Main feature topic

1 Competitiveness and openness to international competition

International competitiveness refers to an economy's ability to sustainably ensure the success of its companies and the growing prosperity of its inhabitants in an increasingly interconnected world. The present introductory chapter clarifies the term "competitiveness", which is frequently used but rarely expresses the same concept. We shall also take a look at where Switzerland stands in comparison with other countries and shall discuss what implications this has for our country's foreign economic policy.

While competitiveness depends on the dynamism of market participants, competitiveness can be encouraged and strengthened through policies, especially foreign economic policy. Opening up the Swiss economy to international competition should be considered as an opportunity that needs to be seized. For this reason, part of this report contains an analysis of Swiss economic branches to determine the current degree of openness to international competition.

1.1 Meaning of competitiveness

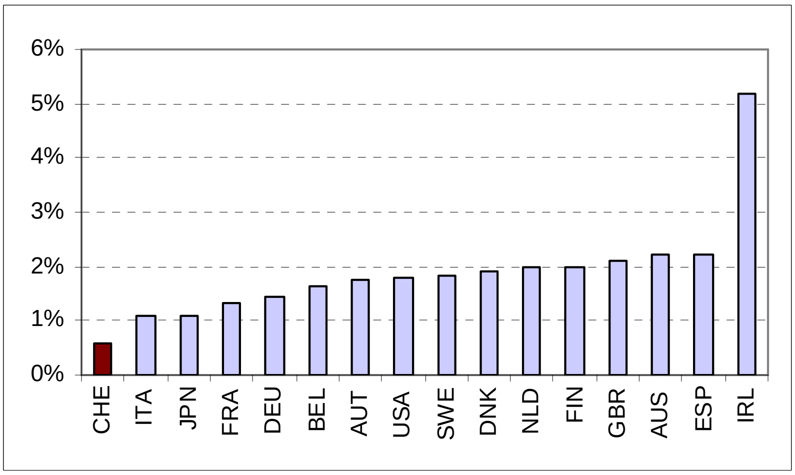
For small, highly developed economies such as Switzerland, openness to international competition is a prerequisite for increased growth and competitiveness.

The economic dynamics of individual countries are reflected in well-known ranking lists showing how well countries compete with one another. Due to various methodological problems, these ranking lists should always be taken with a grain of salt. They do, however, provide insight into economic strengths and weaknesses. In the "World Competitiveness Scoreboard", a ranking list maintained by the Lausanne-based International Institute for Management Development (IMD), Ireland went from 24th in 1992 to 5th in 2000, only to fall back to 14th in 2007. Switzerland followed an entirely different trajectory: in the "Global Competitiveness Index", a ranking list maintained by the World Economic Forum (WEF), Switzerland ranked 2nd and 3rd in the 1980s, dropped to 15th in 2001/2002 and then recovered its 2nd place ranking in 2007/2008.[1]

The economic reality reflected by these rankings is as follows: Ireland's GDP per capita, which is an indicator of individual prosperity, grew at an annual rate of 6.75% in 1992–2002. During that same period, Switzerland's annual GDP per capita growth remained stagnant at only 0.75%. In terms of per capita income, Ireland was therefore able to close some of the distance with Switzerland. If we broaden our focus to include the period running from 1990 to 2006 – which includes two years of strong economic growth: 2005 and 2006 – we find that the situation has not changed (see Fig. 1.1).

Figure 1.1

Annual real GDP per capita growth, 1990–2006



1 The better ranking score was also due to changes in methodology. Rankings are not always comparable from year to year since the composition and weighting of the index as well as the number of countries considered are not always the same.

Source: OECD

It is interesting to note that the countries that rose quickly in the rankings in this period were particularly well-integrated in the world economy. In the case of Ireland, for instance, the share of trade in GDP[2] went from 57% in 1992 to 86% in 2002. Over the same period, Switzerland's share of trade in GDP went from 33% to 40%.[3] For small and highly developed economies such as Switzerland, however, openness to international competition is needed to ensure both greater growth and competitiveness. This is the only way to take advantage of the international division of labour. Economic success, in turn, increases a country's willingness to open up further.

1.2 The term "competitiveness"

The term "competitiveness" refers to an economy's ability to sustainably ensure the success of its companies and the growing prosperity of its inhabitants in an increasingly interconnected world.

The term "competitiveness" has been the subject of lively debates in both economic and political circles. According to the definition used here, the term includes a crucial dynamic component: if companies, economic branches and general macroeconomic conditions adjust on a regular and sufficient basis, the country stays competitive, as current adjustment ensures that prosperous countries are able to maintain high levels of productivity, wages and capital income despite the emergence of new competitors on world markets while, at the same time, poorer countries are able to close the gap with countries that are currently on top.

The OECD defines competitiveness as follows: "... *the ability of companies, industries, regions, nations or supranational regions to generate, while being exposed to international competition, relatively high factor income and factor employment levels*."[4]

Economies that increase their productivity become more price-competitive.

When one thinks of corporate success and world market share, the term "price-based competitiveness" comes to mind. Price-based competitiveness is generally measured in terms of unit labour costs. Unit labour costs, in turn, are calculated on the basis of cost per hour of work, divided by the value that is generated from that hour of work. A given location is therefore considered more appealing if it offers lower unit labour costs than other places. Within an international context, unit labour costs depend on three factors: labour costs, labour productivity and exchange rates. If excessively high labour costs and excessively low labour productivity result in lower price-based competitiveness, sooner or later, under the pressure of market forces, the currency needs to be devalued as a means of rectifying the situation. However, negative consequences such as inflated import prices and lower real wages make currency devaluation an unpopular and often not sustainable means of increasing competitiveness. Greater labour productivity remains the key to increased competitiveness.

When labour productivity rises, real wages can be increased without undermining competitiveness.

Increasing labour productivity is more than simply making sure that a country's goods and services will continue to sell in other countries. It allows improving competitiveness in the broadest sense, which means not only gaining more world market shares but also achieving greater individual prosperity. High wage levels, such as those in Switzerland, do not undermine the competitiveness of a market as long as productivity remains high enough to justify those wage levels. In other words: real wage increases do not have a negative impact on competitiveness if productivity increases accordingly.

