3.7	9.6	7.3	8.8	3.3
Canada	10.0	6.9	16.7	5.9	6.8	6.3
Finland	4.3	2.7	6.7	5.6	7.3	2.0
France	3.1	2.3	5.3	3.6	4.3	2.1
Germany	2.9	1.7	4.6	5.1	7.0	1.6
Israel	7.0	4.5	11.3	7.3	4.0	4.4
Italy	2.3	2.2	4.4	2.1	5.2	1.2
Korea Republic	3.7	3.0	6.7	2.3	6.6	1.5
Netherlands	5.7	5.4	11.0	7.6	10.2	2.7
Portugal	4.7	3.7	8.2	2.4	7.1	1.9
Spain	2.3	2.9	5.2	2.7	6.2	1.6
Sweden	5.8	1.8	7.6	6.1	4.5	2.8
Switzerland	5.1	3.2	8.2	6.1	11.1	1.8
United Kingdom	5.2	3.7	8.8	7.0	6.1	2.3
USA	8.9	4.0	12.6	7.0	9.2	3.4
Average (Innovation-driven economies)	5.5	3.7	9.1	5.1	6.7	3.0



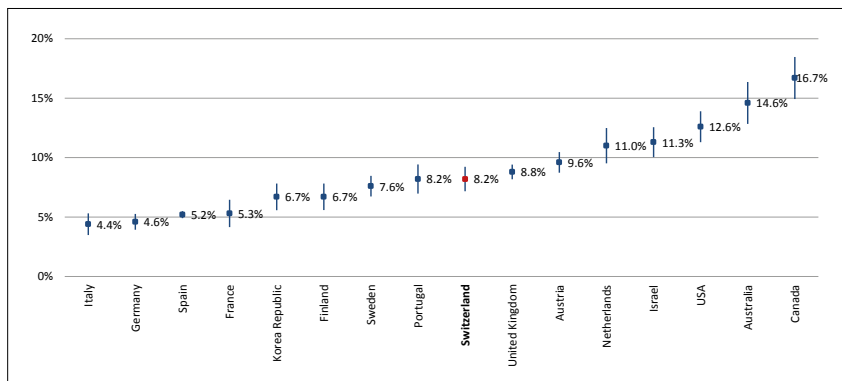
2.2.1 Total Early-Stage Entrepreneurial Activity (TEA)

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 3 presents 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 neigh-

boring countries, such as France, Italy or Germany, only Austria's TEA rate is higher than in Switzerland with regard to adopting a 95% certainty. Among the comparison group, like in 2015, only Canada (16.7%), Australia (14.6%), the United States (12.6%) and Israel (11.3%) 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 of only 5% in 2010, the most important indicator for entrepreneurial activity once more reaches a normal level (8.2%) but below average for innovation-driven economies (9.1%).

Figure 3 Total Early-Stage Entrepreneurial Activity (TEA) in selected innovation-driven economies, 2016



This rebound in entrepreneurial activities in Switzerland is reflected across most of the different age categories (Figure 7). 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.

The share of the Swiss population currently involved in early-stage entrepreneurial activity (TEA) stands at 8.21% in 2016. It is the same high percentage as in 2013, whereby this indicator is usually at a lower level of between 6% and 8%. Since the be-

ginning of the GEM survey in Switzerland in 2002, the 5% level has been measured twice only, namely in 2010 (5.04%) and in 2012 (5.93%).

In general, the percentage of total entrepreneurial activities among the Swiss French and Swiss German populations measures slightly higher than for the Swiss Italians. In 2016, the Swiss Italian entrepreneurial activities rapidly increased. The activities measured in the French-speaking regions of Switzerland also increased to a new peak at a level of almost 10%. At present, we are not able to judge whether this rise in entrepreneurial activities in both the French- and Italian speaking parts of Switzerland, is due to a short-term trend, a statistical deviation for this year, or if it is part of a long-term development. The special case of the Ticino region is part of further discussion in Chapter 5 GEM Ticino.

Figure 4 TEA rates in Switzerland and in the three Swiss regions, 2012 – 2016

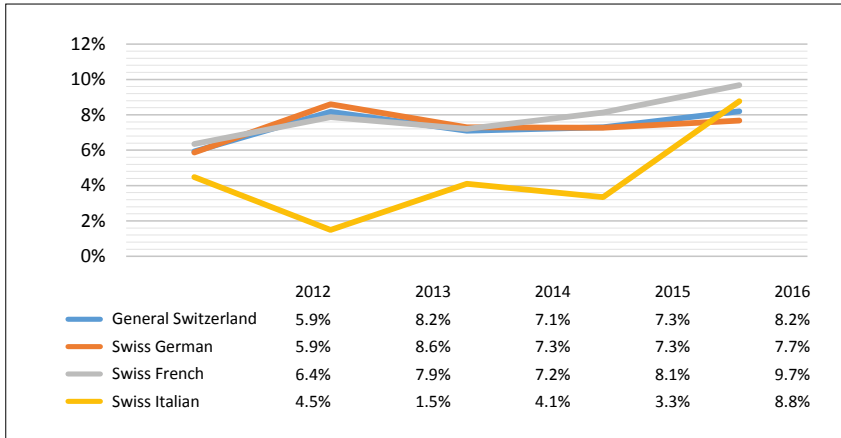


Figure 5 Entrepreneurship as a good career choice in Switzerland and in the three Swiss regions, 2012–2016

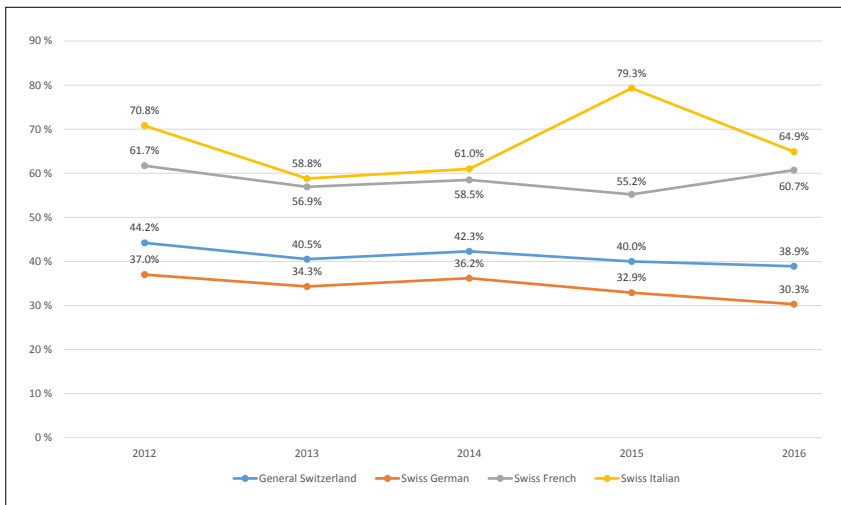


Figure 6 Entrepreneurial Intentions in Switzerland and in the three Swiss regions, 2013–2016

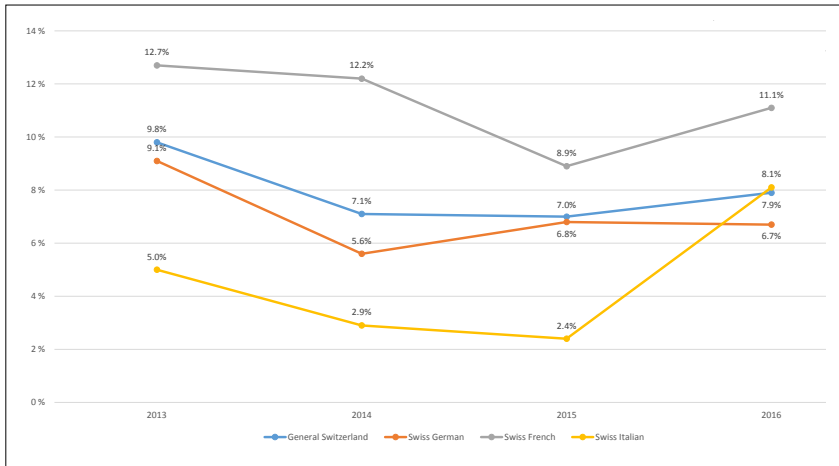
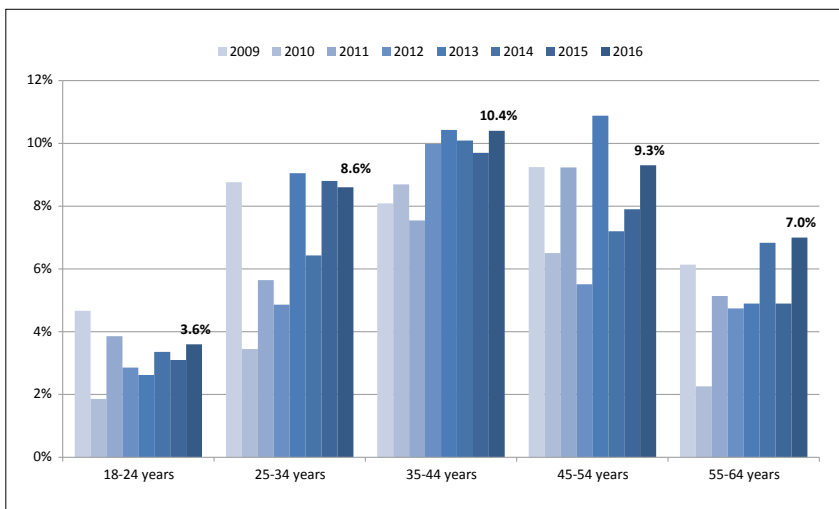


Figure 7 Total Early-Stage Entrepreneurial Activity (TEA) in Switzerland by Age, 2009–2016



Entrepreneurial activity among the adult population older than 35 is high at 10.4%, whereas the TEA rate of younger Swiss inhabitants still lags considerably behind the 2009 peak. Compared to other innovation-driven economies, the TEA rate for the 18–24 age group is, at 3.6%, the lowest and is clearly below average (7.6%). The rate for entrepreneurs between 25–34 years (8.6%) is below the average of innovation-driven economies (11.6%). The TEA rate for people older than 55 years (so-called senior entrepreneurs) is, at 7.0%, also above the average of innovation-driven economies (5.9%). With regard to encouraging young people to become entrepreneurs, Switzerland pulls strongly but pushes weakly. Research is needed to further clarify the effects of these institutional conditions upon entrepreneurial behavior (Schøtt et al. 2015, 32).

