



The happy variety of capitalism

April 25, 2007

Characterised by an array of commonalities

Nearly every OECD country has achieved a high level of material prosperity. The questions now facing individuals and societies are which priorities to set for the future, which objectives to target with their reform processes and how to promote the implementation and communication of reforms – capitalism differs from country to country.

Happiness research can provide some pointers in this quest. The happy variety of capitalism is one of the four varieties identified by a systematic analysis of 22 rich countries.

The happy variety of capitalism: Australia, Switzerland, Canada, the UK, the US, Denmark, Sweden, Norway and the Netherlands as well as (to a lesser degree) Finland and New Zealand have organised society and institutions in such a way that they provide the conditions that are important for human happiness.

The less happy variety of capitalism: Germany, Spain, France, Belgium and Austria trail behind the happy countries on a number of societal and economic counts, and their populations are less happy.

The unhappy variety of capitalism: Portugal, Italy and Greece have hitherto failed to advance the key conditions for human happiness.

The Far Eastern variety: Japan and Korea organise their society and institutions very differently to the other countries surveyed.

Over the last ten years it is above all the Irish, the Spanish and the Scandinavians that have succeeded in implementing considerable happiness-enhancing changes. If the right priorities are set, other countries can also make corresponding progress going forward.

www.
dbresearch.com

Author

Stefan Bergheim
+49 69 910-31727
stefan.bergheim@db.com

Editor

Stefan Schneider

Technical Assistant

Pia Johnson

Deutsche Bank Research
Frankfurt am Main
Germany
Internet: www.dbresearch.com
E-mail: marketing.dbr@db.com
Fax: +49 69 910-31877

Managing Director

Norbert Walter

Indicators for a happy society

Result of a cluster analysis of 22 countries

1. High degree of trust in fellow citizens
2. Low amount of corruption
3. Low unemployment
4. High level of education
5. High income
6. High employment rate of older people
7. Small shadow economy
8. Extensive economic freedom
9. Low employment protection
10. High birth rate

Source: Deutsche Bank Research

Contents

	Page
1. The happy variety of capitalism	
The four varieties of capitalism	3
Array of commonalities link happy countries.....	4
2. Happiness can be measured and compared	5
3. The varieties of capitalism	6
4. Ten indicators for a happy society	
1. High degree of trust in fellow citizens	7
2. Low amount of corruption	9
3. Low unemployment	9
4. High level of education.....	9
5. High income	11
6. High employment rate of older people	13
7. Small shadow economy	13
8. Extensive economic freedom	13
9. Low employment protection	13
10. High birth rate.....	14
5. Felix Australia	
Two reports on the well-being of Australians	16
6. Happiness-promoting changes are possible – as the past shows	17
7. Policy for a happier society	19

The two-digit ISO country codes

Code	Country	Code	Country
AT	Austria	IE	Ireland
AU	Australia	IT	Italy
BE	Belgium	JP	Japan
CA	Canada	KR	Korea
CH	Switzerland	NL	Netherlands
DE	Germany	NO	Norway
DK	Denmark	NZ	New Zealand
ES	Spain	PT	Portugal
FI	Finland	SE	Sweden
FR	France	UK	UK
GR	Greece	US	US

Source: International Organization for Standardization

1. The happy variety of capitalism

Decision about objective of reform process

Many societies in Europe and around the globe are faced with the question of the direction in which they wish to develop. This applies especially to many countries in Central and Eastern Europe that are torn between the US model and the various European alternatives. What is clear is that it is impossible to draw up a roadmap for reform without a clear objective.¹ Moreover, it is much easier to communicate reforms if all those involved have a previously defined, attractive objective on which to focus.

Material well-being becoming relatively less important

A shift in priorities can also occur over time. In countries with low incomes the population's primary focus is on material well-being: this applies to emerging markets at present in the same way as it did to Europe in the 1950s. But since the publication of Ludwig Erhard's "Wealth for All" 50 years ago per-capita incomes in Germany, for example, have more than quadrupled. During this period other factors probably became more important to people: stable social relations, job satisfaction, health etc. Already in 1960 Alfred Müller-Armack wrote an article calling for a "second phase of the social market economy" and advocating the development of a comprehensive societal concept.²

Not the end of history

The question that arises from the world-wide comparison of systems is whether history really has come to an end with the fall of the Berlin Wall, as suggested by Francis Fukuyama.³ This report indicates that today, too, there are still various societal and economic systems competing with one another – but fortunately not militarily, as was the case during the Cold War. Therefore, societies even today can decide how they wish to develop.

The four varieties of capitalism

Happiness research combined with varieties of capitalism

This report describes four varieties of capitalism: the happy, the less happy, the unhappy and the Far Eastern, and expresses a clear preference for the happy variety. In order to differentiate between the varieties the main insights from happiness research (collated on page 5) are combined with findings and methods of the analysis of the varieties of capitalism (summarised on page 6) and applied to 22 countries. We find, for example, that there is no single European model, but that considerable heterogeneity within the EU prevails.

Four different happiness levels with capitalism

(1) The happy variety of capitalism

Australia, Switzerland, Canada, the UK, the US, Denmark, Sweden, Norway and the Netherlands as well as (to a lesser degree) Finland and New Zealand have organised society and institutions in such a way that they provide the conditions that are important for human happiness. And on average people are indeed happier than in other countries.

(2) The less happy variety of capitalism

Germany, Spain, France, Belgium and Austria trail behind the happy countries on a number of societal and economic counts and their populations are less happy.

¹ See Bergheim, Neuhaus and Schneider (2004).

² See Schneider (2004), p. 148.

³ "What we may be witnessing is not just the end of the Cold War... but the end of history... the end point of mankind's ideological evolution". Fukuyama F., (1989). The End of History.

(3) The unhappy variety of capitalism

Portugal, Italy and Greece have hitherto failed to cultivate the key conditions for human happiness. Their inhabitants consider themselves to be less happy than the people in the first two varieties.

(4) The Far Eastern variety

Japan and Korea are different The Japanese and the Koreans organise their society and institutions very differently to the other countries surveyed. On some happiness-relevant criteria they do very well, but on others they score relatively poorly. And their populations say that they are relatively unhappy. Here, however, it is not clear how much of the difference can be attributed to divergent culture-based definitions of happiness, to which for example Diener and Tov (2007) draw particular attention for the Buddhist and collectivist Japan.

Moreover, a “Central and Eastern European variety” could also be identified, as in these transition countries the fall of the Iron Curtain has resulted in very low life satisfaction and many happiness-relevant variables are at relatively low levels.

Spain is a surprise

Categorising the 22 countries according to four varieties of capitalism serves up a surprise or two. For example, Spain finds itself in a group with the Rhine countries instead of with the other Southern European countries. And, above all, no distinction can be made between the Scandinavian and Anglo-Saxon countries – both models differ on criteria that are not really relevant to people’s life satisfaction such as the government spending share and income inequality.

Array of commonalities of happy countries**Many variables important for happiness**

The decision about what countries would be deemed to have which variety of capitalism was made with the aid of a series of variables. It turns out that the happy countries are characterised by a whole array of common features. The ten main features they have in common – besides a high level of happiness – are: strong trust in their fellow citizens, little corruption, low unemployment, high level of education, high incomes, high employment rates among older people, small shadow economy, high level of economic freedom, low level of employment protection, high birth rate.

Coincidence and complementarity

The question of causality is not key for this analysis, it is the coincidence that is important. Nor can any ranking or weighting for the individual elements be established: since we are talking about complementary characteristics this is not relevant either – in happy societies all the criteria are fulfilled. The long list shows that a comprehensive view needs to be taken of society, the economy, institutions and politics. Of course this list is not exhaustive – there are many other relevant variables and aspects. And of course it is partly subjective and coloured by the author’s pre-conditioning. But section 4 will demonstrate the theoretical link between each variable and happiness and provide evidence of the empirical link.



2. Happiness can be measured and compared

Happiness research attracting increasing attention

Interdisciplinary happiness research has become much more important in the last few years and is now even appearing in the leading economic periodicals such as the *Journal of Economic Perspectives* and the *Economic Journal*. Since 2000 there has also been a *Journal of Happiness Studies*. In October 2006 Deutsche Bank Research pointed out the increasing importance of happiness research for the worlds of science and politics – and that individual happiness has in any case always been right at the top of people’s wishlists.⁴

Happiness-boosting activities

- Start a new exercise program
- Be kind to others
- Foster intimate relationships
- Count your blessings
- See things in a positive light
- Set yourself meaningful goals
- Work in a challenging job
- Add variety to your life
- Develop your personality

Source: Lyubomirsky et al. (2005)

1

The approach and findings of happiness research differ significantly in some respects from those of textbook economics. Instead of acting like economists and only observing what people do, happiness researchers also listen to what people say. Together, psychologists, sociologists, physicians and economists have come to the conclusion that happiness or life satisfaction are indeed measurable and can be compared from one person to another.⁵ Up until now economists have steered clear of making this life satisfaction comparison.

