1 Competitiveness: Changing the Mindset

"We must all hang together,
or we shall all hang separately!"

Benjamin Franklin, as quoted by Franklin Delano Roosevelt,
State of the Union Address,
11 January 1944.

The winter of 1619 was indeed very cold in Bavaria. On November 10th, a young French soldier serving in the army of the Dutch Prince Maurice of Nassau sought refuge in a house that had a large stove, and stayed there meditating all day. René Descartes claimed that when he came out of that house, he had developed half of his philosophical theory. In 1637, Descartes published his *Discourse on Method*, whose second principle reads: "The second [principle] was to divide up each of the difficulties which I examined into as many parts as possible, and as seemed requisite in order that it might be resolved in the best manner possible." [1]

The Cartesian method – splitting mind and matter, subject and object, observer and observed – has become, at least in the West, integral to the way we look at the world. Most of the time we are not even aware of how much the Cartesian method still drives our current modes of thinking. Since Descartes, the fundamental approach employed in understanding any problem relies on one operation: *division*.

Economics and management follow the same logic of dividing things up. Economics itself, as a field of knowledge, is divided into macroeconomics – national income, employment, inflation, money, and trade; microeconomics – the behaviour and decision-making processes of households and firms; and econometrics – measuring economic phenomena. Economists also distinguish between what they can quantify exactly, such as GDP, and what they can only assess, such as the probability of a decision.

Management of a firm follows the same principle of division; a firm can be divided in many ways: business units, functions, and, yes, even divisions. Groups of countries are categorised into divisions of the world called "regions": the Americas, Europe, Middle East, Africa, and Asia.

Markets are split into segments: old and young, rich and poor, status conscious, environmentally concerned, etc. Employees are also divided into groups: line managers, with profit and loss responsibilities, and staff managers, with supporting responsibilities. Finally, strategies also have their own divisions, such as cost leadership, and differentiation. Dividing things up seems to be the preferred pastime in a firm.

The Cartesian method of dividing everything up has thus permeated every field of knowledge, ultimately producing that marvel of modern societies: the expert!

Dividing an issue into smaller parts can be a very effective tool to advance knowledge. However, action requires, at some point, the reconciliation of objectives into a cohesive strategy. This task is mainly the responsibility of senior management in firms, and government leaders in nations. Yet, most of the time, these individuals lack the experience to do so. During a large part of their professional careers, they have been conditioned to succeed in a paradigm of division – not one of integration. For those who find themselves in a position of leadership, the biggest challenge is to integrate multiple layers of objectives into a coherent strategy.

1.1 Managing the totality of competencies

A collection of seemingly divided units and people cannot be managed as a firm. Thus, a firm must build alignment through a shared purpose and value system. The situation with nations is analogous – a nation cannot be run as a simple collection of citizens and institutions. National leadership must convince individuals to join, and rally around, a common cause: the old Roman *res publica* – the public thing.

Prior to the rise of prosperity as a common goal for a nation, leaders were the only unifying factor. These leaders were more inclined to focus on the conquest of lands, the development of power, the increase of their personal wealth, or simply survival, than on the overall prosperity and welfare of all individuals. When the common purpose became *increasing* overall national "prosperity," a new era began. Leaders realised they needed to know which forces were driving the prosperity of their country, and also of their businesses. Those scholars who took it upon themselves to analyse prosperity, determine its drivers, and articulate policies, were thus the original founders of economics – slightly more than two centuries ago.

Economics relies on Cartesian logic. Since its creation, it has remained focused on how a nation develops prosperity by separately analysing trade flows, monetary, fiscal, and budget policies, as well as the de-

cisions made by households and firms. Within their management, firms have adopted a slightly more comprehensive approach to understanding the mechanisms of prosperity. While firms focus on measuring things like market share and financial objectives, management has not been reluctant to include "soft" areas, such as human resources, corporate culture, or patterns in consumer behaviour.