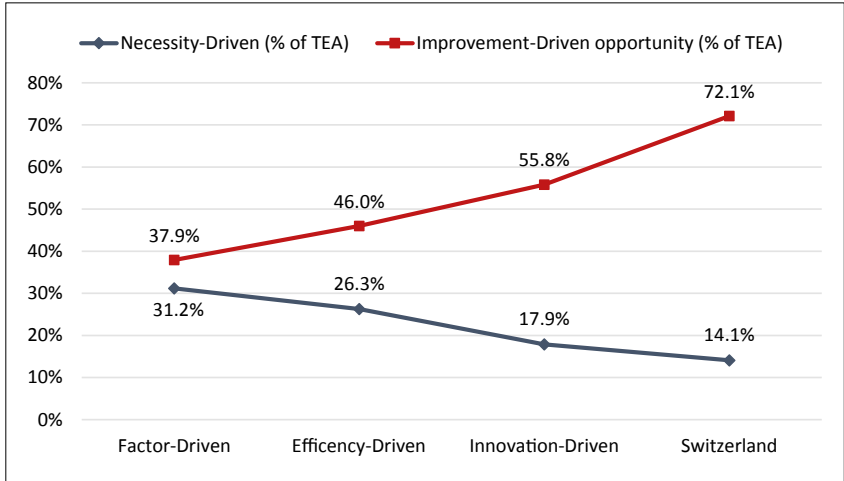
2.2.2 Motivations to Start a Business

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 and opportunity-driven entrepreneurship. A necessity-driven entrepreneur (ND) 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 8 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 economies 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 8 Percentage of Entrepreneurs motivated by Necessity and Opportunity by Phase of Economic Development and in Switzerland, 2016



Among entrepreneurs with opportunity-driven motives, a portion of these seeks to improve their situation, either through increased independence or through increased income (versus maintaining their income). GEM calls these improvement-driven opportunity (IDO) entrepreneurs. Entrepreneurs may view these improvements in their work situation as a possibility, perhaps because they have a promising opportunity or because they see good conditions in the environment. Alternatively, they may simply endeavor to make this improvement. On this measure, the factor-driven economies report the lowest proportion of

IDO at 37.9% of all entrepreneurs, and this proportion increases with economic development level.

To assess the relative prevalence of improvement-driven opportunity entrepreneurs versus those motivated by necessity, the Motivational Index indicates interesting differences. This index reveals that there are one and a half times as many IDO entrepreneurs as necessity-driven (ND) ones on average in the factor-driven economies. The efficiency-driven economies show a higher proportion at 2.0 times.

Table 3 presents the large difference in the innovation-driven economies, where there are more than four times

as many IDO as necessity-motivated entrepreneurs. Finland, Sweden, France, the United States and Switzerland – have over five times as many IDO entrepreneurs as those mo-

tivated by necessity. This signals that more people are seeking to improve their lives through entrepreneurship and/or that fewer are driven to start businesses out of necessity.

Table 3 Motivational Index in selected innovation-driven economies, 2016

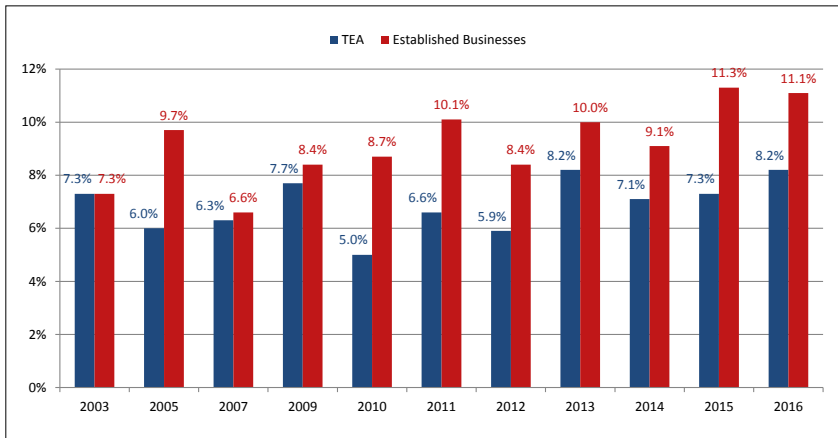
Selected innovation-driven economies	Improvement-driven opportunity (% of TEA)	Necessity-driven (% of TEA)	Motivational index*
Australia	64.6	16.5	3.9
Austria	46.4	15.6	3.0
Canada	48.5	14.3	3.4
Finland	68.6	7.1	9.7
France	69.6	11.1	6.3
Germany	58.1	21.8	2.7
Israel	39.2	15.2	2.6
Italy	40.3	10.9	3.7
Korea Republic	65.7	23.9	2.7
Netherlands	67.5	21.1	3.2
Portugal	55.8	20.8	2.7
Spain	48.6	26.0	1.9
Sweden	53.5	4.5	11.8
Switzerland	72.1	14.1	5.1
United Kingdom	50.8	13.5	3.8
USA	73.6	11.4	6.4
Average (Innovation-driven economies)	55.8	17.9	3.9

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 provide some indication of the sustainability of entrepreneurship in a society.

Figure 9 TEA Rates and Established Business Rates from 2003–2016 in Switzerland



Together with the TEA, the Swiss rate for established business (11.1%) is on the same level as in 2015 (Figure 9). 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 (Finland, United Kingdom

or Sweden), shows comparatively high-established business ownership.

2.2.4 Industry Sector Participation

The analysis of industry sectors demonstrates diversity in the regional and development level of entrepreneurs around the world. Half or more of the entrepreneurs in Africa, Asia

and Oceania, and Latin America and the Caribbean are starting wholesale or retail businesses, while just over one-fourth of the entrepreneurs in Europe and North America operate in this sector.

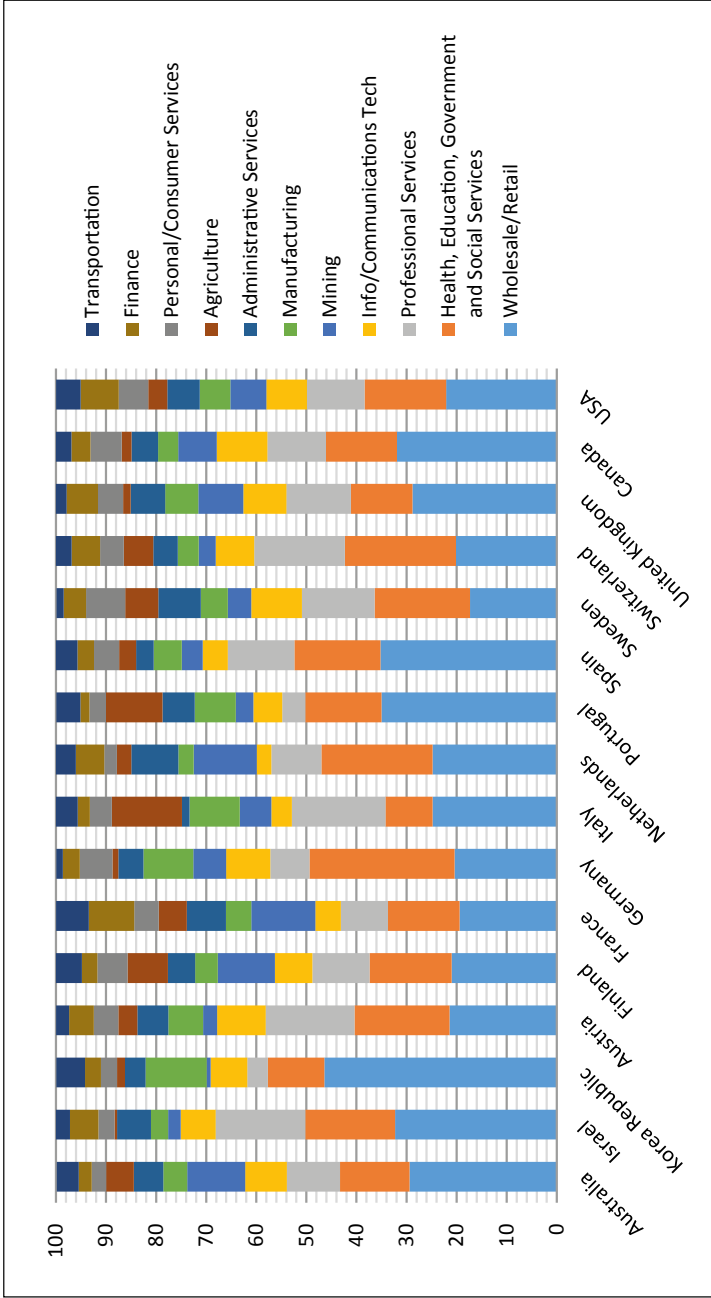
In contrast, information and communications, financial, professional, health, education and other services represent over half the entrepreneurs in North America and nearly half of those in Europe. However, less than one-fourth of entrepreneurs in the other two regions appear in the industry sector by economy and region.

A look into the industry profile across the individual economies illustrates the diversity of entrepreneurship around the world. The emphasis on knowledge and service-based indus-

tries in Europe and North America is obvious.

In Switzerland and the Netherlands, 22.2% of the new ventures operate service businesses in health, education, government and social concerns. This is behind Germany (29%), showing the highest percentage and followed by Sweden (19.1%) and Austria (19.0%). Wholesale and retail are the dominant industries in the Korea Republic (46.4%), Spain (35.2%), Portugal (35.0%), Israel (32.3%), and Canada (31.9%). In Switzerland wholesale and retail, cover one fifth of all startups. In third position in Switzerland are new ventures in professional services (18.1%), followed by entrepreneurs in information and communications technology (ICT) (7.7%).

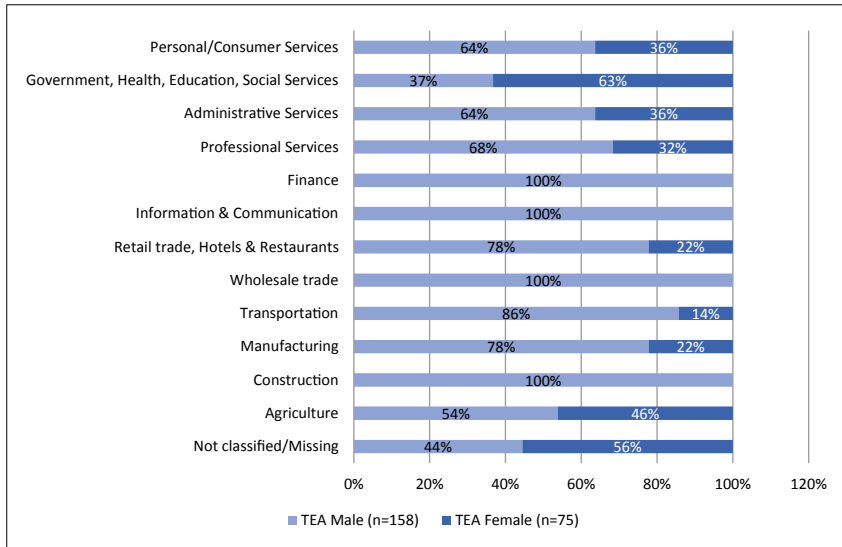
Figure 10 Industry Distribution of TEA in selected innovation-driven economies, 2016



Whereas finance, wholesale/retail, construction and ICT and manufacturing are fully male dominated,

women`s activities refer principally to government/health/education/ social services and agriculture.