A typical question is: “On a scale of 1 to 10, how happy are you overall with your life?” People who say they are relatively content or happy are also seen as such by their friends and acquaintances, have greater activity in the left prefrontal cortex of the brain and suffer from high blood pressure less frequently. Over the last few decades there has been barely any increase in the level of happiness – in contrast to GDP. This may be because people do not now spend more time than before engaged in activities that really promote happiness (see Tables 1 and 2 with lists of activities).⁶ Another reason could be that the prescribed scale always remained fixed between 1 and 10 (or 1 to 3 or similar) and that the interpretation of the scale values has changed over time. Whereas a big car was still a real status symbol in the 1960s, in many countries it is now almost the norm. For this report, however, it is not so important whether happiness is increasing over time as we focus on comparisons across countries in the year 2005.

Also many other conclusions of happiness research are not consistent with the standard models applied by economists. For example, preferences appear not to be constant but are dependent on the environment and even income.⁷ Comparing one’s situation with that of other people is relevant. People also appear to be prey to certain illusions that can prompt them to make the wrong decisions: the illusion that income and consumption make one happy tempt many people to work too much and neglect their private lives, which are the really important factors for their happiness.⁸

There are, however, factors that are important for human happiness via which one can influence one’s life satisfaction: a good education, health, stable social relationships (family and friends) or a committed occupation or leisure-time activity. Happiness can be influenced by focusing on these areas.

The effect of activities

	Time spent	Effect
Intimate relations	0.2	4.74
Socializing after work	1.2	4.12
Dinner	0.8	3.96
Relaxing	2.2	3.91
Lunch	0.5	3.91
Exercising	0.2	3.82
Praying	0.5	3.76
Socializing at work	1.1	3.75
Watching TV	2.2	3.62
Phone at home	0.9	3.49
Napping	0.9	3.27
Cooking	1.1	3.24
Shopping	0.4	3.21
Housework	1.1	2.96
Childcare	1.1	2.95
Evening commute	0.6	2.78
Working	6.9	2.65
Morning commute	0.4	2.03

Sample: 909 women in Texas

Source: Kahneman et al. (2004)

2

⁴ Measures of well-being: There is more to it than GDP. Bergheim (2006).

⁵ Good summaries can be found in the books by Bruni and Porta (2005) or Di Tella and MacCulloch (2006).

⁶ Possible explanation supplied by Kahneman et al. (2006).

⁷ Layard (2006), p. C30.

⁸ Kahneman et al. (2006) call it “focusing illusion”.

The empirical analyses carried out by happiness researchers usually concentrate on individuals: Is a person happier if he is married, buys a bigger car or gets a pay rise? For the comparison we seek to make between entire countries the variables of primary importance are those that can be measured as aggregates such as unemployment, level of education and income.

3. The varieties of capitalism

Focus on differences between societies

For decades economists, political scientists and sociologists have been trying to analyse and categorise the different manifestations of capitalism. This is an understandable pursuit given the vast societal differences between, for example, Sweden and the US. What we use from this literature is the method of cluster analysis, while the variables and differentiation categories are completely different. The country groups derived in this literature are also very different from those we describe here.

Differentiations made by Esping-Andersen and Hall & Soskice

Esping-Andersen outlined three worlds of welfare capitalism in 1990:⁹ firstly, the liberal, Anglo-Saxon world (US, UK etc.), secondly, the conservative, corporatist, continental European world (Germany, France, Belgium, Austria) and thirdly, the social democratic, Scandinavian world (Sweden etc.). Japan and the southern European countries of Italy, Greece, Spain and Portugal do not, however, fit in this typology.

Liberal vs. coordinated market economies

Hall and Soskice went one step further in 2001 and tried to explain why Anglo-Saxon nations such as the US are so successful in markets for high-tech goods.¹⁰ They differentiate between a liberal market economy (LME; archetype: the US), which specialises in high-tech goods on account of its societal and institutional structures, and a coordinated market economy (CME; Germany, for example), which specialises in incremental innovation in advanced technology segments. Table 3 shows their categorisation of the countries.

Varieties of capitalism according to Hall & Soskice

Liberal market economies (LMEs)

Australia	New Zealand
Canada	UK
Ireland	US

Coordinated market econ. (CMEs)

Austria	Japan
Belgium	Netherlands
Denmark	Norway
Finland	Sweden
Iceland	Switzerland
Germany	

Source: Hall & Soskice (2001), page 20

3

The five differentiation categories chosen by Hall and Soskice are the education system (university versus on-the-job), the financial system (stock exchange vs. bank), the relations between companies (competition vs. associations/joint ventures), pay bargaining (decentralised vs. centralised), and company organisation (management decision-making vs. consensus). In the LMEs activity at all levels is conducted more via the market, competition, prices and transparency. In a coordinated market economy, by contrast, the focus is on long-term relationships, networks, trust and co-operation. These categories are very different from the variables used in happiness research. That is why they will not be addressed any further below.

As a rule, empirical analyses (such as those conducted by Panuescu and Schneider (2004)) identify Austria, Belgium and France as definite CME countries along with Germany. The UK, Canada, New Zealand, Ireland and Australia are LMEs, while Sweden, Switzerland, the Netherlands and Finland displayed a tendency towards the LME variety in the 1990s, whereas Japan cannot be said to belong to either variety. Spain, Portugal, Italy and Greece constitute a Mediterranean variety that also cannot be categorised according to the LME-CME dichotomy. This of course

⁹ Esping-Andersen (1990). The three worlds of welfare capitalism.

¹⁰ Hall and Soskice (2001). Varieties of capitalism.

reduces the applicability of the framework. However, it does also illustrate that there is no single “European model” – as is also the case with the analysis of the happy varieties.

For Hall and Soskice there is not an optimum combination that all countries are heading for, but there are differing varieties that can co-exist. Convergence towards one type does not therefore have to occur. There are signs, though, that Germany, the archetypal CME country, has softened some elements of the CME side over the last ten years, but without having consistently and consciously established elements of the LME side to date. A similar question can also be posed regarding the happy variety of capitalism: Are the other countries heading in its direction? The answer is a cautious “yes”, as suggested by section 6.

4. Ten indicators for a happy society

Empirical analysis of happiness

The classification described on page 3 comprising the four varieties of capitalism is the result of an empirical analysis that incorporates the level of life satisfaction as well as the first five variables from the list on page 1. These variables (trust, corruption, unemployment, level of education and income) are closely correlated with a person’s life satisfaction, according to happiness research. In addition, there are a number of variables that underpin the resulting classification and for which there seems a plausible correlation with happiness. These are the items 6 to 10 in the list on page 1: employment rate of older people, share of the shadow economy, economic freedom, employment protection and the birth rate.

Happiness assessed via surveys

Ultimately, everything revolves around the core variable of happiness. Since there is still no international organisation that conducts surveys simultaneously with the same questions and the same scales, the data from various surveys had to be combined.¹¹ For Europe the data on life satisfaction comes from the EU’s Eurobarometer for 2005. For other countries national surveys were used, with the scoring scale converted to 1 to 10 in some cases. All the data are from the World Database of Happiness.¹²

Close correlation between trust and corruption

Since there is still some dispute about the measurability and comparability of happiness – especially when comparing very different cultures – the happiness variables will be supplemented by other criteria that have frequently been shown to have a close empirical correlation with happiness but which come from a variety of sources.

1. High degree of trust in fellow citizens

Scandinavians trust their fellow citizens

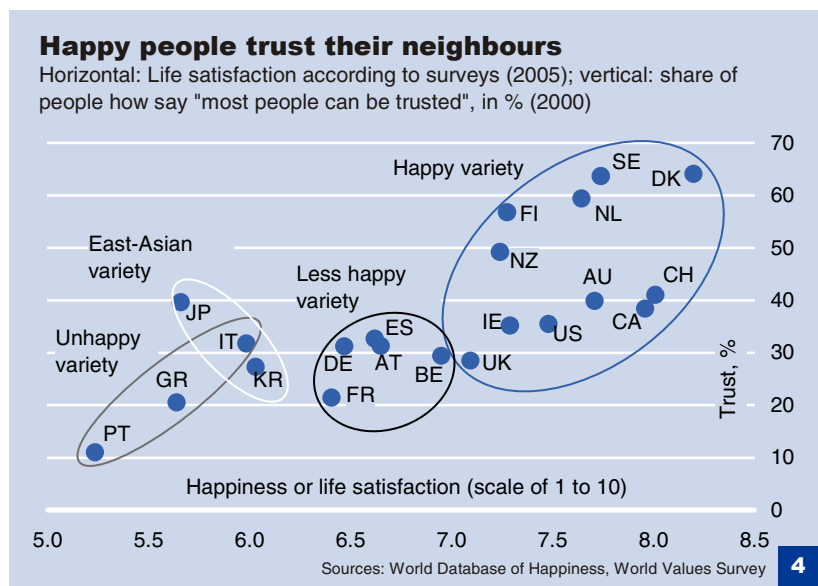
Trust in one’s fellow citizens is a good measure of the stability of a country’s social relations – and thus an important component of personal happiness. In the World Values Survey¹³ conducted every 10 years one of the questions asked is whether one can trust most people (in contrast to “you can’t be too careful”). In 1999 trust in one’s fellow citizens was particularly high in Scandinavia, the

¹¹ And the terminology has not yet been harmonised. In the literature and this report the terms well-being, happiness and life satisfaction are used synonymously. The philosopher Dan Haybron (2007) shows that although the concepts are different, the correlation is presumably very strong.