The US economist Paul Krugman hammered this point home when he stated that "competitiveness" and "productivity" were one and the same thing.[5] Compared to other countries, Swiss productivity is no longer outstanding, as Figure 1.2 shows. In this and subsequent chapters, the term "productivity" always refers to labour productivity.

Figure 1.2

Labour productivity per hour, indexed, PPP-adjusted, 2005, USA=100

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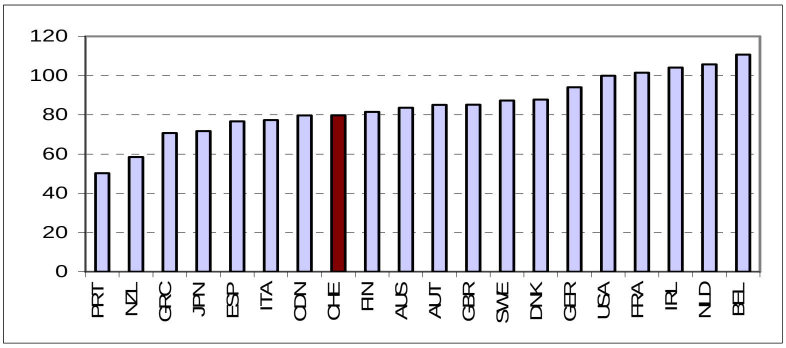
2 Measured by average imports and exports to GDP.

3 SECO calculations based on OECD and WTO data.

4 OECD (1995): Competitiveness: an overview of reports issued in member countries. Paris: OECD.

5 "… for an economy with very little international trade, "competitiveness" would turn out to be a funny way of saying "productivity"…", Krugman Paul (1994): "Competitiveness: A Dangerous Obsession" in: Foreign Affairs March/April 1994, p. 32.



Source: OECD

However, there is a drawback to equating productivity with competitiveness: High productivity does not yet mean that companies and their employees are also investing enough in their future success. The term competitiveness goes beyond the scope of mere productivity by including future growth prospects as well.

Compared to other countries, labour productivity is only moderate. Growth policy measures aimed at increasing productivity will always serve result in greater competitiveness.

Figure 1.2 shows that Switzerland is now only average as far as labour productivity is concerned. Switzerland is able to compensate for moderate hourly productivity by its high degree of labour participation and long working hours, which enables it to maintain high per capita income levels. Belgium, which is only slightly behind Switzerland in terms of PPP-adjusted GDP per capita, is a counterexample: the high productivity per hour of work in Belgium enables relatively low hours worked and a comparably low degree of labour participation.

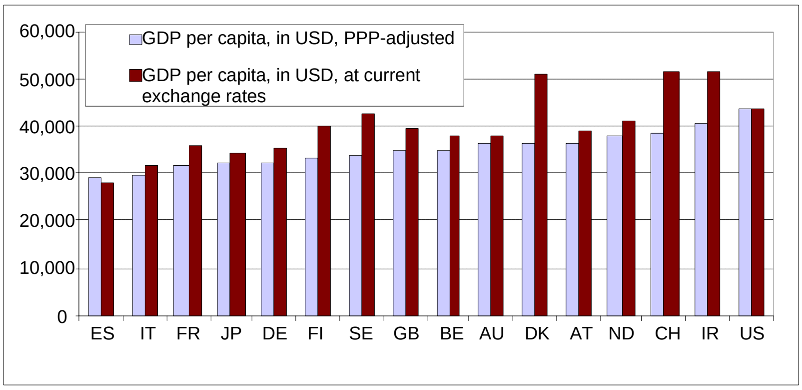
In Switzerland, there is little room for increased labour participation and hours worked. This is why Switzerland needs to focus on increased productivity to ensure economic growth and greater competitiveness. When calculated per hour of work, greater productivity is the only way to ensure sustainable increases in income. Growth policy measures designed to increase productivity always serve to increase competitiveness.

High cost of living in Switzerland: when productivity and income are adjusted on a purchasing power parity basis, Switzerland compares less favourably worldwide.

Switzerland's growth policy gives priority to reforming economic branches oriented towards the domestic market. As international comparisons of competitiveness clearly show, this is a wise choice. For Switzerland, GDP per capita levels differ widely depending whether comparisons are based on current exchange rates or on income levels adjusted for PPP differences (see Fig. 1.3). It is worth mentioning that Switzerland's GDP per capita is 25% lower on a PPP-adjusted basis than the equivalent figure based on exchange rates.[6] In the economic branches little exposed to international trade – such as housing rentals, public or semi-public sector (e.g. health) – the difference between prices in Switzerland and in other countries is particularly noticeable.

Figure 1.3

GDP per capita, difference between PPP-adjusted and exchange rate-based calculation, 2006



Source: OECD

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6 Not everyone agrees with this PPP-adjusted calculation. Here we assume that the basic data from Eurostat, combined with OECD data for countries outside Europe, correctly take into account differences in quality.

While the exchange-rate-based calculation of GDP per capita shows that Switzerland's export-oriented economic branches are competitive on world markets, the difference between the PPP-adjusted figure and the exchange rate-based figure shows a need for reform of the domestic market.

Switzerland benefits considerably from the growth and openness of other countries.

In the paragraphs that follow, we shall demonstrate that the notion that countries compete with one another for limited resources in the form of "orders" or "job prospects" is unfounded. Competition between countries is not a zero-sum game. Competition between countries does not work in the same way as competition between companies:

- If a company becomes more productive, it will gradually increase its market share at the competitor's expense. If the competitor does not react accordingly, then it eventually faces the prospect of bankruptcy. The company in crisis hardly benefits from the additional expenditure by employees of the successful competitor.
- In contrast, when an entire economy becomes more productive, this does not occur at the expense of other economies. Quite the opposite in fact. When Germany and China become more productive and experience economic growth, Switzerland benefits since higher incomes in growing economies allow Switzerland to increase its exports.