Figure 11 Industry Distribution of TEA Male and TEA Female, 2016



2.2.5 Discontinuance

As new businesses emerge, others close. 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

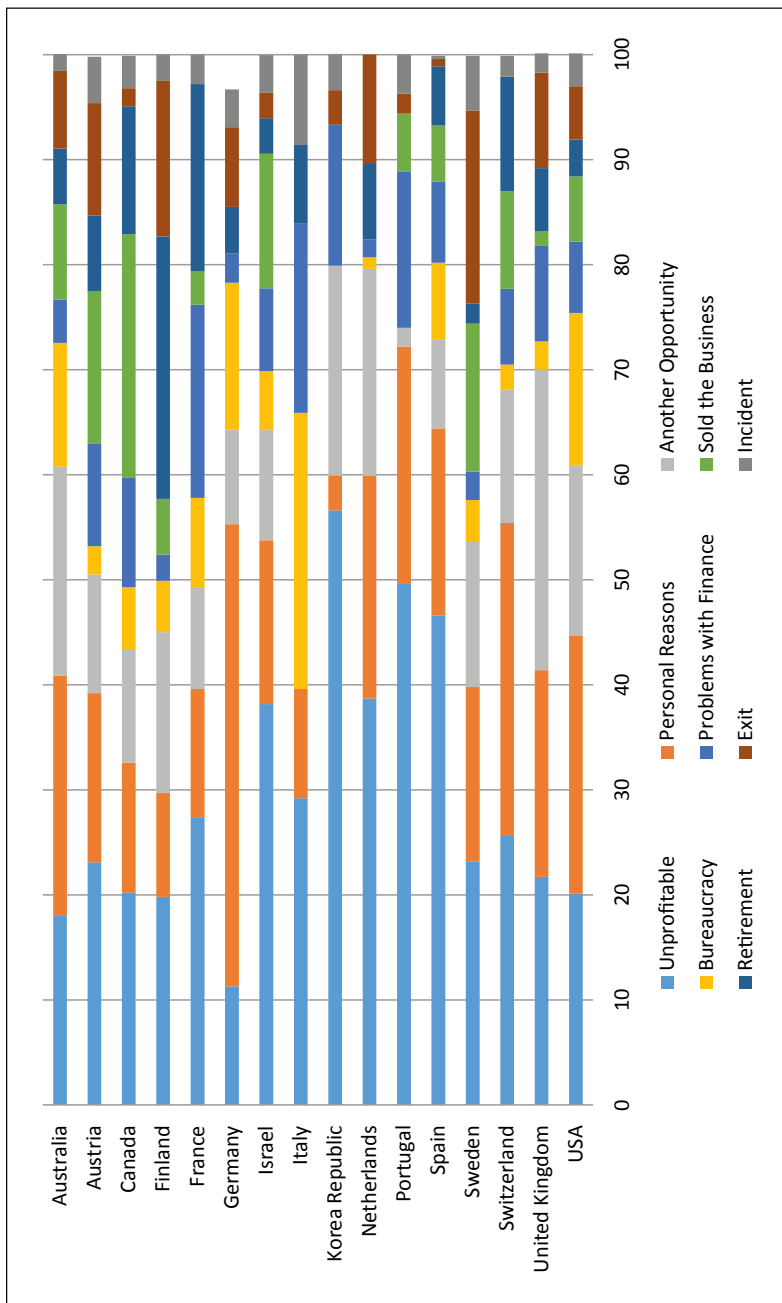
businesses – a component of entrepreneurial dynamism in an economy. GEM Survey respondents who had discontinued a business in the previous 12 months were asked to give the main reason for doing so. First of all, it must be highlighted that in Switzerland the percentage rate of people who abandon their business is one of the lowest (1.8%) compared to their peers of innovation-driven economies.

Personal reasons (29.8%) or unprofitable situations (25.6%) are the main reasons in Switzerland 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 22.0% (compared to 16.1% in 2015) of all discontinuations in Switzerland. The opportunity to sell the business as a reason to discontinue with the busi-

ness merits attention. In 2016, 9.3% of businesses that ceased trading were sold (Figure 12).

Retirement is an issue in innovation-driven economies, for example, especially in France and Canada – countries that are facing challenges with their ageing societies. The Swiss data for 2016 reveals that retirement is an important reason why 10.9% of all businesses were stopped in the last 12 months. Compared with the 2015 data, it is notable that the importance of bureaucracy decreased and was replaced by unprofitable and & personal reasons as factors in deciding to stop the business.

Figure 12 Reasons for Discontinuing a Business in selected innovation-driven economies, 2016



... 3 Impact – Growth, Innovation, and Internationalization

Interest in entrepreneurship has grown quite considerably in the last few years, and so has research into it. This phenomenon is the outcome of a series of factors (Rocha, 2004), in particular the fact that entrepreneurship generates both macro-benefits for economic development, and micro-benefits fostering personal growth and fulfilment. Entrepreneurs are some of the most important engines of an economy, acting as propellers in creating growth, innovation, jobs, and, more generally, providing concrete answers to the changing needs of the market and society. We have been catapulted into an era of great technological, socio-economic, cultural, political-institutional and environmental change. At times like these, entrepreneurship – seen as the ability to read and interpret the challenges and opportunities generated by change and turn them into goods, services, technical solutions, organisational processes, and innovative business models – is without doubt a resource well worth investing in.

GEM measures the impacts of the entrepreneurship phenomenon based

on the aspirations of entrepreneurs, especially their job creation expectations, innovation (mostly products/services-oriented) and international orientation. The economic development of a nation or region has been proved to be positively affected by these forms of entrepreneurial ambition. (Bosma & Schutjens, 2011)

3.1 Growth Orientation

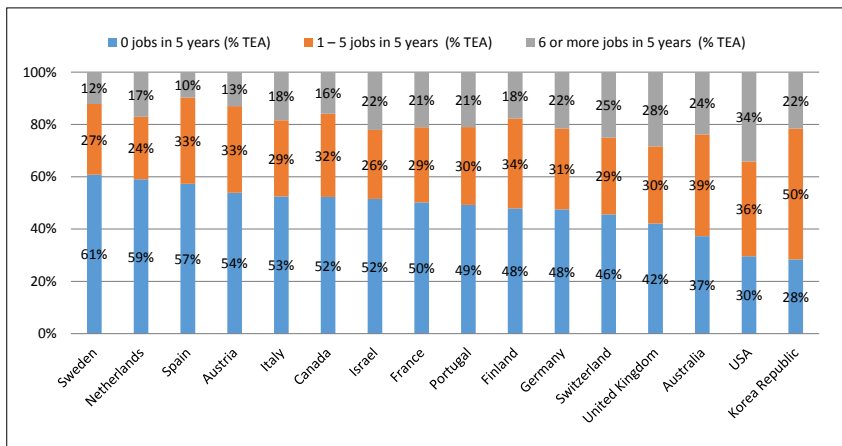
Compared to the rest of the world, Switzerland's economy is strongly characterized by small- and medium-sized enterprises (SMEs). Between 2011 and 2013, SMEs were able to create about 19,500 new net jobs a year, of which 17,000 were in the services sector and 2,500 in the industrial sector (Federal Statistical Office, 2017). At the same time, big firms (with a minimum of 250 on their payroll) created approximately 5,500 net jobs, 2,000 of which were in the services sectors and 3,500 in the industrial sector. In total, the services sector produced about five times as many jobs as the industrial sector. In 2014, 42,478 new firms were set up in Switzerland, resulting in 56,996 jobs. That is an increase of 11.1 % over the

previous year (Federal Statistical Office, 2017). New enterprises, therefore, constitute a relevant source of employment.

At the time of the survey, entrepreneurs, defined according to GEM

criteria, were asked to supply information on their current payroll numbers and an estimate of their payroll numbers in five years' time. Figure 13 illustrates the TEA broken down by job creation expectations.

Figure 13 Job Growth Expectations for Total Early-Stage Entrepreneurship Activity (in selected innovation-driven economies), 2016



In comparison with other world regions, Europe has been found to have on average the highest percentage of entrepreneurs not aspiring to increase their staff number, namely 47%. With its 46%, Switzerland stands slightly below the European average. Our nation demonstrates, at least in its intent, an exciting dynamism for business activities where employment expectations are higher

than six people. At 25%, Switzerland ranks quite respectably among the nations surveyed, preceded only by the United States (34%) and the United Kingdom (28%). Furthermore, compared with the latest survey, there has been an increase of more than 5% in the number of entrepreneurs planning to employ six or more people over the next five years.

It is worth remembering, however, that entrepreneurs tend to overestimate their demand for future job creation, inasmuch as projections tend to be slightly overoptimistic. In time, in fact, these growth expectations do not necessarily come true. That notwithstanding, an Ecoplan survey commissioned by SECO (Ecoplan, 2016) has highlighted that Switzerland ranks among leading countries worldwide for the number of enterprises enjoying strong growth.

The study points out three types of fast-growing companies: (1) medium- and high-growth enterprises, i.e. those that over three years have registered an average employment rise of over 10%; (2) high-growth enterprises, i.e. firms that over the same period have registered an annual rise of 20%; and (3) the so-called «gazelles» (a sub-group of fast-growing enterprises), in other words those firms that are no older than five years by the time they reach the end of the three-year growth period.

In Switzerland, about 12% of all firms with more than 10 dependents are medium-to-strong growth firms, a figure that places our country next to Israel, Germany, Sweden, and the United Kingdom, fluctuating between 11% and 15%. The percentage of fast-expanding enterprises, on the other hand, is 3.5%. Here,

too, Switzerland stands next to other leaders such as Sweden, the United Kingdom and Israel, with percentages between 4% and 5.5%. In our country, the number of fast-growing firms per inhabitant is clearly higher than in most other countries: 400 per 100,000 inhabitants. Even though available data is incomplete, we can legitimately assume that the number of gazelles in Switzerland ranges between 0.2% (at least 80 firms) and 0.8% (at most 400 firms). There is sufficient evidence to make the higher level (0.8%) plausible, hence next to Israel, the country with the highest percentage (0.9%).