¹² www1.eur.nl/fsw/happiness/

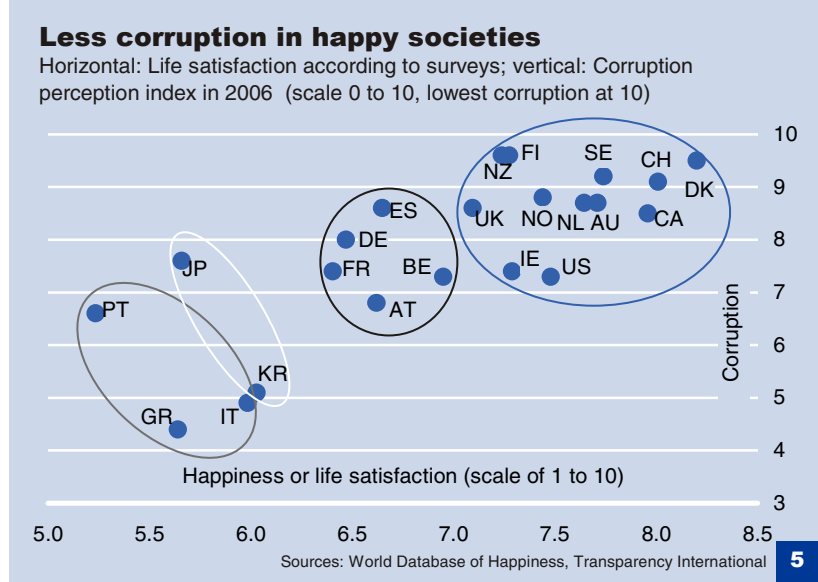
¹³ www.worldvaluessurvey.org

Trust in compatriots is especially high in Scandinavia



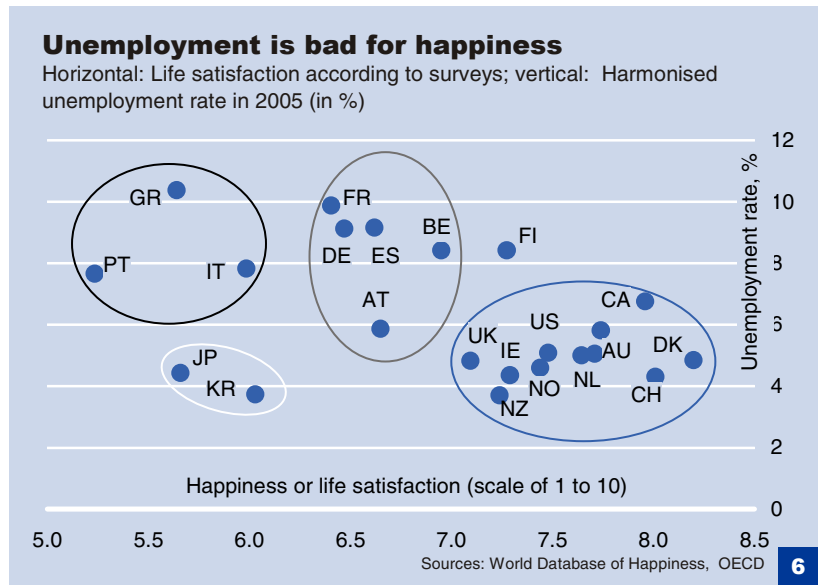
4

Corruption is relatively common in Asia and southern Europe



5

4% unemployment rate is feasible



6

Netherlands and New Zealand – all countries that are in the upper half of the happiness league table. Trust was particularly low in France, Greece and Portugal. The ellipses in Figure 4 distinguish the four different varieties of capitalism from each other.

Corruption a yardstick for quality of institutions

2. Low amount of corruption

Corruption is a sign of poorly functioning social and political institutions and thus also a sensible indicator of people's well-being and how they get along with each other.¹⁴ Since 2004 Transparency International has used surveys as the basis for determining the perception of corruption on a scale of 0 to 10 (10 indicating no corruption) annually in over 160 countries.¹⁵ The organisation sees a clear correlation between corruption and poverty, but does not address the correlation between corruption and general well-being.

In 2006 perceived corruption was particularly low in Scandinavia and many Anglo-Saxon countries (high readings between 8 and 10). For the less happy countries the average reading was below 8 and for the unhappy countries less than 6. The simple correlation coefficient between happiness and corruption for all 22 countries was 0.74. Figure 5 shows again a clear demarcation between the four different varieties.

Unemployment is a personal tragedy

3. Low unemployment

Unemployment is extremely damaging not only to the life satisfaction of the person directly affected but also to society as a whole. This has been established again and again by numerous reports since the mid-1990s. Also, the expansion of unemployment benefit since the 1970s has failed to narrow the gap between the life satisfaction of those out of work and those in work in Europe. Happiness research shows that unemployment is and remains a personal catastrophe and that – contrary to the view of many economists – it is not primarily the rational outcome of an optimisation calculation between work and state support.

Low unemployment rates in Scandinavian and Anglo-Saxon countries

According to the harmonised unemployment statistics, ten of the 22 countries reported rates of between 4% and 5% in 2005 (see Figure 6). This level also appears to be achievable for big countries, which underlines how incorrect the still oft-asserted claim in Germany is that "we are running out of jobs". Figure 6 shows a clear distinction between the happy and the less happy countries with Austria and Finland the exceptions. This diagram makes it particularly clear how special the situation is in Japan and Korea: low unemployment but nevertheless low life satisfaction. One possible explanation could be that unemployment in these countries remains hidden inside companies and does not appear in the official statistics. The low labour productivity in Japan and Korea is consistent with this theory.

Educated people value happiness-promoting activities more highly

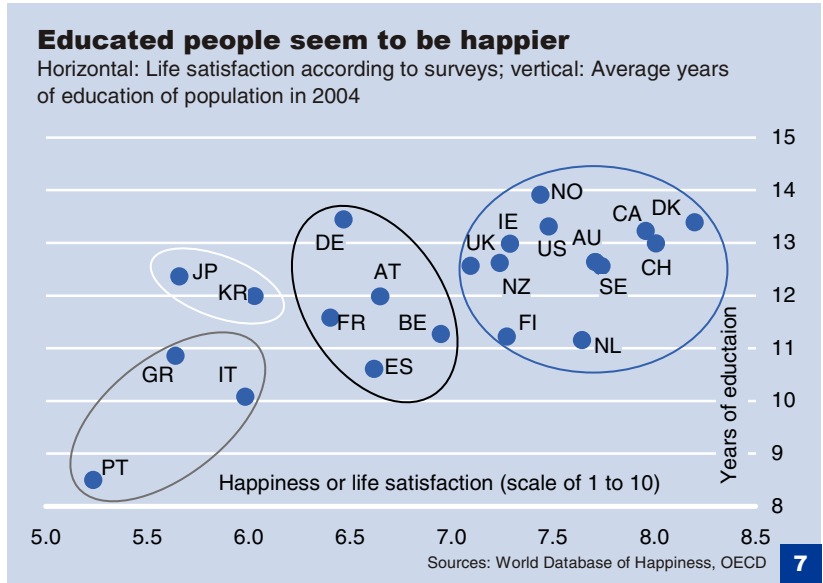
4. High level of education

Education is positively correlated with happiness in all empirical analyses. This may be because better-educated people tend to give greater priority to activities that make them happy or reflect more often on how good their lives are. The most general measure of the level of education is the average number of years of schooling as published annually by the OECD in its "Education at a glance" report. Its correlation with life satisfaction and also income per capita is 0.7, and with corruption it is 0.6. The average duration of