That said, this increase in exports does not necessarily take place in exactly the same economic branches where labour displacement occurs. By becoming increasingly interwoven with other markets, a country will make better use of its own strengths, take advantage of economies of scale in production and increase the variety of available goods on the market. This requires structural change, which in the short-term means adjustment costs. However, in the long-term, the change is needed to ensure positive economic growth.

There is a general consensus in scientific circles that international trade benefits both of the countries involved. While it holds true that not every individual market participant in each country benefits in equal measure, for highly developed and diversified economies such as Switzerland, there is no reason to challenge the benefits of international trade for the economy as a whole.

1.3 Switzerland's competitiveness worldwide

1.3.1 Measuring competitiveness

No single indicator can reliably be used to express "competitiveness". Even the most well-known international comparisons have not been able to produce uniform ranking lists.

Greater competitiveness means being able to increase productivity and maintain prosperity at an internationally high standard. No single indicator can reliably be used to express "competitiveness". A country that improves in a relative sense will be considered just as competitive as a country that maintains its position among high-income countries: Indeed, when China's GDP per capita increases by 10% and Switzerland's GDP per capita increases by 2%, a Swiss housewife will have gained approximately the same amount of purchasing power as a Chinese housewife, because of Switzerland's much greater initial level of prosperity.

Instead of measuring the level of productivity and changes in productivity as the criteria for successful performance, one can measure factors determining competitiveness. Several well-known institutions have condensed the large number of qualitative and quantitative factors considered to be determinants of greater market share and prosperity into internationally comparable key indicators. However, these institutions find themselves confronted with the challenging dilemma of how to weight the factors assigned to each key indicator. The fact that the ranking lists are not uniform among institutions is a manifestation of the divergent views regarding the appropriate weighting of each factor.

In the paragraphs that follow, we shall provide an overview of the most widely consulted international ranking lists.

1.3.2 World Economic Forum's "Global Competitiveness Index"

Due to its stability, Switzerland ranks 2nd in the WEF's ranking list. Nevertheless, foreign trade policy measures still need to be taken to address weak points.

The World Economic Forum (WEF) produces the "Global Competitiveness Index"[7], a ranking list that measures the worldwide competitiveness of countries. This ranking list relies on over a hundred qualitative and quantitative factors based on economic theory, which, according to growth expert Xavier Sala-i-Martin, have a positive impact on productivity and competitiveness. Derived from publicly available statistical data and WEF's Executive Opinion Survey, these factors are first grouped into twelve key indicators of competitiveness, which WEF refers to as "pillars" (see Table 1.1). These key indicators are then used to produce a ranking list of countries. According to WEF, the twelve pillars are interdependent. An increase in competitiveness is therefore most likely to occur when policies are

7 WEF (2007): Global Competitiveness Report 2007–2008

based on all of these pillars. As a case in point, an outstanding primary education system does not lead to greater productivity unless there is a functioning labour market.

According to WEF estimates, Switzerland scores remarkably well. In the latest ranking list, Switzerland is the 2nd most competitive nation, just behind the United States and just ahead of the Scandinavian countries of Denmark and Sweden (among 131 countries considered).

Switzerland's strengths can be found in its capacity for innovation and its highly developed business operations. Also worth mentioning are the outstanding transparency and reliability of its state institutions, its good infrastructure and its very flexible labour market. The ranking shows that Switzerland holds a strong position in almost every respect: matching eleven of the twelve pillars, Switzerland is in the top quintile of the countries considered.

Compared to some countries, Switzerland has a higher level of national debt, which according to the WEF methodology has a negative impact on the "macroeconomic stability" pillar. Also considered negative are corporate governance conditions (e.g. minimal shareholder's rights), which affect the "financial market sophistication" pillar.[8] Detailed analysis also reveals weaknesses in Switzerland's foreign trade policy: Switzerland scores 118th in terms of the cost of its agricultural policy and 80th in terms of trade barriers.

8 This estimate does not contradict the fact that Switzerland has a highly developed banking system.

Table 1.1

WEF's twelve key indicators of competitiveness, Swiss ranking worldwide

Pillar	Swiss ranking among 131 countries
Institutions	4
Infrastructure	4
Macroeconomic stability	22
Health and primary education	14
Higher education and training	7
Goods market efficiency	6
Labour market efficiency	3
Financial market sophistication	21
Technological readiness	3
Market size	37
Business sophistication	2
Innovation	2
Global Competitiveness Index, overall score	**2**

Source: WEF

1.3.3 IMD's "World Competitiveness Scoreboard"

The IMD ranks Switzerland as the 6th most competitive nation. In terms of intensity of competition, the IMD sees room for improvement.

The International Institute for Management Development (IMD) in Lausanne also produces a ranking list to compare the competitiveness of countries worldwide. This ranking list is called the "World Competitiveness Scoreboard".[9] While both the WEF and IMD base their measurements on similar data sets, the data sets are aggregated using a somewhat different methodological approach. While WEF groups over one hundred criteria into twelve key indicators (i.e. its twelve "pillars"), IMD groups over three hundred criteria into four key indicators, which it calls "competitiveness factors" (see Table 1.2).

Table 1.2

IMD's four key indicators of competitiveness, Swiss ranking worldwide

Factor	Swiss ranking among 55 countries
Economic performance	14
Government efficiency	3
Business efficiency	9
Infrastructure	2
World Competitiveness Scoreboard, overall score	**6**

Source: IMD

In its overall assessment, the IMD places the United States at the top of its ranking list, followed by Singapore and Hong Kong. Switzerland fares rather well under IMD scrutiny and is ranked 6th out of a total of 55 countries. The IMD also mentions Switzerland's stability as an important determinant of competitiveness.

9 IMD (2007): World Competitiveness Yearbook 2007

Table 1.3

IMD's assessment of Switzerland's competitive strengths and weaknesses, Swiss ranking worldwide

Criteria	Swiss ranking among 55 countries
Strengths	
Health and environment	1
Fiscal policy	2
Finance	3
Weaknesses	
Prices	42
Direct investment flows from abroad	21
International trade	19

Source: IMD

Detailed analysis shows that IMD considers Switzerland's strengths to lie in its standard of living (health and the environment), its well functioning financial sector and its tax system. Switzerland also stands out in terms of research and its flexible labour market, which has resulted in a high level of labour participation. The weaknesses include its rather moderate economic growth and high prices compared to other countries, which are the result of little domestic and international competition in some economic branches. The high level of agricultural subsidies may be mentioned as one example of this.