3.2 Innovative Orientation

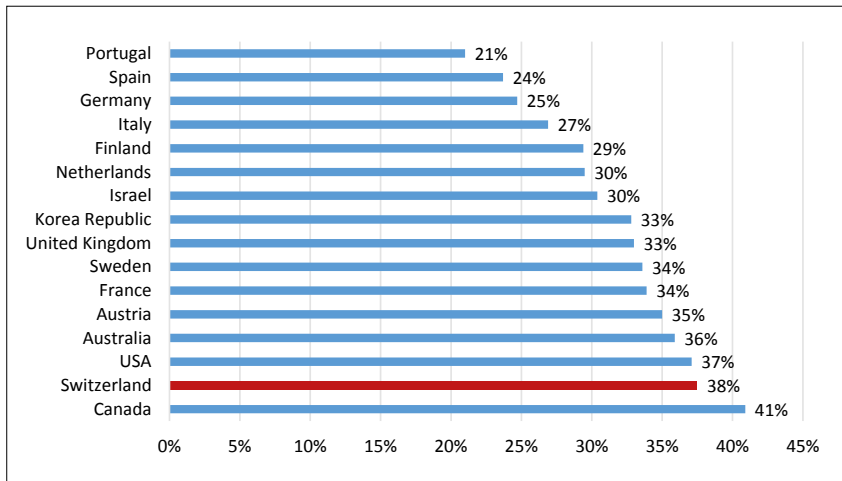
According to Shane (2003), entrepreneurship involves the discovery, evaluation and use of opportunities to launch on the market new products and services, new production processes, new organisational models and new raw materials by managing resources and efforts previously either non-existent or differently organised. Hence, the clear connection between entrepreneurship and innovation. Schumpeter himself (1934) had already defined entrepreneurs as innovators and entrepreneurship as a phenomenon based on discontinuity rather than on equilibrium. Aptitudes and capacity for innovation

are major factors for any actor wishing to play and cope in an ever more competitive economy, especially in high-productivity sectors.

Businesses increasingly have to face emerging and disruptive technologies, changes in the socio-economic and political context, and alternative and disturbing business models (Christensen, 1999). The life cycle of products is getting shorter and short-

er, and time to market is cut shorter as a result. In addition, a degree of contamination may be observed between diverse disciplines and sectors (Goodier, Austin, Soetanto, & Dainty, 2010), likely to produce truly radical innovation. GEM monitors innovative orientation measurable in the launch of new products for some or all customers, as well as in the uniqueness of such products.

Figure 14 Innovation Levels of TEA (product is new to all or some customers AND few / no businesses offer the same product), in selected innovation-driven economies, 2016



In 2016, Switzerland, with 38%, showed higher results than the average for innovation-driven economies, which stands at 31%. Compared to the nations selected, only Canada

performed better, at 41%. Compared to the previous survey, our nation experienced a slight, virtually insignificant drop of 0.5 percentage points, though it continued to be above

levels measured in 2013 and in 2014, when the percentage hovered around 27%. In the overall ranking, inclusive of all other nations that joined the GEM projects, Switzerland comes in at no. 8, behind Lebanon and Chile – in top position – and, closer to home, Luxembourg and Ireland.

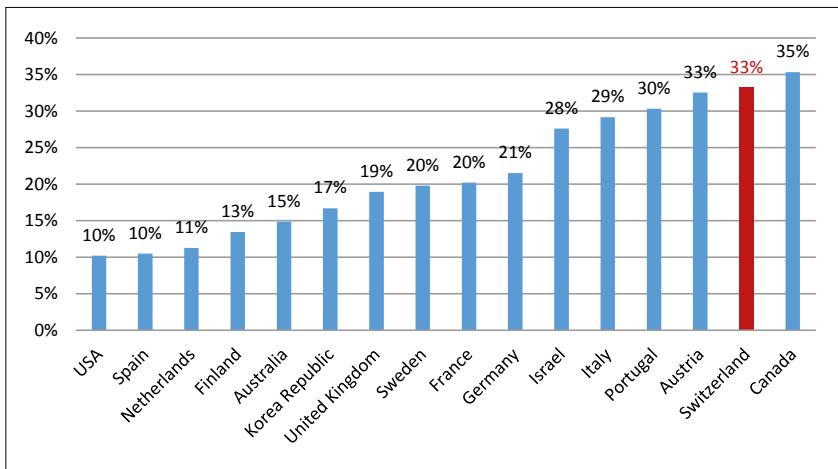
3.3 International Orientation

The internationalization of enterprises is increasingly regarded as a strategic option that is crucial for the creation of value added and for the very growth of the firm. A limited domestic market on the one hand, and a high degree of specialisation on the other are two strong reasons pulling businesses to operate on global markets.

In recent years, there has been a significant increase in research into the modalities with which enterprises explore and take advantage of business opportunities offered by foreign markets.

Any decision to engage in an internationalization process involves some hurdles, mostly because of a variety of factors, both internal (financial, technological, human, managerial, and other resources) and external (market size, demand trend, politics, regulatory and socio-cultural system, etc.). There is a further reason for the complexity of this choice, namely the repercussions inside the firm itself, since it requires changing the corporate structures and processes.

Figure 15 Percentage of TEA with more than 25% of customers from abroad (in selected innovation-driven economies), 2016



GEM measures the degree of internationalization based on the number of customers outside the country of origin. When compared to other nations surveyed, as we deduce from the following Figure, Swiss early-stage firms appear to have a very strong international orientation.

The rate of early-stage entrepreneurs with at least 25% of foreign customers is 33%, six percentage points

below the figure recorded in the previous survey. Compared to innovation-driven economies, our nation can nonetheless claim a percentage above the average, set at 25%. Switzerland, therefore, has established its position alongside countries with an outstanding international orientation. In comparison with the countries selected, Switzerland comes second, immediately after Canada, sharing its position with Austria.

... 4 Entrepreneurial Framework Conditions

The GEM model illustrates the relevant national conditions that affect economic development and activity in general and those that facilitate innovation and entrepreneurship in particular. The National Experts' Survey (NES) data provides insights into the Entrepreneurial Framework Conditions (EFCs) that assess the climate defining inputs and outputs of entrepreneurial activity. This set of framework conditions is expected to concern public and policy makers in all economies. The features that are expected to have a significant impact on the entrepreneurial sector are captured in the 9 EFC total that are illustrated and described in Table 4 below.

The NES data provides insights into the ways in which these EFCs either foster or constrain entrepreneurial climate, activity and development. In order to assess the Swiss framework conditions influencing entrepreneurial activity, 36 Swiss experts completed a closed questionnaire on factors relating to our entrepreneurial environment. In contrast to 2014, the responses of this year's experts were measured on a 9-point instead of a 5-point Likert scale to achieve greater accuracy and sensitivity.

(Scores: 1 = Completely false,
2 = False, 3 = Moderately false,
4 = Somewhat false,
5 = Neither true nor false,
6 = Somewhat true, 7 = Moderately true,
8 = True, 9 = Completely true)

Table 4 Entrepreneurial framework conditions (EFC)

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 firms 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 the basic school level (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 are 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 5 would indicate that the expert regarded the factor as rather positive for entrepreneurship, while a score below would indicate that the

expert regarded the factor as somewhat negative for entrepreneurship. Table 5 displays the assessed values of the nine EFCs in Switzerland, as well as the values of selected innova-

tion-driven economies (benchmark economies) that serve as a comparison group which help to make more sense of our data.

The entrepreneurial finance framework condition describes the availability of financial resources – equity and debt – for small and medium enterprises (SMEs) (including grants and subsidies). Experts evaluate Switzerland’s financial environment for entrepreneurship and innovation slightly positively (5.2/9), higher than the average of innovation driven economies (4.5/9). Within this group of economies, only the Netherlands (5.5/9) and Finland (5.3/9) offer a slightly better financial framework, Experts strongly emphasize the areas of further improvement in early stage funding, in terms of access to seed and venture capital.

The government policy condition relates to the extent to which public policies support 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 new and small business sector. Historically, this framework requirement is valued positively in Switzerland. This year Switzerland, too, lies clearly above the average of all innovation-driven economies with (5.3/9); however, local experts see a

potential area for improvement, especially through easing bureaucratic procedures in founding new ventures and their taxation policies.

The government entrepreneurship program 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 (5.8/9) where the average of innovation driven economies is (4.8/9). One further area of improvement could be achieved towards streamlining government programs and achieving higher coordination among various programs, such as CTI/Innosuisse and SECO.

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. Switzerland is ranked above all the benchmark economies except the Netherlands. This is one of the EFCs where experts see major potential for improvement to be similar to previous years. The experts overwhelmingly recommend entrepreneurship as a pedagogical tool, especially in early years of schooling. On the other hand, Swiss experts evaluate

the post-secondary education (colleges, university and professional education) more positively and emphasize the world-class quality of the Swiss higher education system. Here, Switzerland is rated above all other benchmark economies with (5.8/9) where the average is (4.7/9)

The R&D transfer 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 positively (5.7/9), especially when compared to the benchmark economies; all other innovation-driven economies are rated below, where Switzerland had a consistent trend as in previous years. Local experts have particular praise for the excellence of its industry and technology; however, they also suggest potential improvements in collaborating in technology transfer projects in the academy industry in.

The commercial and legal infrastructure framework conditions relate to the presence of property rights, commercial, accounting, and other legal and assessment services and institutions that support or promote SMEs. In this framework requirement, the Swiss value is not topped by any other country and is on par with economies such as the Nether-

lands and Austria (5.8/9). Experts see areas of improvement in startup advisory services, especially more tailored and affordable resources and services for startups.

Entry regulation condition has two components; internal market dynamics and market openness. Internal market dynamics refers to the level of dramatic change in markets from year to year. This has an inverse scaling; hence, smaller values are regarded more positively. On the other hand, internal market openness relates to the extent to which new firms are free to enter existing markets. Local experts rated market openness as favorable, especially due to the growing Swiss economy; however, they also acknowledge underutilized potential, especially from ideas and startups that are not necessarily ETH or EPFL branded. In this rating, Switzerland tops most of the benchmark economies, below only the Netherlands and Austria.

The 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 2015, Switzerland ranked the highest for physical infrastructure of all assessed countries and this year achieved one of the

highest scores (7.9/9) – only slightly behind the Netherlands. Experts consistently praise this EFC for the Swiss economy, as it offers one of the world’s finest physical and technological infrastructures for economic growth.

The cultural and social norms are the extent to which norms encourage or allow actions leading to new business methods or activities that

can potentially increase personal wealth and income. In this EFC, Switzerland (5.7/9) ranks among the highest among the benchmark economies, just below Israel (7.2/9) USA (6.9/9) and the Netherlands (6.2/9). To achieve a desirable place, local experts emphasize a need for a mindset shift, especially in overcoming stigmatization of failure.