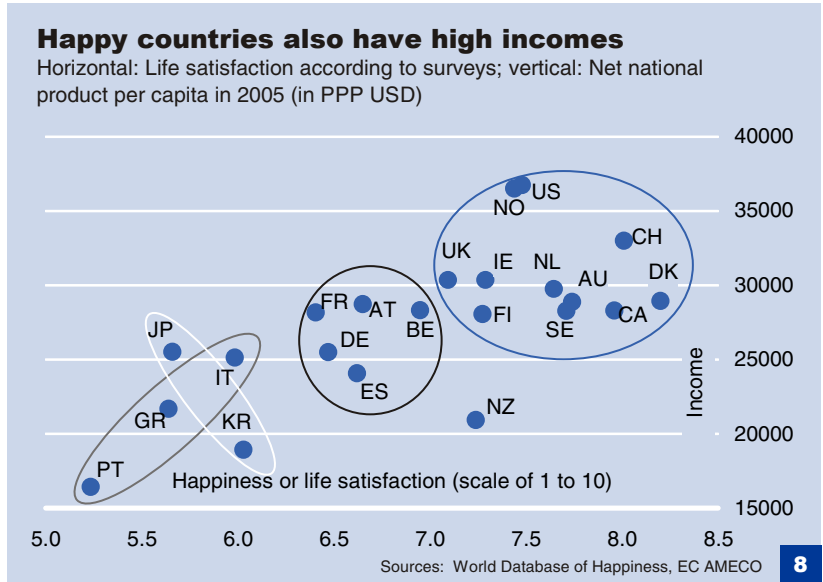
¹⁴ Helliwell (2003).

¹⁵ www.transparency.org

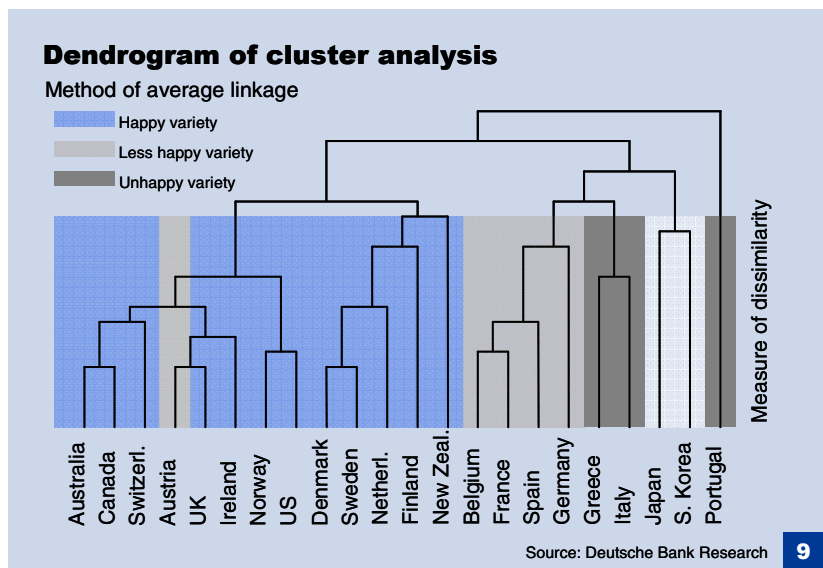
Happy societies also have a lot of human capital



Link between income and happiness weakens above 25,000 USD



Australia and Portugal are very far apart



schooling in happy countries is roughly 13 years, whereas in the unhappy countries it is less than 10 years. Because of its dual education system Germany has a high number of years of formal education – the level of life satisfaction is however relatively low, as shown in Figure 7.

5. High income

Adaptation effects

International comparisons demonstrate that income is only weakly correlated with happiness and this is especially true at higher incomes. This is a well-known finding of happiness research. The explanations given for the weak correlations are adaptation effects and the observation that the relative income position is more important than absolute income.

Direction of causality unclear

Within a country, however, richer people do tend to be more satisfied with life than poor people. The direction of the causality is, however, not completely clear: some studies show that happier young people earn higher incomes in later life. Applied to entire economies this would mean that first a happy environment has to be created and that a proportion of the return would subsequently be achieved in the form of higher national income.

Net national income is the relevant measure

Since GDP contains many components that do not reflect either the current or future consumption possibilities of a country's inhabitants, we shall use net national income.¹⁶ GDP per capita at purchasing power parity is corrected for the volume of net income that goes to non-residents and depreciation. In Ireland, New Zealand and Japan in particular, the net national income (NNI) per capita is much lower than GDP per capita. Figure 8 shows a slightly positive correlation between income and life satisfaction that however becomes very weak from about USD 25,000. With the exception of New Zealand all the countries in the happy variety of capitalism also boast above-average per-capita income.

The cluster analysis

The analysis of the common features of the 22 countries examined in this study starts with six dimensions of which Figures 4 to 8 could each display only two. A cluster analysis allows to detect patterns across all six dimensions. There is no need to worry about exogeneity. Cluster analysis can also be applied if there is no correlation between the data. The basic idea is to combine elements that are quite similar to a new element and to then treat the new element (with the average characteristics of the two original elements) exactly like the remaining ones. In Figure 6, for example, Australia and the Netherlands stand closest to each other. Next, the USA and Norway would be combined to a new element. For the multidimensional analysis the raw data have to be standardised first by expressing them in numbers of standard deviations from the mean (the different scales take care of this in the two-dimensional scatterplots). The method of average linkage was employed here. The graphical presentation in the dendrogram (Figure 9) reveals the difference of the elements that were combined to a new element.

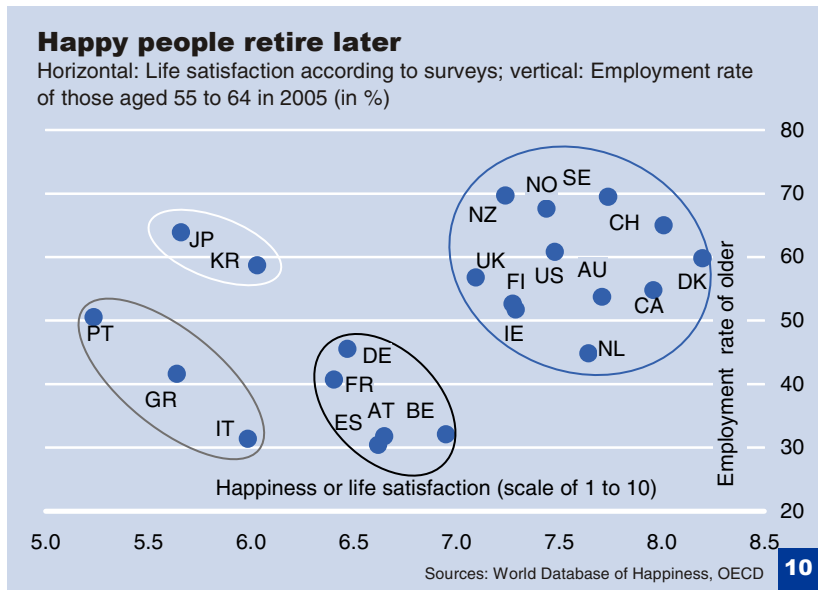
The picture so far: Six variables and four varieties

Life satisfaction and the five macroeconomic variables just described that are closely related to well-being according to happiness research, are the core criteria used to decide how many varieties of capitalism there are and what country exhibits which variety. The graphical analysis in Figures 4-8 was decisive for the classification but all other combinations of the six variables were also analysed. If, for example, the unemployment rate is plotted against the level of education, the Far Eastern variety no longer differs from the happy variety.

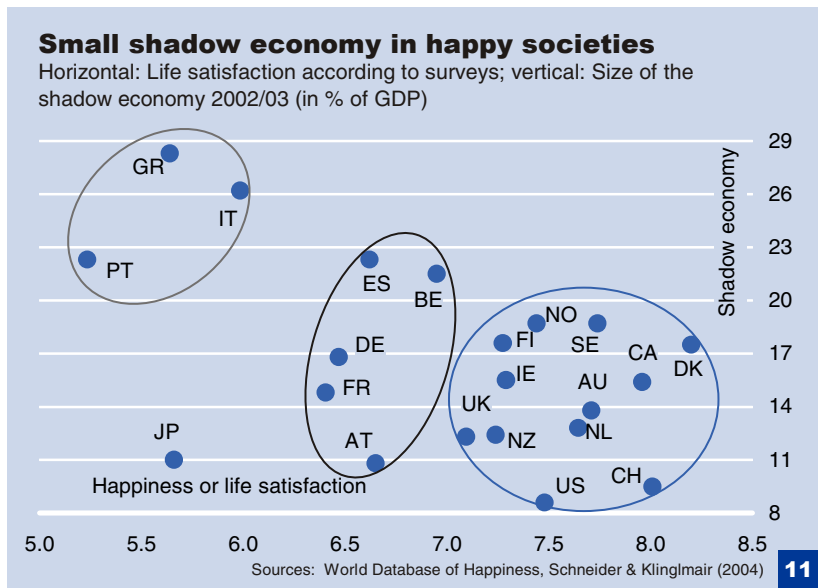
The graphical analysis was supplemented with a cluster analysis (see method box). The tree structure in the dendrogram (Figure 9) shows minimal deviations from the classification chosen for this report. In this case Austria finds itself in the middle of countries of the happy variety. The reason for this is its low unemployment and relatively high income: in Figure 6 Austria could also be ascribed the happy variety. Moreover, the cluster analysis clusters Japan and Korea with several European countries and only includes Portugal right at the end. These results are consistent with the scatter diagrams but were overridden for the sake of differentiation between the unhappy and Far Eastern varieties. Six more cluster analyses with only five of the six variables back up this decision.