1.3.4 KOF's analysis of Switzerland's competitiveness

Based on KOF analysis, the Swiss economy is in a fairly solid competitive position.

In addition to the worldwide resonance that WEF and IMD have had with their ranking lists, there is an empirical analysis produced by the ETHZ's Economic Research Centre (KOF)[10] that focuses specifically on Switzerland. KOF also feels that that the key to improving competitiveness lies with increasing productivity.

Unlike the WEF and IMD, KOF does not only consider competitiveness from a macroeconomic standpoint, but it examines also the competitiveness of individual sectors and branches within the Swiss economy. This analysis culminates in a strengths/weaknesses profile for the Swiss economy (Table 1.4). Based on this profile, KOF draws the conclusion that the competitiveness of the Swiss economy is basically high. KOF also mentions various measures that have already been taken to increase the competitiveness of the Swiss economy, such as the bilateral agreements signed with the EU and the creation of universities of applied sciences. According to these experts, however, there is a need for increased spending on education and research. Greater efforts are also needed to bring the federal budget under control to ensure long-term financial stability.

Table 1.4

KOF's assessment of the strengths and weaknesses of the Swiss economy

Criteria	Strengths	Weaknesses
Labour productivity	Compared to other countries, good progress in *export-oriented branches, such as* industry, hotels and restaurants, financial and business services.	Slow progress in *domestically-oriented branches.* Particularly weak in terms of productivity growth are Switzerland's protected agricultural sector and the only partially liberalised infrastructure branches: transport and communications, and energy.

10 Arvanitis, S., H. Hollenstein and D. Marmet (2005): Internationale Wettbewerbsfähigkeit: "Wo steht der Standort Schweiz? Eine Analyse auf sektoraler Ebene", (*"International competition: How does Switzerland compare? A Sectoral Analysis"*, in German only), vdf? Hochschulverlag AG at ETH Zurich, Zurich.

Criteria	Strengths	Weaknesses
Innovation performance	According to KOF, Switzerland is *Europe's most innovative economy,* Swiss SMEs and the services sector in particular are strong.	*Long-term trend* indicates a decline in industrial prominence, innovative products no longer account for largest portion of sales in international comparison.
Price-based competitiveness	Compared to other countries, *labour costs* are increasing at only a moderate rate.	Relatively strong exposure to *exchange rate fluctuations.*
Quality-based competitiveness	Switzerland holds a strong position in *markets for sophisticated goods*, particularly chemicals, electrical engineering, electronics/instruments, metalworking.	*Slight weakness* (worsening of conditions in the plastics industry).
Technology-based competitiveness	Very strong position in *pharmaceuticals, scientific instruments* (medical technology) and medium to high-tech goods (*engineering*). Strong position in knowledge-intensive branches within the *service sector.*	Weak position in *information and communications technologies.*
Internationalisation of research and development	Extensive *R&D activities conducted by Swiss companies abroad*. These activities are considered to be complementary and serve to enhance Switzerland's position as an R&D location.	No particular weaknesses indicated.
Structural conditions	Limited regulation of the *labour market*, labour market bottlenecks have been eased thanks to the bilateral agreement on the free movement of persons.	Compared to other countries, *heavy regulation of product markets*, which has a negative impact on productivity.
Tax burden	Switzerland holds a *good position* as far as corporate and personal income tax are concerned	Trend towards a reduction of *corporate taxes* outside Switzerland has a negative impact on Switzerland's relative position.

Source: Taken from Arvanitis et al. (2005)

KOF also considers that Switzerland could tap into considerable productivity potential by continuing to liberalise its product markets.

According to KOF, a weakness affecting Switzerland's competitive position is the heavy regulation of product markets. In terms of productivity increases in heavily regulated economic branches, Switzerland has performed below average since 1990. This has undermined the competitiveness of Switzerland's export-oriented branches. KOF feels that greater liberalisation of product markets will unleash a considerable productivity potential. KOF specifically mentions energy, transportation/communications and agriculture.

1.3.5 Standard of living and environment as determinants of long-term competitiveness

As a location, Switzerland offers a good standard of living. Supported by a sustainability policy, this can have a positive impact on competitiveness.

The three international comparisons described above are mainly based on key indicators used to compare economies around the world. However, the ability to sustainably maintain a high standard of living is another important determinant of competitiveness. Organisations such as the United Nations have drawn international comparisons that take such considerations into account. The Human Development Index (HDI) assesses the standard of living in 177 countries.[11] In addition to PPP-adjusted GDP per capita, the ranking list also takes into account the life expectancy and level of education of the population. Switzerland fares rather well, holding the 9th position on the UN's HDI ranking list. For WEF and IMD, Switzerland's standard of living is reflected in its ability to attract qualified labour.

11 UNDP (2006): Human Development Report 2006/2007.

Though also relevant to competitiveness, the environment is not taken into account in the HDI ranking list. To determine how well Switzerland compares in this respect, the Environmental Performance Index (EPI) is used. This widely consulted ranking list is produced by the University of Yale in conjunction with WEF. Here Switzerland also scores quite well. In 2006, Switzerland ranked 16th out of a total of 133 countries.[12] Of 30 OECD member countries, Switzerland had the lowest CO_2 emissions per GDP and below-average emissions per capita. By taking adequate energy policy measures (e.g. use of new technologies) in transport and construction, Switzerland will be able to reduce greenhouse gas emissions even further. In terms of environmental policy, Switzerland is therefore in a good position to maintain its long-term competitiveness.

1.3.6 Overall assessment and conclusions

Despite different methods and assessments, all of the above-mentioned analyses agree that Switzerland is among the most competitive locations worldwide.

The experts generally agreed that the competitive strengths of the Swiss economy lie in the following areas:

- Its stable and transparent institutions;
- Its flexible labour market and – thanks to the bilateral agreement on the free movement of persons – fewer labour market restrictions. Switzerland's appeal for foreign employees is also mentioned;
- Its fiscal policy, which places a comparably low tax burden on company profits;
- The capacity of Swiss companies for innovation and their determination to provide top-notch quality are reflected in the high productivity of Switzerland's export-oriented economic branches;
- Its well-built and reliable infrastructure.