Table 5 Entrepreneurial Framework Conditions (EFC) in selected innovation-driven economies, 2016

Average scores from Likert scales of 9 points (1 = highly insufficient, 9 = highly sufficient).

Selected innovation-driven economies	Financial environment related with entrepreneurship	Government concrete policies, priority and support	Government policies bureaucracy, taxes	Government Programs	Entrepreneurial education at Primary and Secondary levels	Entrepreneurial education at Vocational and Professional levels
	1	2a	2b	3	4a	4b
Australia	4.6	4.5	4.4	4.2	3.5	3.7
Austria	4.6	4.2	3.6	6.3	2.2	4.9
Canada	4.5	4.7	4.5	4.8	3.4	4.7
Finland	5.3	5.4	5.3	4.8	3.9	5.0
France	4.8	5.9	5.3	5.5	2.8	5.6
Germany	5.0	3.9	4.1	5.7	2.8	4.3
Israel	4.6	3.5	3.0	3.9	3.1	4.8
Italy	4.3	3.3	2.8	3.2	3.1	4.9
Korea Republic	4.1	5.9	4.7	5.3	3.3	4.0
Netherlands	5.5	5.3	5.6	5.6	5.4	5.9
Portugal	4.9	4.7	2.9	5.1	3.5	5.1
Spain	4.0	3.0	3.2	5.1	2.7	3.5
Sweden	4.5	3.8	3.9	4.7	4.1	4.2
Switzerland	5.2	5.3	5.3	5.8	4.1	5.8
United Kingdom	4.5	3.6	4.8	3.8	2.8	4.1
USA	5.1	4.1	4.1	4.5	3.2	4.5
Average (Innovation-driven economies)	4.5	4.5	4.3	4.8	3.4	4.7

Selected innovation-driven economies	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
	5	6	7a	7b	8	9
Australia	3.7	5.1	4.9	5.0	6.7	4.5
Austria	4.7	5.8	4.4	5.4	7.7	3.7
Canada	4.3	5.6	5.1	4.1	6.6	5.3
Finland	4.6	5.6	4.7	5.0	7.8	4.5
France	5.3	5.4	4.7	4.3	7.4	3.7
Germany	4.1	5.6	5.2	5.2	6.3	4.2
Israel	4.3	5.3	4.0	3.4	6.2	7.2
Italy	4.0	4.3	4.5	4.1	5.1	3.9
Korea Republic	4.2	4.4	7.1	3.8	6.7	4.9
Netherlands	5.3	5.8	5.7	6.2	8.0	6.2
Portugal	4.6	5.4	3.6	4.1	7.5	4.1
Spain	4.4	5.4	4.5	4.6	5.7	4.5
Sweden	4.2	5.0	5.7	4.5	6.8	5.1
Switzerland	5.7	5.8	4.8	5.3	7.9	5.7
United Kingdom	3.8	4.8	4.2	5.1	6.0	4.6
USA	4.1	5.5	5.2	4.7	7.0	6.9
Average (Innovation-driven economies)	4.4	5.2	4.9	4.6	6.8	4.9



Overall, Figure 16 and 17 give a quick overview of the Swiss EFC benchmarked against other economies. Especially with the innovation-driven economies, Swiss ratings are higher than average for each EFC, and the competitive edge in post-secondary education and government programs are clearly visible. On the other hand,

Figure 17 shows the advantage of Switzerland in the EFC of physical infrastructure and especially R&D Transfer, where Switzerland could leverage this by developing a culture that not only celebrates failures in entrepreneurship but also eases bureaucratic steps and taxation in new venture foundation.

Figure 16 Composite indicators on Entrepreneurship Framework Conditions, by stage of development compared to Switzerland (EFC 1–4)

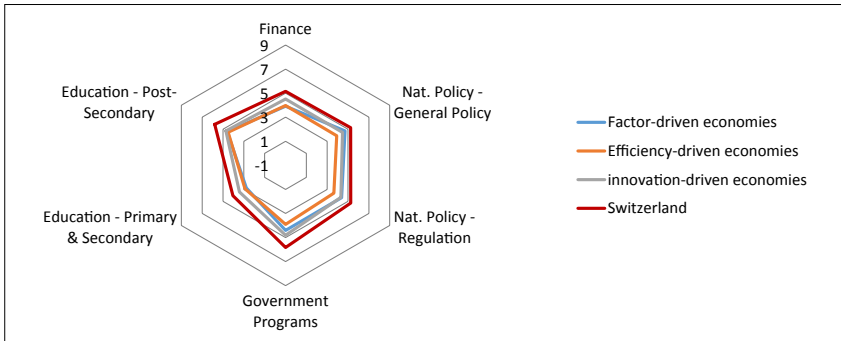
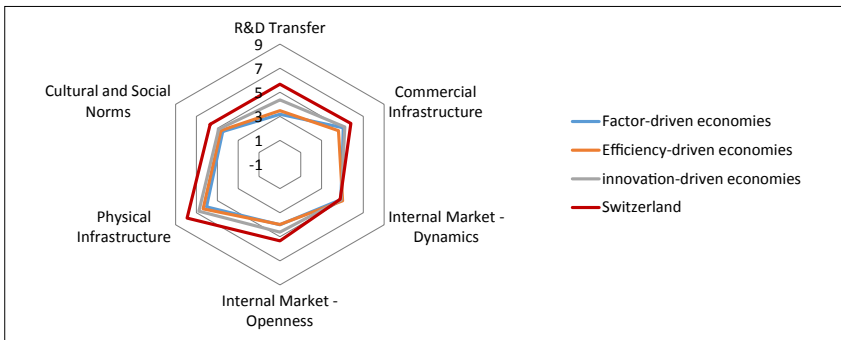


Figure 17 Composite indicators on Entrepreneurship Framework Conditions, by stage of development compared to Switzerland (EFC 5–9)¹



¹ Note: Internal market – dynamics is an inversely scaled indicator.

... 5 GEM Highlights in Switzerland

Societal values and perceptions about entrepreneurship as well as the measured individual attributes of potential entrepreneurs can differ strongly from nation to nation. The global GEM Data allows us to compare these indicators across nations and between world economies among different stages of development. Nevertheless, we need to pay attention to the fact that some major urban areas can contribute largely to a nation's economic growth, whereas other regions, often predominantly rural ones, struggle hard to keep track with the general economic development. Moreover, some important factors that can influence entrepreneurial activities may vary strongly from one region to another. The region's dominant culture, a specific policy, or even the infrastructure could be counted as such factors. Hence, spatially oriented entrepreneurship research is of growing interest for many scholars (Acs et al., 2008; Acs and Storey, 2004; Feldman,

2001; Acs and Armington, 2004; Wagner and Sternberg 2004, Van Stel and Storey, 2004) and the GEM community does not hesitate to take this into account. In the past few years, some major regional and even city-related contributions have been published in addition to the national reports.²

A diverse cultural population with three major language regions characterizes the Swiss environment. Some vibrant metropolitan areas with a relatively high population of multinational headquarters and top universities thus strongly contrast with mountainous and rural regions that are majorly influenced by tourism and artisanship. As the general economic situation in Switzerland has significantly changed over the last few years, these mountainous and rural regions have often more difficulties to cope with this structural change (Regiosuisse, 2014). The new regional policy (NRP) as initiated by the State of Secretariat for Economic Affairs SECO supports

² i.e. GEM Euroace Report (published by Mogollon et al. in 2015), the Quebec (published by St-Jean, E. and Duhamel, M. in 2016), British Columbia (published by Langford, C.H.; Josty, P. and Sanders C. in 2016) and Ontario reports in Canada (published by Haber, S.; Lo, M. and Davis, C.H. in 2016) as well as The Entrepreneurial Advantage of World Cities; Evidence from Global Entrepreneurship Monitor Data (published by: Acs, Z.; Bosma, N.; Sternberg, R. in 2008).

mountain areas, border regions and other rural regions with programs, initiatives and projects. Their focalization lies in the promotion of the region for the strengthening of innovation, value creation and competitiveness, creating synergies between regional and sectoral policies as well as in the establishment of a knowledge system for regional development.³ For the 2016–17 survey, the sample of the adult population survey has been increased from the usual 2000 to a total number of 3699 respon-

dents. As in previous years, age categories and language regions stratify the sample. The increased number of interviews allows us to improve the validity of the major indicators regarding the seven major regions as defined by the Federal Statistical Office (Schuler et al, 2005) as well as for the spatial distribution that serves as a major reference for new regional policy (NRP) as initiated by the State Secretariat for Economic Affairs (SECO).

Table 6 The GEM sample according to the seven major Swiss regions, 2016

The seven major Swiss regions*	Cantons*	Number of respondents
Lake Geneva Region	Geneva, Vaud, Wallis	456 (12.3%)
Mittelland	Berne, Fribourg, Jura, Neuchâtel, Solothurn	872 (23.6%)
North-western Switzerland	Aargau, Basel-Landschaft, Basel-Stadt	515 (13.9%)
Zurich	Zurich	321 (8.7%)
Eastern Switzerland	Both Appenzell, Glarus, Graubünden, St. Gallen, Schaffhausen, Thurgau	514 (13.9%)
Central Switzerland	Lucerne, Nidwalden, Obwalden, Schwyz, Uri, Zug	503 (13.6%)
Ticino	Ticino	518 (14%)
Total		3699 (100%)

* source: Schuler & al., 2005.

³ Cf the *regiosuisse* webpage: regiosuisse.ch/en/new-regional-policy-nrp, accessed 27.04.2017.

Through increasing the sample size, we reached an average of over 500 respondents for the seven major regions.⁴ The mapping of the respondents according to their municipality even allowed us to compare individual attributes between metropolitan areas, agglomerations and other

urban communities, suburban and rural areas as well as alpine tourist centers, and peripheral rural areas. In the latter type of region, we still collected more than 250 answers despite the fact that only around five percent of the total Swiss population lives in such places.

Table 7 The GEM sample according the regionsuisse typology.

Regionsuisse typology of major Swiss regions*	Share of the national GDP*	Share of the total population*	Share of total employment*	Number of respondents
Metropolitan areas	59.4 %	47.5 %	54.4 %	1398 (37.8 %)
Agglomerations and other urban communities	23,7 %	25.7 %	26.1 %	1148 (31.0 %)
Suburban and rural areas	12.7 %	21.2 %	14.5 %	901 (24.4 %)
Alpine tourist centers and peripheral rural areas	4.2 %	5.6 %	5 %	252 (6,8 %)

* Source: Regionsuisse (2014), p.17

⁴ The average sample size amounts to 528 individuals per region. Only for the Canton of Zurich (321 observations) and the Lake Geneva area (456 observations) did we have to be satisfied with a sample of less than 500.