Competitiveness is thus a field of economics that *reconciles* and *integrates* several concepts and theories from economics and management into a series of guiding principles driving the prosperity of a nation or an enterprise. However, the models provided by either economics or management theories rarely touch upon many of the factors that influence prosperity. Such theories often fail to link various elements – such as education, infrastructure, or value systems – with prosperity, even in the presence of evidence that they do make a difference.

The following definition underlines the importance of integrating all the drivers of prosperity, and can thus provide a good starting point for a preliminary understanding of competitiveness:

> *Competitiveness analyses how nations and firms manage the* totality of their competencies *to achieve prosperity or profit.*

In competitiveness, firms play the central role – they generate economic added value. Nations provide the appropriate framework to maximise economic added value. Their responsibility is also to ensure that the results of firms' activities are transformed into tangible signs of prosperity for people. The fate of firms, nations, and people is thus intertwined, and cannot be managed separately.

Competitiveness takes an integrative, holistic approach. Holism is the tendency in nature to produce organised wholes, which are more than the mere sum of the component units. Thus, understanding a firm's, or a nation's, competitiveness requires one to move above and beyond some misconceptions.

1.1.1 Competitiveness is more than productivity

For a firm, productivity is the amount of good produced, or service rendered, divided by a unit of input – money, raw material, or labour – used. The ratio between the sales – or even better, added value – of a firm, and the number of employees is a common approximation of its productivity. For a firm, an increase in productivity is perceived as a sign of increased competitiveness, as it shows that the company has become more efficient. In the case of nations, the indicators used are different,

but the measurement of productivity is similar. Economists generally use the ratio of GDP to the number of people employed to track productivity, and refine it by incorporating hours worked per year. Labour-hour productivity serves as a proxy for evaluating the overall efficiency of a nation.

The question arises as to whether competitiveness can be reduced merely to the management of productivity across firms or within a country. Paul Krugman, Professor of Economics at Princeton, expressed that viewpoint in a 1994 *Foreign Affairs* article [2]. Krugman argued: "the doctrine of competitiveness [of nations] is flatly wrong." He stressed that focusing on the competitiveness of a nation could lead to misallocation of resources, trade frictions, and even poor domestic economic policies. He then proceeded to develop the position that competitiveness is just another name for national productivity.

Nobody questions the fact that productivity is a key determinant in competitiveness. Productivity is especially important at the level of the firm. Since the firm is at the core of our description of competitiveness, the overall productivity of a nation's firms greatly determines competitiveness. And, while a government can set its own productivity objectives, such as increasing the efficiency of its administration or public spending, their overall impact on national economic output is rather limited. Some scholars, taking the argument one step further, have even denied the existence of such a concept as national competitiveness. In their view, nations do not compete with one another, only firms do!

Statements that attempt to deny competition between nations oversimplify reality. In fact, both firms and nations compete in international markets. Nations compete in attracting investments or highly skilled labour, in scientific research, and even in educational standards. A highly productive firm operating in a highly inefficient, or even hostile, national business environment cannot be expected to sustain its competitive edge easily.

Productivity is thus a key aspect of competitiveness, because it is an indicator of efficiency: it conveys how much firms or nations produce with limited resources – the more produced with less, the better. Yet, there is a lot more to competitiveness than just productivity.

1.1.2 Competitiveness is more than what you can measure

Competitiveness thrives increasingly on intangible assets that are difficult to value, to account for, to create, and to recover. A nation's economic success depends more and more on the excellence of its

education system, the quality of infrastructure, the dynamism of research, and even the quality of its administration. Although these factors have a huge impact on competitiveness, they are not measured easily, and, of course, are not included in the national accounts. Such omission can have pernicious effects.

A country can let its education or research system deteriorate for years before observing an impact on its competitiveness. By the time the problem becomes evident, leaders are confronted with a long uphill battle – sometimes lasting a generation – to correct these wrongs. Economic data produced by governments does not account for the depreciation in the intangible assets of a nation, thus failing to provide an early warning system of national competitiveness deterioration.

The time it takes to reverse trends is a very important consequence of the shift from tangible to increasingly intangible assets as key drivers of competitiveness. In Figure 1.1, it takes a nation one to five years to address a "standard" economic challenge, such as a surge in inflation. A thornier political issue, such as the reform of the pension system, might take longer – perhaps five to ten years. However, deteriorating trends, such as falling standards in education or research, might take significantly longer to be reversed – 10 to 30 years!