The experts unanimously agree that the competitive weaknesses of the Swiss economy lie in the following areas:

- Its highly regulated product markets, especially in relatively protected and subsidised economic branches (i.e. agriculture and infrastructure);
- A consequence of the foregoing, a comparably low intensity of competition on the domestic market, lower productivity in domestically-oriented branches, and high cost of living.

The general consensus in the various analyses is that Switzerland can increase its competitiveness by adopting the following economic policy measures: first, increase competitive pressures on the domestic market by lowering market access barriers; and second – and this has a direct bearing on foreign economic policy – open up relatively well-protected economic branches to international competition.

The following paragraph shows the degree of openness of Swiss economic branches and draws a correlation between the degree of openness of these branches and their level of labour productivity.

1.4 Competitiveness and integration of Swiss economic branches in international markets

Generally speaking, Switzerland is well integrated in the world economy; nevertheless, major differences between individual economic branches subsist. Trade barriers undermine the competitiveness of agricultural and food branches.

If a country is both well-integrated in the world economy and is highly specialised, it will automatically also have a high import penetration. This is because it is not possible for a country to specialise in a large number of economic branches. Invariably, the country becomes dependent to a certain degree on imports. Import penetration is defined as the percentage of domestic demand that is satisfied by imports in the economic branches considered.[13]

A value near 100 for a given branch means that domestic demand is satisfied mainly by imports and that domestic production is primarily used for exports. As a country cannot only import, but needs to export as well, it is not possible to assess the international competitiveness of an economic branch without taking the export performance of these branches into account. Export propensity is defined as the percentage of exports in the given branch's total production.

Fig. 1.4 assesses international competitiveness by drawing a correlation between both variables (i.e. export propensity and import penetration): the first looks at export markets and the second at Switzerland's domestic market. If an economic branch is located in the upper right quadrant, it means that the economic branch does a great deal of

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12 Yale Center for Environmental Law & Policy, Center for International Earth Science Information Network (CIESIN) (2006): Pilot 2006 Environmental Performance Index.

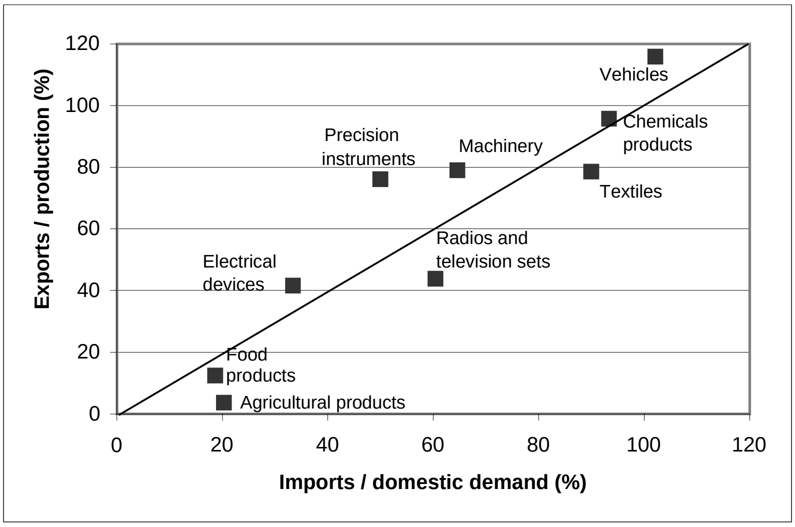
13 Domestic demand is defined as domestic production plus imports minus exports.

intra-industrial trade. This is a characteristic feature of developed countries, in which similar but differentiated products are simultaneously exported and imported. Generally speaking, this is the pattern observed with capital-intensive and high-tech goods requiring highly skilled workers. For a small economy such as Switzerland, the international division of labour is essential since this enables the country to make the most of specialisation, economies of scale and the greater diversity of intermediate and final goods.

A straight line is drawn diagonally across the chart. The differences between export ratios and import penetration in the various economic branches reveal that Switzerland is highly specialised in precision instruments, chemicals and machinery. In these branches, the export propensity is high. In contrast, Switzerland has a higher import penetration when it comes to radios and television sets and textiles. This is a typical feature of economic branches where Switzerland has a comparative disadvantage.

Figure 1.4

Export propensity and import penetration, goods, 2001[14]



Source: OECD's STAN indicators for Switzerland, 2001

In addition to the above-mentioned economic branches, Switzerland has also a comparative disadvantage when it comes to the agricultural sector and natural resources (not shown in Fig.1.4) since Switzerland needs to import fossil fuels.

Agricultural products and food products can be found in the lower left quadrant of Fig. 1.4. Here we observe a clearly different production pattern from the one observed for the other goods on the chart.[15] The low level of import penetration is the consequence of high tariff and non-tariff trade barriers. The fact that such barriers also lead to lower competitiveness on export markets is demonstrated by the low export ratios. Although food products on the chart are far removed from the other types of goods, they are nevertheless closer to the diagonal line than agricultural products. This difference can be explained by the high level of competitiveness of a few companies specialised in the processing of agricultural products. It can be seen that in every branch exposed to intense competition from imports, there are a number of well performing companies making use of the latest technological developments.

Specialisation leads to a better allocation of natural, industrial, financial and human resources. In the short term, however, it will lead to adjustment costs.

International trade not only enables companies to take advantage of economies of scale and less expensive intermediate inputs, it also allows them to benefit from the transfer of knowledge and technology. As this exchange intensifies, the most productive companies will grow and less productive companies will either be forced to pull out of the market or will be taken over by more competitive rivals.

According to the OECD, while international economic integration leads to job displacement across economic branches and occupational groups, it does not result in a general reduction of employment.[16] A flexible labour market such as the one found in Switzerland is key to a smooth reallocation of resources from less productive economic branches to those with more added value. On the other hand, it is likely that increased trade with low-wage countries, combined with technological advances, has contributed to wage disparities in several other OECD member countries.[17]

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[14] When interpreting the data, please note that the value of exports may exceed the value of production because export figures include re-exports. This can skew the results when trade data per product is converted to trade data per branch.