¹⁶ The unsuitability of GDP as a measure of well-being is discussed in "Measures of well-being: There is more to it than GDP" (Bergheim, 2006).

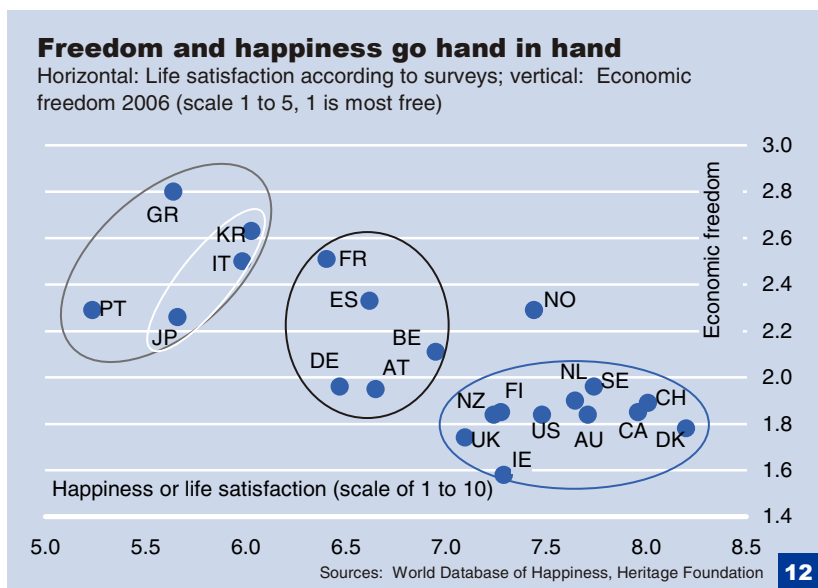
Early retirement does not boost happiness



Size of the shadow economy differs significantly



Economic freedom is not a threat





The following five variables support the classification made above. They do not have a prominent position in happiness research, which may have to do with the fact these are macroeconomic variables, whereas happiness research focuses on the characteristics of individuals. A theoretical link with happiness can, however, be established quickly.

Employment rates for older people are higher in happy countries

6. High employment rate of older people

The integration of people into society and into working life is an important element of happy societies – this also applies to older people. The participation rates of those aged 55-64 in happy countries is at 59% indeed more than 20 percentage points higher than in the less happy countries, as shown by Figure 10 on page 12.

Strong correlation between shadow economy, corruption and unemployment

7. Small shadow economy

The size of the shadow economy is also an indicator of the functioning of social and political institutions and of the level of social cohesion. The data of Schneider and Klinglmaier (2004) for the years 2002/03 show that the countries of the unhappy variety of capitalism had very large shadow economies amounting to over 25% of reported GDP (see Figure 11). For the less happy countries there is a broad span from 11% to 22%, while the range in the happy countries is lower at 8.6% to 18.7%. A particularly strong correlation also exists between the size of the shadow economy and corruption as well as the unemployment rate.

Happy countries provide lots of economic freedom

8. Extensive economic freedom

Economic freedom appears to have different connotations for people in different countries. In some places it is regarded as a threat since risk increases – calls are made for state protection. In other places economic freedom is seen as an opportunity for individual economic and personal expression – state intervention tends to be opposed. Figure 12 shows, however, that all countries with the happy variety are also countries with extensive economic freedom (Norway is the exception). According to the Heritage Foundation, freedom was particularly high in Ireland, the UK and Denmark in 2006.

The observation that economic freedom has a lot to do with people's happiness could be deployed in communicating societal and economic reforms in the less happy and unhappy countries. The primary emphasis here should be on the new opportunities open to the individual. Only the happy countries do well in the "Regulation" subcomponent of the Economic Freedom Index.

Employment protection does not deliver happiness in the long run

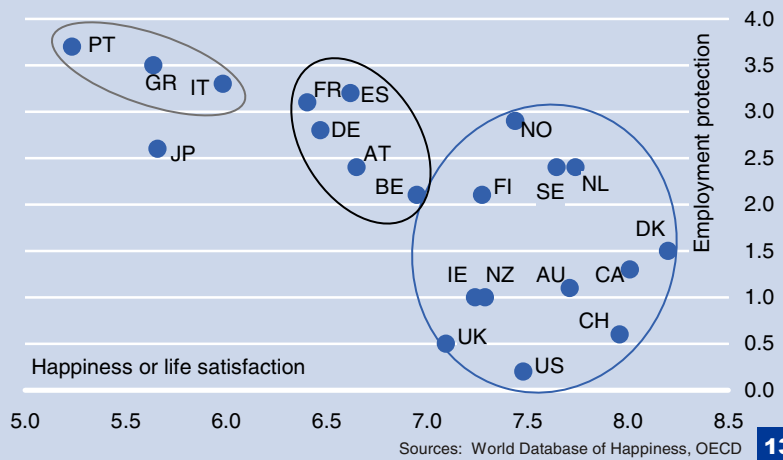
9. Low employment protection

The importance of a well-functioning labour market for people's happiness has already been made clear above and is a recurring theme in happiness research. In many countries, though, opinions still differ about what constitutes a well-functioning labour market. Some countries resort to onerous state and company protectionist measures which are aggregated by the OECD in its Employment Protection Legislation Index (Figure 13 on page 14). The readings for 1998 reveal a clear negative correlation with life satisfaction and corruption while the correlation with unemployment is positive: happy countries with well-functioning labour markets have little dismissal protection, little corruption and low unemployment. Here, too, there is considerable potential with regard to the communication of reforms in the unhappy and less happy countries.

More flexibility in the labour markets

Happy societies protect jobs relatively little

Horizontal: Life satisfaction according to surveys; vertical: Employment protection legislation index according to the OECD in 1998

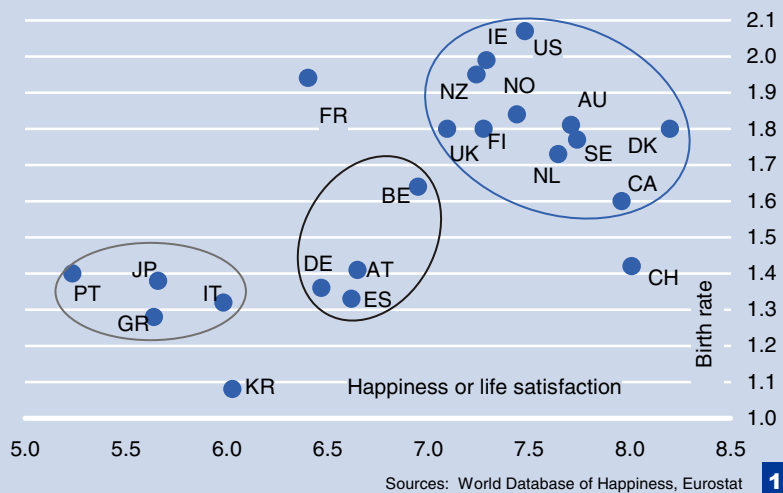


13

Birth rate is higher in the happy variety

More children in the happy societies

Horizontal: Life satisfaction according to surveys; vertical: Birth rate in 2005



14

10. High birth rate

High birth rate in happy countries

Happiness research repeatedly identifies family and stable social relations in general as key determinants of individual happiness – even though children themselves are not necessarily seen as boosting happiness per se. And indeed, birth rates in the happy countries are much higher than in the other three varieties, as shown in Figure 14. There, societal institutions and social cohesion are evidently so good that many people decide to have children. In some countries the relatively high birth rates of large groups of immigrants may also play a role. The big exception is France, where an active women’s and family policy has raised the birth rate far above the levels in the other less happy countries. Leaving France aside, the overall analysis of the ten happiness-relevant dimensions in this report shows that a truly successful family policy is normally accompanied by good conditions in many other segments such as the labour market.



11th element: addressing the issue of happiness

Adopting new methods to measure and evaluate sustainable development

Numerous initiatives in the happy countries

Crime, health and the environment are probably also important

Happy countries pay attention to happiness

Another trait shared by happy countries is that they also expend a great deal of energy addressing the issue of what is important for the well-being of their citizens and how this develops. Here, too, the causality is unclear: are these countries happy because they have debated the issue or are happy countries simply more happy to spend time thinking about their happiness? In any event this activity appears to be a part of the array of commonalities of happy countries.