The more an issue relates to intangibles, the more time it will take to alter its course – both for governments and companies. Challenges in

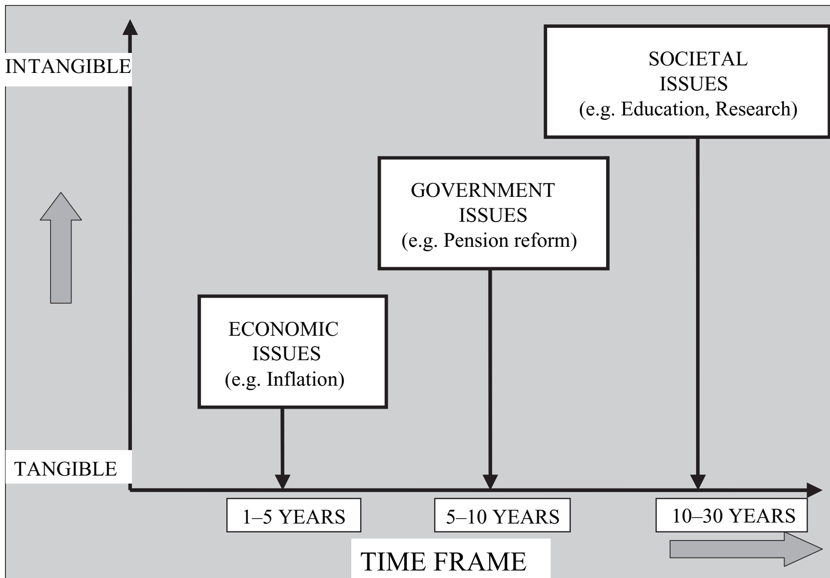

Figure 1.1 – Time to reverse trends.

brand recognition, customer loyalty, innovation, or people skills take much longer to reverse than a problem of excessive costs. The lesson to be learned: pay careful attention to the less tangible factors of competitiveness. In general, by the time the problem becomes apparent, it is too late for a quick fix.

The competitiveness of firms is highly dependent on intangible assets, such as brands, customer loyalty, image, skills, and processes, which are generally not accounted for in the firm's books. The value of brands and other market assets are only accounted for under "goodwill" if there has been a transaction – merger, sale, or acquisition – through which these intangible assets can be valued. Increasingly, companies attempt to incorporate the value of their intangible assets in their annual reporting. For example, Philip Morris (today, Altria), was one of the first companies to list the value of its many brands in its accounts.

Nations also have a "brand" – the image of the country abroad, and all the preconceptions going with it. For a nation, brand management is crucial to its competitiveness. Ireland enjoys an image of attractiveness for foreign investments; Singapore of efficiency in the administration. Other perceptions can be negative: Colombia for insecurity, Italy for strikes, The Philippines for poor infrastructure, the former Soviet Union for corruption. All of these perceptions – whether based on actual facts or not – strongly influence business and competitiveness. Perceptions are powerful, but also highly emotional, from a competitiveness point of view; they should never be overlooked.

If the value of brands (see Table 1.1 for the world's biggest) is still elusive in accounting standards, the financial value of a customer base, or of the competence of a firm's employees, is even more difficult to calculate. Accounting standards state that assets cannot appear in a firm's financial statements if the firm does not have full ownership of them. Obviously, no firms fully "own" their customers, and even less their employees.