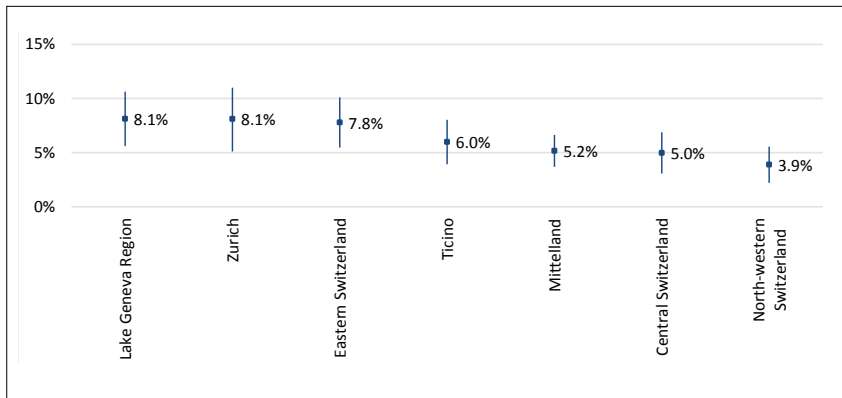
5.1 Regional Entrepreneurial Activities

In our further analyses, we observed only very small differences between the TEA rates in metropolitan areas in general, agglomerations and smaller cities, as well as rural areas. This might be surprising as one could assume that in the larger metropolitan areas, entrepreneurial activities might be increased through their vibrant economic conditions and a relatively large population of a highly skilled workforce. Considering entrepreneurial activities among the

whole population (18–99 years old), in Zurich, the major Lake Geneva region as well as the eastern cantons of Switzerland, entrepreneurial activities in 2016 tend to be slightly higher than in the north-western cantons of both Basel and Aargau.

Hence, high entrepreneurial activities in the rural areas and smaller cities of the Ticino area and a relatively low indicator for metropolitan areas of the Mittelland and Basel might balance the overall differences among the different types of the Swiss urban and rural areas.

Figure 18 TEA rates in the major Swiss regions, 2016 (18–99 age population)



5.2 Regional Entrepreneurial Values and Attributes

In this study, we observed some very important differences regarding the individual attributes of potential entrepreneurs and societal values and perceptions about entrepreneurship on a subnational level. Perceived opportunities seem to be highly linked to the area in which our respondent lives. In the German- and French-speaking parts of Switzerland, the perception of opportunities seems to be equally high on a 40% level, whereas in the Italian-speaking parts, the number of individuals stating that there might be an interesting business opportunity in the area where they live is clearly lower. This is seemingly not only a difference between the language regions but rather a factor that is influenced by **urban-rural differences**. We can state a significantly higher value in the Swiss metropolitan areas.

In metropolitan areas, almost half of the total population (47.3%) see **business opportunities** whereas in peripheral rural areas, not even a third recognize business opportunities. Hence, in an overall comparison between the regionsuisse indicators, the population in metropolitan areas is clearly ahead of every other type of region in terms of opportunity rec-

ognition (see Table 8). In relation to the perceived opportunities, entrepreneurial intentions are higher in metropolitan areas and agglomerations compared to rural regions.

The results regarding **perceived capabilities, social status of entrepreneurs** between the regionsuisse regions are not significantly different. The fear of failure is even higher in metropolitan areas and agglomeration compared to peripheral rural areas. For these indicators there is no significant difference observed between metropolitan areas, periurban regions and smaller cities or for rural areas. **Media attention for entrepreneurship** is under-represented in alpine tourist centers and peripheral rural areas.

The results in the seven major regions confirmed the urban rural differences regarding opportunity perception. In Zurich, the Lake Geneva region, and in North-western Switzerland a high score of perceived opportunities was established. Regarding perceived **entrepreneurial capabilities** among the working population (18–64) in the seven major regions, Zurich (49.5%) tends to be significantly above average, whereas the Mittelland (40.2%) is clearly lower.

Table 8 Individual attributes & Societal values and perceptions according to the regionsuisse typology, 2016

Selected innovation-driven economies	Individual attributes				Societal values and perceptions		
	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions **	Entrepreneurship as a good career choice	High status to successful entrepreneurs	Media attention for entrepreneurship
Switzerland	41.4	43.3	31.2	7.9	38.9	66.0	58.3
Metropolitan areas	47.3	44.7	34.1	8.8	37.7	65.9	58.1
Agglomerations and other urban communities	42.0	40.1	31.4	7.5	40.0	67.6	62.9
Suburban and rural areas	33.0	44.9	25.9	7.0	39.5	65.9	56.8
Alpine tourist centers and peripheral rural areas	30.3	38.7	20.9	5.9	40.6	61.0	47.4
Average (Innovation-driven economies)	41.3	43.8	39.8	15.4	57.6	69.6	62.2

* fear of failure assessed among those seeing opportunities.

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

Table 9 Individual attributes & Societal values and perceptions in the seven major Swiss regions, 2016

Selected innovation-driven economies	Individual attributes				Societal values and perceptions		
	Perceived opportunities	Perceived capabilities	Fear of failure*	Entrepreneurial intentions**	Entrepreneurship as a good career choice	High status to successful entrepreneurs	Media attention for entrepreneurship
Switzerland	41.4	43.3	31.2	7.9	38.9	66.0	58.3
Mittelland	37.3	40.2	31.4	7.9	38.3	63.4	55.2
Lake Geneva region	45.1	42.6	40.7	11.2	60.8	81.3	52.8
North-western Switzerland	44.7	42.8	30.4	9.3	27.4	62.6	58.7
Eastern Switzerland	33.8	42.0	15.5	5.5	32.4	62.8	64.7
Ticino	29.6	47.8	37.5	8.4	63.9	71.0	61.3
Central Switzerland	41.7	40.7	29.1	4.1	27.2	59.3	60.9
Zurich	50.3	49.5	32.0	7.0	31.3	60.3	60.8
Average (Innovation-driven economies)	41.3	43.8	39.8	15.4	57.6	69.6	62.2

* fear of failure assessed among those seeing opportunities.

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

Among those seeing business opportunities, the fear of failure rates are significantly higher in the French-speaking, Lake Geneva area and in the Italian-speaking Canton of Ticino than in the Swiss-German parts, especially in eastern Switzerland. Most of the eastern Swiss cantons consist of rural areas of smaller cities. In this sense, fear of failure seems not to be influenced by urbanization but rather by other regional factors, such as economic development, policy or even cultural backgrounds. Entrepreneurial intentions are rather low in Switzerland when compared with other innovation-driven economies.

The Swiss-French population indicates higher intentions to start a business within the next three years than the rest of Switzerland. This ongoing trend was measured for at least the last five years of the study.

5.3 GEM Ticino

According to the latest data supplied by the Cantonal Statistical Office, in 2014 there were 37,523 firms operating in Ticino, for a total payroll of 225,748. This number corresponds to 184,057 full-time equivalents (FTEs), namely 4.6% of our national total, 4 million jobs. A survey conducted in 2015 by BAK Basel showed that our Canton's competitiveness ranked

high on the international stage, exceeding, according to the indicators used, the average for Western Europe (BAK Basel, 2014). Under the «Performance» heading, Ticino, with its highly diversified economy, appears to be a very dynamic region. As far as «Attractiveness» is concerned, Ticino is well placed internationally, but rather near the bottom on the domestic front. The third and last index, «Structural Potential», where potential is measured in relation to economic structure, is positive and above the average of Western Europe. In addition, complementary surveys have highlighted the strategic role of Canton Ticino in some meta-sectors, particularly in the life sciences, mechanics and electronics, ICTs and, finally, fashion. This does not exclude a degree of fragility, which mostly affects labour productivity and a culture of entrepreneurship that is anything but widespread (IRE, 2016; UBS, 2016; Baranzini et al., 2015).

The findings of a GEM investigation on a sample of over 500 people residing in Canton Ticino has pointed out that the rate of Total Early-stage entrepreneurial Activity (TEA) for 2016 was 8.8%, more than 5 percentage points above the recorded rate for 2015. This is the highest measurement registered since the GEM survey was first regionalised. Once more,

Ticino is noticeable for regarding entrepreneurship as a good career choice. The measurement for 2016 – around 64 % – is a good 25 percentage points higher than the national average. Similarly, Ticino stands above the national average (albeit not conspicuously so) not only in terms of the status recognised to entrepreneurs (71 %), but also in terms of media attention to entrepreneurship (61.3 %). Although its Perceived Opportunities rates are among the lowest, Canton Ticino stands out for its capacity for 'doing business', and in this sense there has been a trend shift from the previous year. This might have had some repercussions on Entrepreneurial Intentions, whose rate rose from 2.3 % in 2015 to 9.3 % in 2016, the highest figure since regionalisation first took hold. It is now a matter of verifying whether these declared intentions – though the same applies to the TEA – are contingent numbers or whether there has been a real change of direction, mostly because of recent hard work done to promote entrepreneurship, which may possibly be yielding the desired benefits. Our Canton, in fact, is increasingly coming into line with what is happening at the national level (in the sectors, productivity, etc.); and this could be true also of the entrepreneurship rate.

The profile of a typical Ticino entrepreneur, analysed according to given socio-demographic features, is noticeably predominantly male. Indeed, the two most recent surveys tell us that the female/male ratio is just over 0.4, as against the figure recorded for 2014, namely 0.23. In line with the national ratio, Ticino's typical entrepreneur is between 35 and 44 years old. An entrepreneur's average age, in 2016, was found to be 38.5, a touch lower than in 2015, when the average age was 38.7, and six years younger than in 2014. The latest survey revealed that the youngest entrepreneur was 20 years old, while the oldest was 62. Over half of the entrepreneurs surveyed were educated beyond the compulsory secondary II level; in other words, half of them had either achieved a certificate of professional competence (dual apprenticeship) or completed their normal school education (specialised school or High School/A-levels). Nearly 89 % of entrepreneurs in Ticino are personally acquainted with someone who, during the past two years, has set up an entrepreneurial activity; and this rate is over 50 percentage points higher than for non-entrepreneurs. In addition, when one compares dependents with independents, entrepreneurs are found to be less daunted by any hurdles involved

in launching an entrepreneurial activity, and are positive about its good opportunities. Non-entrepreneurs (49%) are distinctly more anxious about failing than entrepreneurs (9%). The latter view entrepreneurial activity – in terms of image – as commanding a high level of respect and status. If we look at economic sectors, in 2014 Ticino entrepreneurs set up their activities in the areas of «commerce, hotel and restaurants» (22%) and «public administration, education, health and social care» (19%).