[15] The data shown here is in CHF. In terms of food supply, the Agricultural Report 2007 establishes Switzerland's self-sufficiency rate at 59% (2005). This figure, however, is not comparable since it is derived from a calorie-based calculation.

[16] Chap. 1 of OECD Employment Outlook 2005 entitled, "Trade-adjustment costs in OECD labour markets: a mountain or a molehill?": Paris.

[17] Chap. 3 of OECD Employment Outlook 2007 entitled, "OECD workers in the global economy: increasingly vulnerable?": Paris

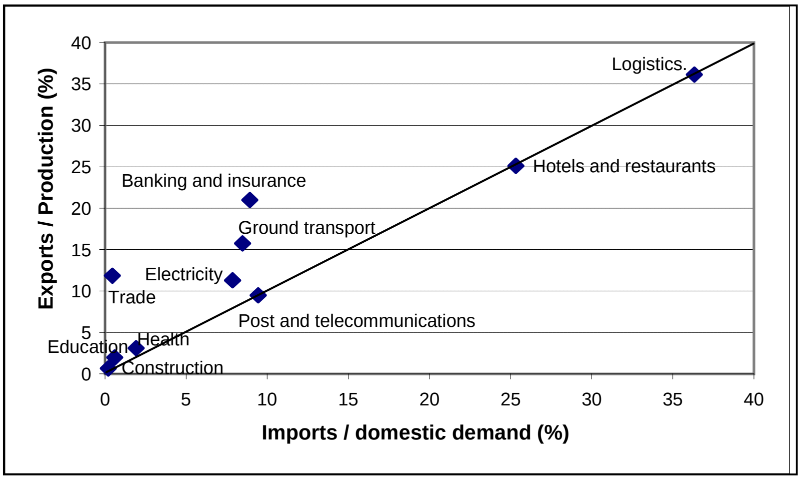
The integration of services into the world economy offers great potential, especially for Switzerland as a service-oriented economy.

Although the tertiary sector has developed in a very dynamic fashion, international trade in services remains far behind international trade in goods. This is partly explained by the fact that services are generally more difficult to trade than goods, since service providers and consumers often need to meet personally. However, the relatively high degree of regulation of service branches is another reason why trade in services lags behind trade in goods. Figure 1.5 shows major differences in openness between the various service branches.

The competitiveness of banking and insurance, logistics and tourism can be seen in the relatively high export propensity. The low import penetration in the banking and insurance branch is an indication that most of the domestic demand may already be satisfied locally. The infrastructure (i.e. post and telecommunications), education and health branches show a low export propensity and import penetration. This is partly due to missing data and partly due to the lack of opportunities for international trade in these branches. Other reasons need to be mentioned as well, such as the high degree of regulation in service markets and a type of public financing that is not conducive to competition.

Figure 1.5

Export propensity and import penetration, services, 2001



Source: OECD's Input-Output Tables for Switzerland, 2001, SECO calculations

Although the results obtained for the various service branches were partly influenced by difficulties in gathering data on trade in services,[18] the conclusions that may be drawn from Figure 1.5 match the findings of the analysis comparing liberalisation of the service sector in Switzerland with that of EU member states.[19] These comparisons show that Switzerland is among the most liberal in terms of banking services, business services and rail freight transport services. However, less progress in terms of reform has been made in infrastructure services, electricity supply, rail passenger transport services, postal services and telecommunications. These economic branches are less exposed to international competition. As far as health and education services are concerned, where there is still little international trade, Switzerland is only slightly behind the most open EU member states.

The branches that are most open to foreign markets are also the ones with the highest hourly productivity.

Differences in the exposure of economic branches to international competition have a significant impact on Switzerland's economic performance. Figure 1.6 shows the level of productivity in individual branches. Here again we find good performance in manufacturing, banking and insurance. The economic branches that are lagging behind are mainly those that are shielded from competition, partly because of tariff and non-tariff trade barriers. This is the case for agriculture, difficult-to-trade personal services, health and construction.

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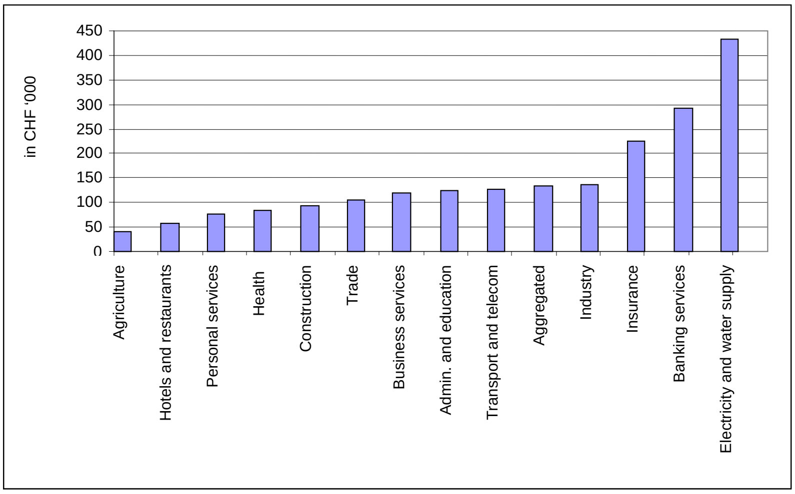
18 These findings should be interpreted with care since not all of the necessary data could be gathered. Examples include data on trade in business services, which were very incomplete despite the fact that this branch has experienced strong growth in recent years.

19 SECO (2005): Bericht zur Dienstleistungsliberalisierung in der Schweiz im Vergleich zur EU *("Comparison of Liberalisation in Switzerland and the EU"*, in French and German only)

Figure 1.6

Swiss productivity per full-time equivalent, by branch, 2006



Source: FSO, SECO

The high level of productivity in electricity and water supply can be explained by the fact that these branches are extremely capital-intensive. In contrast, the low level of productivity in tourism is the result of the relatively high proportion of unskilled workers employed in that branch. Switzerland benefits from its direct investments abroad and remains an attractive location for manufacturing.