Peter Drucker rightly underlined that "the purpose of a company is to create a customer" [4] and, one could add, to retain them. Managers know a loyal customer base is one of the most important assets of a company, and that it deserves utmost attention. For example, Rolex or Apple customers display impressive loyalty. Rolex customers are willing to wait many months for the delivery of a watch worth several thousand dollars – time and cost do not discourage such motivated clients. Apple customers wait stoically for the launch of breakthrough products, stubbornly refusing to switch to Windows, even when the competing machines are at a lower cost and of equal, or better, quality. Steve Jobs capitalised on such loyalty when he took over the reins of the company, and relaunched Apple's fortunes with the iPod series. It seems obvious

Table 1.1 – The world's most valuable brands

RANK 2005	RANK 2004		BRAND VALUE 2005 $MN	BRAND VALUE 2004 $MN
1	1	COCA-COLA	67 525	67 394
2	2	MICROSOFT	59 941	61 372
3	3	IBM	53 376	53 791
4	4	GE	46 996	44 111
5	5	INTEL	35 588	33 499
6	8	NOKIA	26 452	24 041
7	6	DISNEY	26 441	27 113
8	7	McDONALD'S	26 041	25 001
9	9	TOYOTA	24 837	22 673
10	10	MARLBORO	21 189	22 128
11	11	MERCEDES-BENZ	20 006	21 331
12	13	CITI	19 967	19 971
13	12	HEWLETT-PACKARD	18 886	20 978
14	14	AMERICAN EXPRESS	18 559	17 683
15	15	GILLETTE	17 534	16 723

Source: [3]

that such unique customer dedication has a value – yet it is not accounted for anywhere.

A similar argument can be made for employees: they are the cornerstones of any firm. It is a well-known fact that many CEOs end their speeches to the troops by reiterating the cliché: "In our company, people are our most important asset." The problem is that this "most important asset" is accounted as a "cost." Whether a firm employs 1000 geniuses, or 1000 "idiots," their value basically appears to be the same – the cost of their salaries. A firm that invests significantly in the training and education of its workforce does not see an increase in its accounting value. No trace will be kept of this laudable effort of training and education, except, of course, as a line item cost in the books – despite the fact that the *competitiveness* of the firm is certainly improved.

Although accounting standards don't allow a valuation of intangible assets, financial markets are bolder in their valuations and do include figures for the intangibles. Stock markets reflect intuitively how companies such as Microsoft and Nokia are also valuable because of the quality of their intangible assets: brand, customer loyalty, innovation, intellectual property, and even the skills of their staff. The staggering market capitalisation of Microsoft and Nokia (share price multiplied by

the number of outstanding shares) demonstrates the importance financial markets attach to intangible assets. The ratio between market capitalisation and revenues illustrates this point. On average, in 2004, Microsoft displayed a ratio between market capitalisation and revenues in the order of 10 to 1 (i.e. $30 bn in revenues for an average market capitalisation of $300 bn). In the case of General Motors, the ratio was exactly the inverse – 1 to 10 – revenues being ten times larger than market capitalisation.

Financial markets have stepped in and are compensating actively for the shortcomings of accounting standards. The valuations they give to a firm include an approximation of the value of the intangible assets. This role has, however, been assumed by default, and the "standards" used by financial markets to assess the intangibles are sometimes questionable. Thus, in the absence of reliable valuation methodologies, financial markets develop a tendency to become easily exuberant. The so-called Internet bubble between 1998 and 2001 and, more recently, the Google IPO, serve to illustrate how financial markets' valuation of companies can sometimes defy gravity.

As we shall see later, key determinants for competitiveness can be intangible assets like science, technology, education, skills, infrastructure, brand, and even image. Competitiveness draws attention to intangible assets in a firm's or country's strategy, even if they are difficult to value.

1.1.3 Competitiveness is more than wealth

Although the purpose of competitiveness remains prosperity, wealth alone does not determine the success of a nation, a firm, or even an individual. Nations can be wealthy and not competitive. Living in Switzerland – a wealthy nation by many standards – I have often been at odds with the authorities and the business community when trying to alert them to the falling competitiveness of the nation. One of the typical reactions I encountered was: "What do you mean we are losing our competitive edge? Look how wealthy we are: the roads, the education, the technology, the money . . ."

True, Switzerland is extremely wealthy, but is it competitive? People who inherit $100 mn and decide to spend the rest of their days lying on a tropical beach, are definitely wealthy, most probably happy. But from a competitiveness point of view they are useless – they do not, through their own efforts, create any economic added value and, thus, do not contribute to the prosperity of any nation.