These countries are fulfilling the demands already made by the UN World Commission on Environment and Development (Brundtland Commission) back in 1987 to adopt new methods for measuring and assessing countries' sustainable development. Diener and Seligman (2004) demand that well-being should become a primary focus of policy, with broadly based well-being not replacing GDP but complementing it. According to Layard (2003), "the prime purpose of social science should be to discover what helps and hinders happiness."

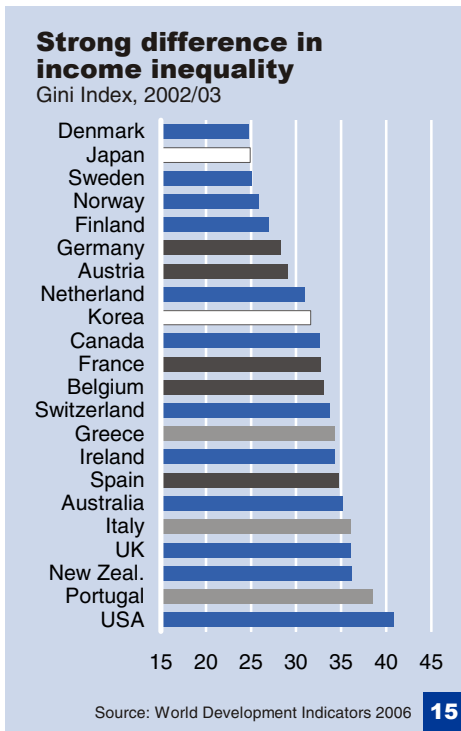
Australia is pursuing a variety of initiatives that are scrutinised in this report from page 16 onwards. Also in the vanguard is Britain, which made "A better quality of life" a policy objective as long ago as 1999 and publishes an annual report about priorities and progress.¹⁷ The motivation cited by prime minister Tony Blair back then was that there was a "growing realisation that real progress cannot be measured by money alone". The Irish Statistical Office has published an annual report since 2003 with the title "Measuring Ireland's Progress" that also addresses areas such as social cohesion, crime and the environment. In 2004 the US Government Accountability Office unveiled a report entitled "Informing Our Nation: Improving How to Understand and Assess the USA's Position and Progress", and the Department of Health plans to publish a national Well-Being Account. In 2000 the Danish finance ministry published a report entitled "Structural Monitoring – International Benchmarking of Denmark". At the European level the Eurobarometer and European Foundation for Improving Living and Working Conditions provide valuable data and analyses.¹⁸ We are not aware of any comparable initiatives or reports from the less happy or unhappy countries.

Other factors: Not measurable or not relevant

Besides the 10 indicators used above there are numerous aspects that are undoubtedly of relevance for quality of life, but which can only be measured with great difficulty or whose comparability is insufficient for the purposes of this analysis. For example, crime is certainly an aspect that has a negative impact on the quality of life. However, definitions and recording methods differ so much that international comparisons do not necessarily make sense. Health is also a very important factor for individual happiness. Health expenditure is, however, an inappropriate yardstick.

¹⁷ www.sustainable-development.gov.uk

¹⁸ www.eurofound.eu.int



Australia with good values in all 10 dimensions

How the ABS measures Australia's progress

Dimensions of progress

- Individuals**
 - Health
 - Education and training
 - Work
- Economy**
 - National income
 - Economic hardship
 - National wealth
 - Housing
 - Productivity
- Environment**
 - Natural landscape
 - Air and atmosphere
 - Oceans and estuaries
- Living together**
 - Family, community & cohesion
 - Crime
 - Democracy & governance

Source: Australian Bureau of Statistics **16**

Life expectancy is influenced by other factors like climate and dietary habits, and suicide rates also appear to depend on other factors. Deriving a global figure for environmental quality is just as difficult. Furthermore, there is a lot of data available that is regularly used in international country comparisons but which has not been shown to have an empirical link with life satisfaction. This applies, for example, to the size of the public sector, income inequality, R&D spending and religiousness. Religiousness can mitigate the impact of negative quirks of fate and thus positively influence life satisfaction. However, data from the World Values Survey reveals no correlation with the other variables used here: in Portugal, Greece and Italy 80% and more of the population claim to be religious, whereas in Sweden and the UK the figure is only 40%. Only the US, Denmark and Ireland are highly religious and very happy. Inflation is often regarded as negatively correlated with happiness, but for the 22 countries surveyed here it is stable and low anyway.

5. Felix Australia

One country figures very prominently in our analysis in the previous sections: Australia. It scores very well on all the variables examined – as illustrated by Figures 4 to 14 – and the country expends a great deal of energy on finding out what is important for the well-being of its 20 million inhabitants. As a result, Australia provides the counterpoint to Portugal in our cluster analysis and is found on the very left of Figure 9. So, it is no wonder that despite the great distance nearly 2,200 Germans emigrated to Australia in 2004.¹⁹

The life satisfaction of Australians in 2005, at 7.71 points on a scale of 1 to 10, was only topped by that of Canadians, Danes and the Swiss.²⁰ Trust in one's fellow citizens is not as high as in the Scandinavian countries, but higher than in almost all the other Anglo-Saxon countries. The same holds for corruption, where none of the other Anglo-Saxon countries except New Zealand scored as well. The unemployment rate of 5% in 2005 was about average among the happy countries and has in fact fallen since then to 4.5%. The population's 12.6 years of schooling on average are not at the top of the league, but the increase in the ratio of university graduates, to 36% among those aged 25 to 34 (Germany: 23%), points to a significant gain in the years ahead. Per capita income, labour force participation of older people, shadow economy and birth rate are all around the averages for the happy countries – there still seems to be room for improvement in these areas. The degree of economic freedom is, by contrast, only better in Ireland and the United Kingdom, and the labour market is only considerably more flexible in the US, the UK and Switzerland.

Two reports on the well-being of Australians

Broad analysis of Australians' well-being has already been established as a successful tradition and is well anchored in the political arena. Back in 1992 the "Council of Australian Governments" agreed a "National Strategy for Ecologically Sustainable Development". Since 2002, the Australian Bureau of Statistics (ABS) has issued a report every second year documenting the country's progress.²¹

¹⁹ 1,335 Germans returned home, so net migration totalled 855.

²⁰ Australian Unity Wellbeing Index, Australian Center on Quality of Life, 2005, Melbourne, Australia, <http://www.deakin.edu.au/research/acqol/index.htm>

²¹ www.abs.gov.au

This was motivated by a consensus at the time that countries and governments needed to “develop a more comprehensive view of progress, rather than focusing mainly on economic indicators such as Gross Domestic Product”. The aim is to stimulate public debate on progress.

The latest edition of “Measures of Australia’s Progress” appeared in 2006; it is 216 pages long and covers a broad spectrum of indicators from the economy, society and the environment that goes far beyond the variables discussed here, see Figure 16.

The key question is: Is life in Australia getting better? At the core of the matter is the concept of “progress”, which is closely associated with life satisfaction, welfare and happiness. However, “progress” is deliberately left undefined. It was made clear at the same time, though, that it is impossible to capture every single aspect. And the ABS does not attempt to calculate a comprehensive index which reflects the development of progress over time. Rather, it is up to the readers themselves to paint a picture of the country’s progress on the basis of their own weightings.

Analysis based on surveys

The second source of information is the Australian Unity Wellbeing Index with its subjective, survey-based approach that is calculated by Deakin University of Melbourne and insurer Australian Unity. It comprises an index for individuals (Personal Wellbeing Index, PWI) and one for the nation (National Wellbeing Index, NWI) and has been calculated at least twice a year since April 2001 on the basis of surveys of 2,000 Australians. Over the past five years the PWI has remained largely stable, with values peaking during the 2004 Olympic Games and – this may come as a surprise to Europeans – shortly after the beginning of the war in Iraq. The NWI is much more volatile and shows no clear trend. The many background questions on the role of health, marriage, weight, sport, pets etc. are also informative as regards Australians’ well-being.

6. Happiness-promoting changes are possible – as the past shows

Substantial progress in Ireland, Spain, Finland, Sweden and Denmark

No country needs to stay caught in its variety of capitalism forever. Changes will not come about automatically, though, nor will countries necessarily converge. Changes have to be initiated and developed deliberately. Progress towards the happy variety is possible, as shown especially by Ireland, Spain, Finland, Sweden and Denmark over the past 10 years. By contrast, developments in Korea, Japan and Austria were less conducive to the progress of happiness. The table on page 19 shows the changes in 9 variables, in standardised form, over the last 10 years for which the data are available.²² The countries are ranked by average change.