Five thematic areas for the future development of the Canton of Ticino

At the end of February 2015, at the instance of the Department of Finance and Economy (DFE) of Canton Ticino, a Working Table was constituted to review the economy of Ticino. It brought together representatives of the political, economic, trade union and academic worlds. The Working Table was coordinated by SUPSI's Competence Centre inno3, which provided it with technical and research support. It met five times between February 2016 and January 2017. Its main objective is to exchange and discuss views and ideas on the economic situation of the Canton of Ticino and, at the same time, to share a vision of future development and identify possi-

ble areas of intervention. In addition, three study days have been held on taxation and competitiveness, innovation and regional development, and finally on work and training. These were open to the public. Five thematic areas have emerged, within which a series of measures have been developed aimed to promote well-balanced economic growth. Some of these measures will be implemented over the next few months, while the rest will be spread over the medium- to long-term. The thematic areas include:

- Entrepreneurial Ticino: Ticino as a Canton with a strong entrepreneurial culture and able to develop its entrepreneurship potential at all levels;
- Competitive Ticino: Ticino as a Canton capable of standing on its own feet as an innovative and competitive economic centre;
- Interconnected Ticino: Ticino as a Canton making the most of the new AlpTransit tunnel, thus boosting its networking capacity;
- Digital Ticino: Ticino as a Canton able to seize the opportunities of digital technology as a potential engine of innovation and development;
- Sustainable Ticino: Ticino as a Canton at the cutting edge, responsible and mindful of the principles of sustainability.

Ticino intends to emerge as a Canton whose appeal is based on the creation and growth of innovative start-ups; it also intends to equip young people, from school age, to face the challenges of a highly competitive and entrepreneurial economy. Taking advantage of the newly opened tunnel, AlpTransit, Ticino wants to direct its attention to the north of the Alps and so strengthen its economic ties with the rest of Switzerland. The Canton Ticino also wants to support its businesses in successfully facing up to the ongoing transformations, first and foremost the challenge of the digital revolution, which involves new work processes, new competences and new professional profiles. That is not all: indeed, the challenge of the tax system arising from national and international contexts, as well as Fintech, are two priority areas of intervention, all of which can in no way ignore the principles of sustainable development and of corporate social responsibility.

Among the various thematic areas, the following are particularly worth highlighting: the development of programs and activities promoting a culture of entrepreneurship across the education system, primary and secondary schools included; support to start-ups, not merely through funding but also through flanking and

technical backing along their growth path; setting up a competition recognised nationwide for rewarding new original entrepreneurial ideas; building two new network sites for *Tecno-polo Ticino* designed to host activities on behalf of the med-tech sector as well as companies on behalf of the bio-tech sector; the reorientation of entrepreneurial activities; a stronger collaboration with the «Greater Zurich Area» (a supra-cantonal organisation specialising in attracting innovative firms from abroad); the repatriation of talent and qualified personnel; the creation of a competence centre for digital technologies, the creation of training courses focused on new technologies; the creation of a system to monitor and analyse the effects of digitalisation on the world of work and education.

The measures identified rely on the cross-sectional component of innovation and on a rediscovered culture of entrepreneurship – sensitive to the Swiss values of work, social peace and sustainability. These are indeed the essential factors helping Ticino to remain attractive and compete successfully, promoting general prosperity and welfare. In a context of constant and fast evolution, the framework conditions underpinning «doing business» are indispensable, not only for the economy, but also for

the territory and society as a whole. This is why it matters that, alongside the public authority, all actors – economic, social and academic – play their part within a regional system of innovation that is coherent and closely-knit. Current debate over the creation of a centre of competence on digital technologies, as well as the recent coordinated strategy for innovative start-ups launched by the DFE, may be a sign that the Working Table's proposals are beginning to be firmed up. From now on, our task will be to monitor the effects of these strategies, initiatives and actions over time.

5.4 Youth Entrepreneurship

As mentioned in Chapter 2.2.1. Total Early-Stage Entrepreneurial Activity, Switzerland is significantly below average in terms of youth entrepreneurship activities. Youth entrepreneurship comprises entrepreneurial activities, aspirations and other related values given by the first age category of the working population, from the age of majority in Switzerland until the age of 25. In fact, only seven of the total GEM economies rank lower, four innovation-driven economies (UAE, Spain, Korea Republic and Greece) and three effi-

ciency-driven economies (Morocco, Slovakia and Malaysia) rank lower than Switzerland. We count only approximately one out of thirty young adults as either nascent entrepreneur or an owner-manager of a business that is younger than 42 months. In the Netherlands, one of our compared economies, almost every fifth young adult is already experiencing the joy, sorrows and challenges of entrepreneurship.

The percentage, as well as our rank relative to other innovation-driven economies, is rising the older the sample group becomes. Between the ages of 35–44 years, our Swiss population achieves a TEA rate of 10.4% and ranks on an average level among innovation driven economies. Interestingly, the TEA rates of the Netherlands then lies only slightly above the Swiss value at an average of 10.9%. Other compared economies, such as Spain (6.1%), Germany (5.7%), France (5.5%) and Italy (5.2%) are at the bottom of this age category. In the middle-age and senior category, Switzerland ranks above average with a 9,3% for the 45–54 year olds (12th) and a 7,0% (10th position) for the so-called senior-entrepreneurs who are above the age of 54.

Table 10 Ranking of TEA for 18–24 age category, 25–34 age category and 35–44 age category in innovation-driven economies (27 countries)

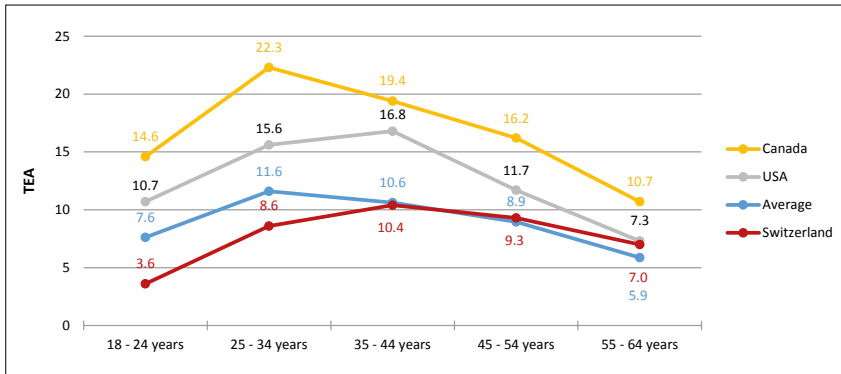
TEA 18–24 age category			TEA 25–34 years category			TEA 35–44 years category					
Rank	Country	%	Rank	Country	%	Rank	Country	%			
1	Estonia	24.6	1	Estonia	27.0	1	Canada	19.4			
2	Netherlands	18.8	2	Canada	22.3	2	Australia	18.7			
3	Canada	14.6	3	Cyprus	17.7	3	USA	16.8			
4	Slovenia	12.8	4	USA	15.6	4	Estonia	16.5			
5	USA	10.7	5	Australia	15.1	5	Israel	14.3			
6	Austria	10.6	6	Puerto Rico	14.9	6	Hong Kong	13.1			
7	Cyprus	9.9	7	Portugal	13.4	7	Cyprus	12.6			
8	Australia	9.4	8	Luxembourg	13.3	8	Puerto Rico	12.2			
9	Ireland	9.4	9	Netherlands	13.3	9	Austria	11.3			
10	Puerto Rico	8.4	10	Slovenia	13.2	10	Ireland	11.3			
(...)	23	Switzerland	3.6	(...)	20	Switzerland	8.6	(...)	15	Switzerland	10.4

Figure 19 shows the distinct situation of the Swiss age categories when compared to the average of innovation-driven economies and the highly entrepreneurial North American countries. Whereas Canada, one of the innovation-driven economies with the highest TEA rates, reaches its peak at the 25–34 year old category, the entrepreneurial activities in the United States still grow after this category in order to reach their peak at the 35–44 year level.

Switzerland seems to reach its absolute highest number of nascent en-

trepreneurs and owner-manager of Start-ups at middle age between 35 and 44 years. Whereas in most of the innovation-driven economies as well as in our compared North-American countries, the TEA rate among the older age groups is strongly decreasing, Switzerland does not seem to follow this trend. Actually, the relative position among the innovation-driven economies is still increasing until the senior-age group of the 55–64 year old entrepreneurs. In this category, Switzerland ranks 10th out of 27 innovation-driven economies.

Figure 19 TEA rates in selected innovation-driven economies compared among the five age groups, 2016



Despite the fact that entrepreneurship is a desirable career choice for many young adults, namely almost half of the population at a 44.2 percent level, there is a great gap among the youths` perception of opportunities and capabilities. In their early twenties, the great majority of Swiss individuals do not think they have the knowledge, skills, and experience required to start a business. Nor do they see business opportunities where they live. As can be seen in Table 11, perceived opportunity rate stands at 25.5% and perceived capabilities at 13.6%.

This lack of knowledge and opportunity recognition then collides with a much lower perception of entrepreneurship as a desirable career choice and higher fear of failure rates among those seeing opportunities at a later age (Hulsink & Koek, 2014). The percentage of individuals in the Swiss population thinking that Entrepreneurship is a desirable career choice sinks from 44.2% to 36.8% from the first to the second age group. The fear of failure rate among those seeing opportunities rises from 27.1% to 29.2% between the first and the second age category and grows another 10% between the second and the third age category.

Table 11 Selected variables and their values for the 18–24 age category, compared to the remaining age categories and the overall value, in Switzerland, 2016

	Age groups					
	18–24	25–34	35–44	45–54	55–64	Overall
Perceived opportunities	25.5 %	38.3 %	48.2 %	45.2 %	43.4 %	41.4 %
Perceived capabilities	13.6 %	37.2 %	51.9 %	55.6 %	43.8 %	43.3 %
Entrepreneurship as a desirable career choice	44.2 %	36.8 %	37.3 %	37.3 %	41.8 %	38.9 %
Fear of failure (among those seeing opportunities)	27.1 %	29.2 %	38.9 %	29.8 %	26.3 %	31.2 %
Entrepreneurial intentions	8.8 %	9.1 %	9.4 %	8.0 %	3.7 %	7.9 %
TEA	3.6 %	8.6 %	10.4 %	9.3 %	7.0 %	8.2 %

The situation regarding women entrepreneurs in Switzerland shows a special development since 2003. The portion of women entrepreneurs increased significantly until 2011 and stabilized at a high level until 2014. In the last two years, the female/male ratio has decreased and is at the same level in 2016 as in 2003. There are multiple dimensions to explain this development and a lot of ques-

tions are unanswered: Is the high entrepreneurial activity at end of 2011 due to the fact that after the financial crisis more women created their company under pressure of necessity? Is the better job market situation in the last years a reason not to create a company? Or are social factors like work life balance, or more dedication to the family, causes to explain this behaviour?