Wealth is largely the result of past competitiveness – the accumulated economic and business achievements of past generations. Wealth is also

a function of *chance* – such as having natural resources for a nation, or being born into a rich family for an individual – yet such wealth is not sufficient to determine future competitiveness. Wealth helps – it gives nations, firms, and people a head start in economic development – but it does not guarantee that the prosperity of today will be perpetuated tomorrow.

Natural resources: a blessing or a curse?

Abundant natural resources are generally considered a blessing for a country. Saudi Arabia and Norway are wealthy countries in their own right, because they are world leaders in oil and gas production. Because their populations are wealthy, both nations give the impression of being competitive: Saudi Arabia has a per capita Gross Domestic Product (GDP) of $10 486 (purchasing power parity adjusted for 2001), while for the same year, Norway had a GDP per capita of $30 142. A regular flow of money from natural resources helps an economy, or rather provides a sense of security. Natural resources continue to play an important role in industrialised nations: the US and France are world-leading exporters of agricultural goods, while oil remains, with the automobile industry, one of the top exports of Britain. In a similar way, considerable exports of North Sea gas have sustained the competitiveness of The Netherlands.

However, natural resources don't necessarily lead to competitiveness. Iraq has huge reserves of oil but, unfortunately, cannot yet capitalise on this asset. Russia has the largest amount and diversity of natural resources of any nation in the world, yet it is only barely emerging as a competitive power. There is a long list of nations that seem to follow a similar pattern – South Africa, Brazil, India, Indonesia – immensely rich nations, endowed with considerable natural resources, but lagging in the development of their competitiveness. They have over-relied on the extraction of natural resources for their wealth, yet if they were to focus more on processing those resources into other products, they would increase their competitiveness.

Is it a "curse" to have natural resources? In contrast to nations richly endowed in natural resources, "poorer" nations in that sense – Singapore, Japan, Switzerland, and Ireland – have indeed thrived in competitiveness. These nations focused on the transformation of imported natural resources into manufactured products, and now dedicate themselves mostly to the provision of services.

Whether it is renewable or not determines the impact that a natural resource has on competitiveness. Forests are managed as renewable resources in many countries, and timber harvesting is highly regulated. Trees cannot be cut before a certain age, and new plantations are

compulsory. In Europe, 31.1 % of the surface area is now covered by forest, a proportion that is increasing every year – partly because oil has replaced wood as a significant source of energy. As a consequence, and contrary to conventional wisdom, there are probably more trees in Europe today than one hundred years ago.

Unfortunately, such enlightened forestry policy is not applied everywhere. Brazil and Indonesia, for example, suffer the effects of severe deforestation because of unregulated, intensive timber exploitation, without appropriate replanting schemes. The former East Germany had one of the highest growth rates in the former Communist world. However, after German reunification, it became evident that East Germany had achieved its success at considerable environmental cost. The eastern part of a unified Germany was a land exhausted by pollution, careless exploitation of resources, and poorly planned urbanisation. The East German "economic miracle" depended on the abuse and depletion of nonrenewable assets. East Germany only performed, or rather boasted, at the expense of future generations – "selling the family silver to buy lunch."

Sustainable development

In 1987, the World Commission on Environment and Development, under the chairmanship of Dr Gro Harlem Brundtland from Norway, articulated a widely-accepted definition of sustainable development. The definition states that sustainable development "meets the needs of the present without compromising the ability of future generations to meet their own needs." The work of the Commission is considered a landmark, highlighting the long-term relationship between the exploitation of natural resources and prosperity [5].

Unless they are used to develop other activities, nonrenewable natural resources – oil, gas, or minerals – are not assets for competitiveness. If the proceeds from their exploitation and extraction are not invested for building future competitiveness, the depletion of nonrenewable assets represents a net loss of wealth for future generations. Although exports of nonrenewable natural resources can contribute significantly to the Gross Domestic Product of a nation, they cannot, as such, be considered drivers of future competitiveness, unless used wisely.