Analysis of trade in goods and services is not enough to give us a complete picture of Switzerland's integration in international markets. Direct investment by Switzerland abroad also plays an important role. Specifically, a large proportion of trade in services takes place through commercial presence.[20] As such, they are closely correlated with direct investment in the service sector. The main observation regarding direct investment is that Switzerland is a net exporter of capital. From a total of CHF 635 billion that was directly invested abroad, Switzerland earned CHF 69 billion in 2006.[21] While the presence of Swiss companies abroad is above average, this does not mean that Switzerland is unable to draw foreign direct investment into the country. Quite the opposite in fact. In 2006 foreign direct investment in Switzerland reached CHF 266 billion (see Table 1.5). Also in 2006, a total of 351,000 employees in Switzerland worked for companies with foreign ownership.

Table 1.5

Foreign direct investment in Switzerland, by branch, 2006, in% (100% = CHF 266 billion)

Manufacturing	**17.9**
Chemicals and plastics	8.6
Metals and machinery	2.6
Electronics, energy, optics, watchmaking	4.7
Other manufacturing and construction	2.1
Services	**82.1**
Trade	13.2
Finance and holding companies	45.3
Banks	12.1
Insurance	6.3
Transportation and communications	2.7
Other services	2.5
Total	**100.0**

Source: SNB

20 Mode 3 based on definition used by GATS (General Agreement on Trade in Services)

21 SNB (2007). "Development of Direct Investment in 2006". Zurich: SNB

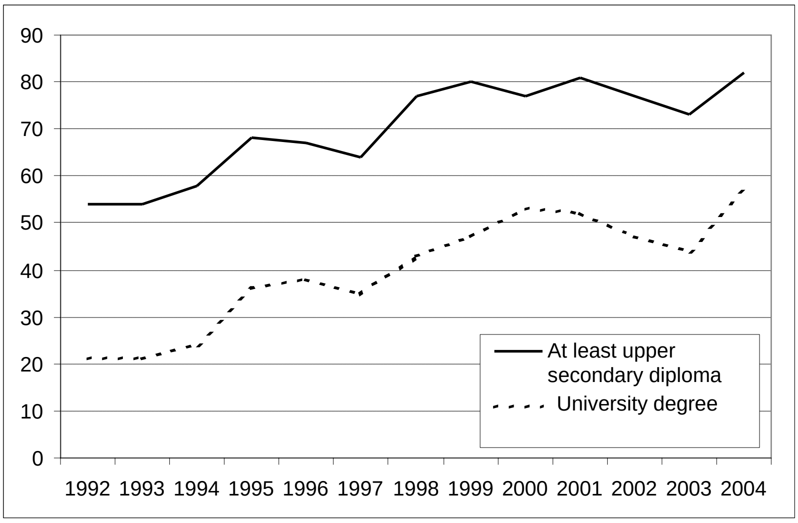
In terms of attractiveness for international companies, a study of Switzerland's appeal found that the country is currently the preferred location in Europe for international and European headquarters, research institutes and administrative and accounting back offices.[22] Among the key factors most frequently mentioned were Switzerland's macroeconomic stability, its strong diversity and intercultural tradition, the quality of its infrastructure, its flexible labour legislation and low taxes.

In order for Switzerland to remain competitive in high value added branches, Swiss companies need to tap their innovation potential by gaining easy access to specialists and highly qualified workers.

Back in the 1990s, it was decided to restrict recruitment of foreign workers to only nationals from countries with comparably high real wages. At the beginning of this decade, the Swiss-EU bilateral agreement on the free movement of persons has enabled companies in all economic branches to recruit EU nationals. These two policy measures have clearly enabled Switzerland to continue on its path towards specialisation in economic branches that require highly skilled workers. Figure 1.7 below shows how foreigners taking up employment in Switzerland over the past 15 years have become increasingly qualified.

Figure 1.7

Education level of employed foreign resident population, 2nd quarter 2005, depending on year of arrival in Switzerland, in % [23]



Source: Federal Statistical Office (FSO), Employment Statistics.

Of the total number of immigrants who arrived in Switzerland in 1992 (and were still employed here in the second quarter of 2005), only 20% had a university degree. By 2005, the proportion of newly arriving immigrants holding a degree at university level had swelled to over a half. A similar trend for immigrants with at least an upper secondary diploma was also observed over the same period. In terms of knowledge transfer, integration in the world economy is also determined by the cross-border flow of workers and the regulations that encourage/discourage such flows.

1.5 Economic policy implications

Greater openness to international competition ensures Switzerland's economic growth and competitiveness.

Despite the different interpretations of the term "competitiveness" and measurement methodologies, the most prominent competitiveness studies all reach the same conclusion, a conclusion that has a direct bearing on foreign trade policy: Switzerland needs to open up its economic branches in order to take advantage of the benefits of international trade, increase the productivity of its economy and raise its competitiveness to improve the standard of living of its inhabitants and the success of its companies. If the necessary reforms are undertaken, Switzerland will remain among the world's most competitive nations.

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22 Ernst & Young (2006): Swiss Attractiveness Survey – What Foreign Companies Say. Zurich.

23 Only foreigners meeting the following three criteria were considered: aged 18 and over; holding at least a one-year Swiss residence permit; and employed in 2005.

As far as trade in goods is concerned, there is still room for improvement, especially in the agricultural sector and in the food industry. In the services sector, which requires highly skilled workers, Switzerland should be able to expand its comparative advantage beyond the financial and business services if the market is opened up to an even greater extent. In some segments of the infrastructure branch, there is a need for greater international openness. This also holds true for health and education, where there is still little international trade. Greater openness in these branches will enable Switzerland to capitalise on its strengths. In the public sector, there is still room for private initiatives and corresponding capital spending on infrastructure and means of production. This can be achieved by creating a competitive environment that doesn't discriminate between established suppliers owned by the State and new market entrants.

Continued implementation of the government's growth policy leads to greater competitiveness.