Figure 20 Female / Male TEA Ratio in selected innovation-driven economies, 2016

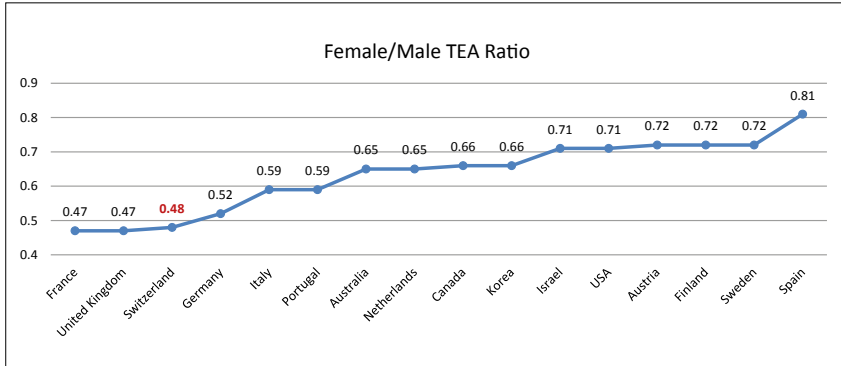
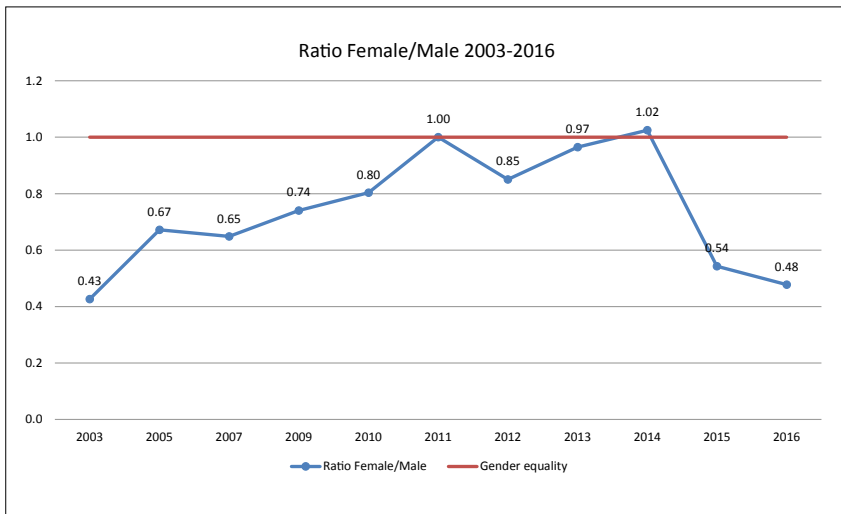


Figure 21 Ratio Female / Male of TEA 2013–2016 in Switzerland



... 6 Conclusions and Recommendations for Policy and Practice

Over the last years, and particularly after the global financial crisis, the realization that people could no longer depend on large organizations or government as job creators, is especially important for Switzerland with their SME dominance. Globalization, technological advances and the digital economy have also had a radical effect on the world of work. The traditional career path of a stable job with steady hours, a regular paycheck and solid pension – a job for life – is no longer an option for many people.

Faced with digitalization, entrepreneurial behavior in large organizations and public institutions play a major role, supported by an entrepreneurial ecosystem with start-ups and dynamic SMEs. The number of career transitions experienced by individuals is already on the increase, and technology is disrupting the traditional patterns in many industries. While the changing world environment presents challenges of varying natures and magnitudes, it is clear that it also presents opportunities – in particular for innovative and dynamic entrepreneurs.

Several initiatives should be fostered to enhance the entrepreneurial ecosystem in Switzerland in order to have more high ambition start-ups and growing SMEs. The government has to focus on high-growth entrepreneurs in order to build a generation of robust, engaged entrepreneurs. **Innovation based businesses and Gazelles** still create the majority of net new jobs in an economy. Government should create special dispensation for these two categories of enterprise, for example, providing special funding vehicles, and funding for business development services.

Mentorship quality: young entrepreneurs in particular often struggle to build up appropriate professional networks. It is important to provide mentorship programs where the mentors have practical personal experience of running a business. It is essential that all entrepreneurial trainers and consultants are well trained and/or experienced in the specific area of expertise that they offer.

Critical mass and density: Clusters/business hubs should be created – including entrepreneurs as

well as commercial and professional support structures – so that start-ups can be assisted in a more protected and supportive environment. This is particularly important in **rural and semi-rural areas**.

Serial entrepreneurs: in fact, the feeling is that if you never experience failure, you are not being innovative enough. In order to spur entrepreneurial activity, corporates, investors, and government also need to be disruptive and adopt a new approach to investing in and funding new businesses. They need to back entrepreneurs and encourage them to experiment, even if they fail the first time. The Swiss ecosystem should accept that there is a high chance that a first venture will fail, but recognize that this is a necessary part of the entrepreneurial journey.

Pension funds and venture capital: Pension funds are allowed to invest in private equity and venture capital up to 15% of their investments. The focus of their investment should be for the growing stage of the company to allow and enhance their internationalization in order to create a greater impact for the local economy and society.

Finally, many people choose an entrepreneurial direction after school

– it is thus important to increase investment in training programs in **entrepreneurship outside of the traditional higher education** institutions. Programs must be regularly evaluated and continually improved to take into account changes in the national conditions as well as research. GEM research has confirmed a positive link between training in starting a business and entrepreneurial behavior, which is not always visible in the short run. Practical and interactive business and entrepreneurship training programs at secondary school are an important factor in encouraging effective **youth entrepreneurship**. Education in entrepreneurship at school level should equip learners with key business skills. It is imperative, however, that teachers in these courses are well trained. Schools also need to actively promote entrepreneurship as a career path – inviting successful young entrepreneurs to participate in the educational program. **Internships**, especially inside start-ups and SMEs, should be provided for young adults interested in entrepreneurship. A culture of experiential learning provides young people with the opportunity to learn from the professional world while still students.

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Glossary

Measure	Description
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Societal values and perceptions

Entrepreneurship as a good career choice	Percentage of the adult population between the ages of 18 and 64 years who believe that entrepreneurship is a good career choice.
High status to successful entrepreneurs	Percentage of the adult population between the ages of 18 and 64 years who believe that high status is afforded to successful entrepreneurs.
Media attention for entrepreneurship	Percentage of the adult population between the ages of 18 and 64 years who believe that there is a lot of positive media attention for entrepreneurship in their country.

Individual attributes of a potential entrepreneur

Perceived opportunities	Percentage of the population between the ages of 18 and 64 years who see good opportunities to start a firm in the area where they live.
Perceived capabilities	Percentage of the population between the ages of 18 and 64 years who believe they have the required skills and knowledge to start a business.
Entrepreneurial intention	Percentage of the population aged 18–64 years (individuals involved in any stage of entrepreneurial activity excluded), who are latent entrepreneurs and who intend to start a business within three years.
Fear of failure rate	Percentage of the population aged 18–64 years perceiving good opportunities who indicate that fear of failure would prevent them from setting up a business.

Entrepreneurial activity indicators

Three indicators describe the life cycle of a venture:

<p>TEA Total Early-stage Entrepreneurial Activity</p>	<p>Percentage of the adult population between the ages of 18 and 64 years who are in the process of starting a business (a nascent entrepreneur) or owner-manager of a new business which is less than 42 months old. This indicator can additionally be enriched by providing information related to motivation (opportunity vs. necessity), inclusiveness (gender, age), impact (business growth in terms of expected job creation, innovation, internationalization) and industry (sectors).</p> <p>Nascent entrepreneurs – those who have committed resources to starting a business, but have not paid salaries or wages for more than three months.</p> <p>New business owners – those who have moved beyond the nascent stage and have paid salaries and wages for more than three months but less than 42 months.</p>
<p>Established business ownership rate</p>	<p>Percentage of the adult population between the ages of 18 and 64 years who are currently an 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.</p>
<p>Business discontinuation rate</p>	<p>Percentage of the adult population aged between 18 and 64 years (who are either a nascent entrepreneur or an owner-manager of a new business) 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.</p>

Other indicators which describe additional types of entrepreneurial activity:

<p>EEA Entrepreneurial Employee Activity</p>	<p>Percentage of the adult population aged between 18 and 64 years who as employees have been involved in entrepreneurial activities such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary.</p>
<p>SEA Social Entrepreneurial Activity</p>	<p>Percentage of the adult population aged between 18 and 64 years who are engaged in early-stage entrepreneurial activities with a social goal.</p>



International orientation	Percentage of entrepreneurs who report that 25% or more of their sales come from outside their economy.
Necessity-driven (% of TEA)	Percentage of TEA of the adult population aged 18–64 years old who have started a business out of necessity because they have no other option.
Opportunity-driven (% of TEA)	Percentage of TEA of the adult population aged 18–64 years old who have started a business out of an opportunity.

... Country List

Country/International code

Argentina	AR	Jordan	JO
Australia	AU	Kazakhstan	KZ
Austria	AT	Korea Republic	KR
Belize	BZ	Latvia	LV
Brazil	BR	Lebanon	LB
Bulgaria	BG	Luxembourg	LU
Burkina Faso	BF	Macedonia	MK
Cameroon	CM	Malaysia	MY
Canada	CA	Mexico	MX
Chile	CL	Morocco	MA
China	CN	Netherlands	NL
Colombia	CO	Panama	PA
Croatia	HR	Peru	PE
Cyprus	CY	Poland	PL
Ecuador	EC	Portugal	PT
Egypt	EG	Puerto Rico	PR
El Salvador	SV	Qatar	QA
Estonia	EE	Russia Federation	RU
Finland	FI	Saudi Arabia	SA
France	FR	Slovakia	SK
Georgia	GE	Slovenia	SI
Germany	DE	South Africa	ZA
Greece	GR	Spain	ES
Guatemala	GT	Sweden	SE
Hong Kong	HK	Switzerland	CH
Hungary	HU	Taiwan	TW
India	IN	Thailand	TH
Indonesia	ID	Turkey	TR
Iran	IR	United Arab Emirate	AE
Ireland	IE	United Kingdom	UK
Israel	IL	United States	US
Italy	IT	Uruguay	UY
Jamaica	JM		





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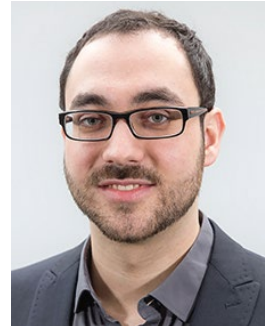
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**Global Entrepreneurship
Monitor 2016/2017
Report on Switzerland**

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