Irish success linked with greater freedom

In Ireland, not only did incomes increase sharply over the past 10 years. The unemployment rate dropped by 8.2 percentage points (or 3.8 standard deviations across the 22 countries in the year 2005, see table), economic freedom expanded strongly, the education level increased, and there was a significant upturn in the number of older people with a job.

Spain’s progress is broadly based

While Ireland’s (economic) achievements are well known by now, Spain’s are sometimes still underestimated. It emerges, however, that Spain’s societal and economic progress are broadly based. The

²² No long-term time series are available for corruption and job protection.

unemployment rate has plummeted there too – by close to 10 percentage points. Income, education level and economic freedom have improved substantially. Even the birth rate has headed up, and Spaniards' life satisfaction has increased. These improvements have shifted Spain out of the group of unhappy countries into the group of less happy countries. The only dimensions that did not show any progress were the shadow economy and employment of older persons. It is interesting that these changes were possible without a higher degree of life satisfaction being declared a policy objective or – as in the happy countries – an institute being commissioned to make a broad-based assessment of progress.

Over the past 10 years, Finland, Sweden and Denmark have also made considerable progress in terms of the dimensions shaping the happy variety of capitalism. All three countries saw growth in their life satisfaction, trust in fellow citizens, education levels and economic freedom, combined with a noticeable decrease in unemployment and the shadow economy. Only the birth rate showed little change – but it has been high for years anyway.

Changes since the mid-1990s

Country	Average	Happiness	Trust	Unemployment	Education	Income p.c.	Empl. of old	Shadow econ.	Econ. freedom	Birth rate
Ireland	1.3	0.1	-0.8	3.8	1.7	3.3	1.0	0.0	1.9	0.5
Spain	1.2	0.7	0.3	4.5	1.9	1.5	-0.2	0.0	1.4	0.5
Finland	1.1	0.4	0.6	3.9	0.1	1.6	1.5	0.1	1.7	0.0
Sweden	0.7	0.3	0.5	0.9	0.7	1.3	0.6	0.1	1.9	0.1
Australia	0.6		0.0	1.5	0.1	1.3	1.0	-0.1	0.9	0.1
Denmark	0.6	0.0	0.6	0.9	1.1	1.0	0.8	0.1	1.2	0.0
Canada	0.6			1.3	0.4	1.2	0.9	-0.1	0.6	-0.1
New Zeal.	0.5			1.2	0.5	0.7	1.7	-0.2	-0.2	-0.1
UK	0.5	0.2	-1.0	1.8	0.6	1.3	0.7	0.0	0.5	0.3
Norway	0.5			0.1	1.1	1.5	0.5	-0.1	0.5	-0.1
Netherlands	0.5	0.2	0.6	0.7	-0.5	1.1	1.2	0.2	0.1	0.7
Italy	0.4	-0.2	-0.1	1.7	0.8	0.6	0.2	0.0	0.3	0.5
France	0.4	0.5	0.0	0.7	0.7	0.9	0.6	-0.1	-0.5	0.7
Belgium	0.4	0.0	-0.1	0.6	0.7	1.0	0.8	0.0	0.0	0.3
Greece	0.4	0.8	0.0	-0.6	1.1	1.3	0.2	0.1	0.6	-0.1
USA	0.3	-0.1	0.0	0.2	0.3	1.4	0.5	0.0	0.5	0.2
Switzerland	0.2		1.0	-0.5	0.2	0.6	0.3	-0.3	0.3	-0.2
Germany	0.2	0.1	0.0	-1.0	0.2	0.6	0.8	-0.6	1.1	0.4
Portugal	0.2	-0.3	-0.7	-0.2	0.7	0.6	0.4	0.0	1.1	0.0
Austria	0.1	-0.6	0.2	-0.3	0.5	1.1	0.3	-0.4	0.3	0.0
Japan	0.0	0.7	-0.3	-0.6	0.5	0.6	0.0	-0.1	-0.2	-0.1
Korea	-0.4		-0.4	-0.8		1.2	-0.3			-1.6

Values are changes between 1995 and 2005 (or similar periods depending on data availability) divided by the standard deviation of that variable across the 22 countries in 2005. This allows a better comparison of changes. Excluding the unemployment rate leads to a nearly identical ranking.

Source: Deutsche Bank Research

17



7. Policy for a happier society

Need for comprehensive policy

Our analysis so far has shown how differently the 10 selected indicators are positioned in the 22 countries under review – and that it is possible for changes to occur over time. It also emerged that the happy variety of capitalism features an array of commonalities. Thus, any attempts by society to initiate changes leading towards the happy variety should take a comprehensive approach. It is also clear that it is necessary for politics, business, societal groups and individuals to act together if genuine progress is to be made. A new regulation against illegal employment or a call for greater freedom will fizzle out if not embedded in a broadly-based concept.²³

It is important to note that happy societies show an array of commonalities – and that today's still less happy societies must tackle a whole series of measures jointly if they are serious about making happiness-rising progress. The direction of causality is ultimately irrelevant.

Pay heed to historical roots

The countries' current situation is deeply rooted in history and may be partly explained by upheaval and structural breaks over the past few years and decades. However, this does not change the fact that changes are possible. The state already sets priorities today, as evidenced not least by the big government budgets of in some cases over 40% of GDP. Are these priorities really desired by the public at large today?

a) Policy for the happy countries

Still room for improvement also in the happy countries

Even in the countries with the happy variety of capitalism, not everything is sweetness and light. Some indicators have no natural upper or lower limit and thus can be improved further. The primary goal of these countries is (or should be) to identify their respective weaknesses and eliminate them. Even Australia has room for improvement: the participation rate of older people in the workforce, at 54%, is still far below the 70% enjoyed by several other countries. The degree of trust in fellow citizens could also be higher. Switzerland's glaring weaknesses are the low birth rate and the low degree of trust in fellow citizens. Canada's challenges are its high unemployment and low birth rate.

Britain's weaknesses lie in the aspects of trust and partly in the employment of the elderly. In Ireland and the US, corruption appears to be relatively high and trust relatively low. Denmark ought to question why the shadow economy accounts for 17.5% of GDP. Sweden could reduce its unemployment rate – which would probably go hand in hand with a decrease in job protection. In Finland, the unemployment rate is still very high at over 8% and the education level is relatively low. New Zealand is relatively low on the income scale and should seek to raise its productivity.

b) New priorities for the less happy countries

Greater efforts needed in the less happy countries

The nations that currently fall into the category of less happy countries still have a longer way to go, of course, and their societies must do a great deal more in all segments if they want to join the group of happy countries in some years' time. It holds for all five countries that they will need to devote more thought to the topic of

²³ Similar arguments are put forward by Nobel laureate Edmund Phelps (2006): "A transformation of the economy to one of dynamism ... can be obtained only if the economic culture and possibly other 'background conditions' are conducive ..." (p. 13).

well-being, emulate the happy countries in drawing up reports on happiness, and declare membership of the happy variety to be a policy objective. The 10 indicators listed above and the happy countries themselves can initially serve as guides towards finding the right path and deciding on the individual steps to be taken.

Germany and France: labour market needs to be given priority

For example, Germany ought to set its sights on achieving an unemployment rate of 4%. This is attainable. The low birth rate also stands out – and the government has already recognised it to be a weak point. France still suffers from very high unemployment as well, and the general level of economic freedom is low. Austria appears to have significant potential for improvement above all in the areas of corruption and employment of the elderly. Belgium's and Spain's weaknesses lie in the low participation rates of the elderly and the extensive shadow economy.

c) The long way ahead for the unhappy countries

Need for rethink of priorities in today's unhappy societies

While the countries deemed less happy are not all that far from the target, the unhappy countries would have to completely rethink their priorities if they should also want to head in the direction of the happy societies. Portugal, Greece and Italy score poorly on all 10 indicators. More education, less government regulation, effective labour market reforms and many other coordinated measures appear necessary here – and feasible in the long term considering the examples of other countries.

Recommendations are not anti-growth

The policy recommendations put forward here are not anti-growth at all. On the contrary: higher education, less unemployment, greater economic freedom and a higher level of employment among the elderly will lead in the end to higher incomes. The countries with the biggest changes along the dimensions that promote happiness in Table 17 were the ones with the highest rates of per capita GDP growth from 2001 to 2005 (the only exception being Greece).

New means of communication and motivation

The core idea of this study is that GDP be supplemented by other elements, thereby enabling a comprehensive policy to be formulated. Happiness and life satisfaction should be explicit policy objectives. Many recommendations for greater happiness dovetail with the standard suggestions proposed by economists – though the ways of communicating them and the reasoning behind them differ significantly.