Well targeted growth policy measures should operate at the intersectoral level and will require the following:

- dismantling border protection;
- continued internal liberalisation;
- improving the qualifications of the labour force;
- making the most of the free movement of persons.

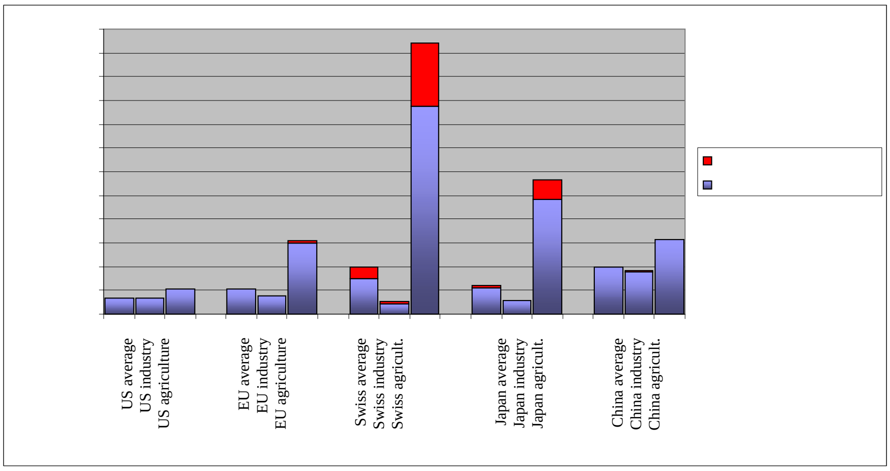
Dismantling border protection

By continuing to open up Swiss markets to imports, as provided for by the upcoming revision of the Federal Act on Technical Barriers to Trade (SR 946.51), legislation can enable companies to purchase intermediate inputs at the lowest possible cost. When combined with agricultural reform (see Chap. 5.3), this will help lower the high cost of living faced by Swiss households.

A crucial factor for companies is being able to operate from Switzerland while gaining access to foreign markets. Given the perspective of further liberalisation of the agricultural sector at an international level and following the Agricultural Policy 2011, it will be necessary to find political solutions in order to decrease, in a financially and socially acceptable way, the high level of protection of the agricultural sector (see Fig. 1.8). This reform is needed to enable Switzerland to address key foreign trade policy challenges such as the conclusion of the WTO Doha Round as well as further free trade agreements covering goods, services and investment.

Figure 1.8

Bound and applied tariff rates, Swiss position worldwide, ad valorem equivalents (%), simple average



Source: WTO tariff database 2006

Continued internal liberalisation

Internal liberalisation will considerably strengthen Switzerland's position as a business location. Thanks to implementation of infrastructure reforms, companies – and households – will be able to benefit from a broad range of high-value infrastructure services at a lower price.

Consideration must also be given to the increasing amount of tax competition (see EU–Switzerland tax dialogue, Chap. 3.1.2). In order to maintain a favourable fiscal climate, expenditure adjustments are needed to stabilise the ratio of public expenditures to GDP. At the same time a number of tax systems need to be reformed accordingly.

Improving the qualifications of the labour force

Knowledge acquisition and exchange go hand in hand. Increased and more efficient use of public resources in education should enable Switzerland to become more specialised in human capital-intensive economic branches. The international mobility of highly skilled and specialised workers is very important for companies and their employees because it ensures the transfer of knowledge, among other things. Free movement of persons within the EU will play an important role in this respect.

Making the most of the free movement of persons

Implementing the Swiss-EU bilateral agreement on the free movement of persons in the last legislative period has helped to strengthen Switzerland's advantageous labour market conditions, combining internal flexibility with openness towards the European labour market. The interplay of these two key factors makes Switzerland more appealing as an economic hub. In the next legislative period, the Swiss-EU bilateral agreement on the free movement of persons will need to be confirmed along with the other commitments from the first series of bilateral agreements (see Chap. 3.1.1.). This should be done without losing sight of the crucial importance of labour market flexibility in Switzerland.

Further implementation of the foreign trade policy strategy

The introductory chapter of the Federal Council's Foreign Trade Report 2004 describes the strategy underpinning its foreign trade policy. Foreign economic policy is linked to growth policy by the fact that carefully timed reforms of economic branches in Switzerland that have thus far been shielded from competition will open up opportunities in future negotiations.

With regard to opening up foreign markets, priority has been given to multilateral agreements, since the multilateral approach best suits the needs of medium-sized and open trading nations (see Chap. 2.1).

Given the rapid growth in the number of preferential trade agreements being signed across the globe, there is also a need for continued expansion of Switzerland's network of treaties both on a multilateral basis – through the EFTA – as well as on a bilateral one (see Chap. 4).

Given the increasing importance of service-sector branches in domestic and international trade, Switzerland intends to strive for a comprehensive agreement that covers trade in goods, trade in services, market access for investments, and improved protection of intellectual property rights. As one of the word's leading countries of origin as far as direct investment is concerned, Switzerland has tremendous interest in making sure that the interests of Swiss investors are adequately protected in the target country (see Chap. 5.2).

In addition, Switzerland seeks to expand its international cooperation activities in the fields of science and education (see Chap. 3.1.1). In its dealings with the EU, Switzerland works to broaden its agreements in education, since a comprehensive network of bilateral agreements adds to the competitiveness of the Swiss economy. Accordingly, Switzerland's bilateral ties with the EU should be regularly subject to an overall assessment.

Switzerland is currently considering the possibility of entering into a Swiss-EU free trade agreement covering agricultural goods and food products. This agreement would offer major benefits to consumers. In addition to lifting import duties and export subsidies, the agreement would also do away with non-tariff trade barriers at all levels of the agribusiness production chain. From the producer's perspective, such an agreement with the EU would give the Swiss food industry virtually unrestricted access to the largest market of consumers with strong purchasing power. From a macroeconomic standpoint, the agreement would also complete the liberalisation process by including the two economic branches mentioned in the various competitiveness ranking lists as being most in need of liberalisation and openness.

Based on the foregoing, the following chapter of the Foreign Trade Report is devoted to the many initiatives that Switzerland is currently taking to ensure its further integration in the world economy