Stefan Bergheim (+49 69 910-31727, stefan.bergheim@db.com)

Bibliography

- Bergheim, Stefan (2006). Measures of well-being: There is more to it than GDP. Deutsche Bank Research. Current Issues. September 8, 2006.
- Bergheim, Stefan, Marco Neuhaus and Stefan Schneider (2004). *Reformstau – causes and remedies*. Deutsche Bank Research. Current Issues. September 18, 2003.
- Bruni, Luigino and Porta, Pier Luigi (2005). *Economics & happiness. Framing the analysis*. Oxford: Oxford University Press.
- Diener, Ed and Martin E.P. Seligman (2004). Beyond Money. Toward an economy of well-being. *Psychological Science in the Public Interest*, 5, pp. 1-31.
- Diener, Ed and William Tov (2007). Culture and subjective well-being. In S. Kitayama & D. Cohen (eds.). *Handbook of cultural psychology*. New York: Guilford.
- Di Tella, Rafael and Robert MacCulloch (2006). Some use of happiness data in economics. *Journal of Economic Perspectives* 20, pp. 25-46.
- Esping-Andersen, Gøsta (1990). *The three worlds of welfare capitalism*. Cambridge: Cambridge University Press.
- Frey, Bruno S. and Alois Stutzer (2002). What can economists learn from happiness research? *Journal of Economic Literature* 40 (2), pp. 402-435.
- Hall, Peter A. and David Soskice (2001). *Varieties of capitalism: the institutional foundations of comparative advantage*. Oxford: Oxford University Press.
- Haybron, Dan (2007): Life satisfaction, ethical reflection, and the science of happiness. *Journal of Happiness Studies* 8, pp. 99-138.
- Helliwell, John F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, 20, p. 331-360.
- Kahneman, Daniel, Alan B. Krueger, David Schkade, Norbert Schwarz and Arthur A. Stone (2004). Toward national well-being accounts. *American Economic Review* 94(2). *Papers and Proceedings*, pp. 429-434.
- Kahneman, Daniel, Alan B. Krueger, David Schkade, Norbert Schwarz and Arthur A. Stone (2006). Would you be happier if you were richer? A focusing illusion. *Science* Vol. 312, pp. 1908-1910.
- Layard, Richard (2006). Happiness and public policy: a challenge to the profession. *Economic Journal* 116. C24-C33.
- Lyubomirsky, S., Sheldon, K. M. and Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology* 9 (2), pp. 111-131.
- Panuescu, Mihai and Martin Schneider (2004). Wettbewerbsfähigkeit und Dynamik institutioneller Standortbedingungen: ein empirischer Test des "Varieties-of-Capitalism" Ansatzes. *Schmollers Jahrbuch* 124, pp. 31-59.
- Phelps, Edmund (2006). Economic culture and economic performance: what light is shed on the continent's problem? Paper presented at CESifo conference in Venice.

Schneider, Andrea (2004). Ordnungsaspekte in der National-
ökonomik. Eine historische Reflexion. Haupt.

Schneider, Friedrich and Robert Klinglmair (2004). Shadow
economies around the world: what do we know? Universität Linz,
Working Paper No. 0403.

Veenhoven, Ruut (2007). World Database of Happiness.
Distributional Findings in Nations. Erasmus University
Rotterdam. www.worlddatabaseofhappiness.eur.nl

Less is more: DB Research now offers customised subscriptions

Readers of DB Research's regular publications can now also order subscriptions on specific topics and/or countries. Register for an [e-mail subscription](#) on the DB Research website and click on the topics and countries or regions that interest you. Or make direct contact with us. We will send you only those research articles relevant to you as soon as they are published. Of course you may, however, also continue to subscribe as usual to our regular publications.

Please do not hesitate to contact us for further information. We also welcome your feedback at: marketing.dbr.@db.com

Deutsche Bank Group | DBR Home | Contact | Disclaimer | Imprint | Deutsch

Think tank of Deutsche Bank Group

Deutsche Bank Research

Research | Publications | Walter's Web Wisdom | Info services | About us

You are here: Home > DB Research

Full text search

Home

- Banking, Financial Markets and Regulation
- Country Infobase
- Economic and European Policy Issues
- Emerging Markets
- eResearch
- Financial Market Monitoring
- Macro Trends
- Real Estate
- Sector Research

Subscriptions

Please send all documents as

Please choose your language for topics, regions and megatopics

I would like to subscribe to the DBR News Service (monthly list of all new DB Research publications).

Publications

- Aktuelle Themen (Dt.)
- Aktueller Kommentar (Dt.)
- Current Issues (Engl.)
- E-Banking Snapshot (Engl.)
- E-economics (Dt.)
- E-economics (Engl.)
- EU Monitor (Engl.)
- EU-Monitor (Dt.)
- Research Notes (Engl.)
- Talking Point (Engl.)
- Walters Web Winkel (Dt.)

Topics

- Economic policy
- Emerging markets
- eResearch
- European issues
- International financial system
- Macrotrends
- Quantitative analysis
- Real estate
- Sectors / commodities

Countries/Regions

- Germany
- USA
- Japan
- China
- India
- EU
- Dollar area
- Emerging markets
- Western Europe
- Eastern Europe
- Middle East
- Asia
- Latin America & Caribbean
- Africa

Megatopics

- China
- Demography
- Digital economy
- Energy
- European integration
- Global growth centres
- India
- Latin America
- More growth for Germany

Service

- Print
- Change password
- Personal data
- Logout
- E-mail subscription
- RSS feed

Walter's Web Wisdom

DBR noticeboard

- Less is more: DB Research now offers customised subscriptions

Megatopics

- China
Presentation: China: In the year of "Olympics minus 1" [new]
- Demography
How will senior Germans spend their money? [new]
- Digital economy
To boldly go where automotives have gone before: Industrialisation of financial services
- Energy
EU emission trading: Allocation battles intensifying
- European integration
Retail certificates: A German success story [new]
- Global growth centres
Presentation: Global Growth Centres 2020
- India
India's capital markets: Unlocking the door to future growth
- Latin America
The emergence of Latin multinationals
- more

Please register here for free e-mail subscriptions.

Current Issues

Global growth centres

Available faster by e-mail:
marketing.dbr@db.com

Substantiated, long-run growth forecasts are back in the limelight following the New Economy euphoria and the emerging market crises over the past 10 years. Deutsche Bank Research uses an innovative combination of modern growth theory, state-of-the-art quantitative techniques and systematic trend analysis to analyse the long-run growth perspectives of 34 economies. We identify growth stars, explain the reasons for their success and derive conclusions for companies, investors and policy-makers.

Japan 2020 – the decline in trend growth is home-made

Falling labour input and sluggish opening slow growth..... September 26, 2006

Measures of well-being

There is more to it than GDP..... September 8, 2006

Live long and prosper!

Health and longevity as growth drivers..... March 20, 2006

Opening economies succeed

More trade boosts growth..... November 11, 2005

Dynamic sectors give global growth centres

the edge..... October 31, 2005

Human capital is key to growth

Success stories and policies for 2020 August 1, 2005

Global growth centres 2020

“Formel-G” for 34 economies March 23, 2005

All our publications can be accessed, free of charge, on our website www.dbresearch.com

You can also register there to receive our publications regularly by e-mail.

Ordering address for the print version:

Deutsche Bank Research
Marketing
60262 Frankfurt am Main
Fax: +49 69 910-31877
E-mail: marketing.dbr@db.com

© Copyright 2007. Deutsche Bank AG, DB Research, D-60262 Frankfurt am Main, Germany. All rights reserved. When quoting please cite “Deutsche Bank Research”.

The above information does not constitute the provision of investment, legal or tax advice. Any views expressed reflect the current views of the author, which do not necessarily correspond to the opinions of Deutsche Bank AG or its affiliates. Opinions expressed may change without notice. Opinions expressed may differ from views set out in other documents, including research, published by Deutsche Bank. The above information is provided for informational purposes only and without any obligation, whether contractual or otherwise. No warranty or representation is made as to the correctness, completeness and accuracy of the information given or the assessments made.

In Germany this information is approved and/or communicated by Deutsche Bank AG Frankfurt, authorised by Bundesanstalt für Finanzdienstleistungsaufsicht. In the United Kingdom this information is approved and/or communicated by Deutsche Bank AG London, a member of the London Stock Exchange regulated by the Financial Services Authority for the conduct of investment business in the UK. This information is distributed in Hong Kong by Deutsche Bank AG, Hong Kong Branch, in Korea by Deutsche Securities Korea Co. and in Singapore by Deutsche Bank AG, Singapore Branch. In Japan this information is approved and/or distributed by Deutsche Securities Limited, Tokyo Branch. In Australia, retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product.

Printed by: HST Offsetdruck Schadt & Tetzlaff GbR, Dieburg

ISSN Print: 1612-314X / ISSN Internet and e-mail: 1612-3158