Nonrenewable natural resources can, nevertheless, provide a window of opportunity to develop future competitiveness if the wealth derived from their exploitation is invested in means of future production, such as human capital, plant, and equipment. Dubai, one of the United Arab Emirates, unlike its wealthy neighbour Abu Dhabi, only has a limited amount of oil left – perhaps 20 more years of production. The leadership of Dubai has thus decided to use current oil revenues to diversify its economy, promoting the development of technology-based activities, such as the Internet and multimedia, together with an offshore financial centre and a booming tourist industry [6]. Norway is following a slightly different strategy, although the purpose is similar. The Norwegian government has created a special fund – financed mainly by the country's considerable oil revenues – with the objective of preparing for when oil revenues dry up.

The experiment of Dubai

Dubai is conducting an impressive experiment in shifting its competitiveness away from oil, to a diversified economy. Dubai's GDP, estimated at $16.4 bn in 2000, has been growing at 8 % over the past ten years. Today, only 10 % of the GDP is derived from the oil sector – manufacturing, trade, finance, real estate, tourism, and transportation have all become more important than oil. The non-oil sector is now growing by almost 10 % per year. Dubai is a remarkable example of the strategic decision to use nonrenewable natural resources (oil and gas) to finance the transition toward a more sustainable and advanced competitiveness model, thriving on skills and knowledge.

Although clearly a source of wealth, natural resources should be perceived as an *enabler* of competitiveness. The true value of natural resources for competitiveness exists only if such resources are made renewable, or if the nation uses the revenues generated by natural resources to diversify the economy into added-value activities that can last into the future.

It is mainly nations that need to have natural resources policies but very similar basic underlying principles apply to firms. In 2004, oil giant Shell got into deep trouble because it had misstated its proven oil reserves and mismanaged oil exploration efforts, jeopardising the future

source of revenue of the company. Shell certainly still has a strong balance sheet (wealth), but under these circumstances, it was not very competitive.

Sustainability has thus a special appeal for today's customers and businesses. Our modern value system increasingly emphasises that we don't actually own assets – we are just custodians for future generations. Patek Philippe, the Swiss watch company, runs an advertisement that capitalises on such new trends: "You never actually own a Patek Philippe. You merely look after it for the next generation."

Past competitiveness – an unbearable burden?

A link between past competitiveness and present wealth is relatively easy to establish. Competitiveness ultimately aims at increasing the prosperity of a nation and its people. In theory, a competitive nation generates a certain amount of economic value every year, which appears in the national accounts as an increase in GDP. In turn, this increase in GDP adds to the existing wealth of the nation, which is accounted for . . . well, actually, nowhere!

The GDP data of a nation indicates an added value. It does not reflect in any way the accumulation of valuable assets, such as roads, buildings, transportation, schools, or universities, which are key parts of the wealth of a nation. Some nations – New Zealand, Italy and, more recently, Great Britain – are trying, not without difficulty, to assess the value of their total wealth. These projects attempt to fill a vacuum in national accounts. Accumulated wealth is a very important portion of a nation's prosperity, which remains unaccounted for. Using GDP alone to determine the prosperity of a nation is akin to calculating the prosperity of an individual solely on the basis of their current yearly income, omitting any wealth accumulated over time.

Wealth, if it is not a direct consequence of natural resources, is the cumulative result of the competitiveness of years past. Wealthy nations, such as Great Britain, Japan, and Germany, owe a great deal of their present standard of living to the competitiveness of past generations. Today, these nations may or may not be competitive, regardless of the achievements of past generations. Past success is not necessarily a guarantee of present competitiveness.

For any nation, a mix of past wealth and present competitiveness determines current prosperity. Prestigious universities, such as Harvard, Oxford, or La Sorbonne, innovative firms, such as Siemens, and efficient infrastructure, such as the bullet train in Japan, are legacies of the past. Yet, they can also contribute actively to today's competitiveness. However, their historical value is neither a guarantee of their future competitiveness, nor of the prosperity of their home nation in the future.

Success will depend upon the efficiency of the present generation to use, expand, and transfer these assets to future generations.

Wealth can also be a *threat* to competitiveness. Wealthy nations, firms, and people run the risk of falling into complacency, arrogance, and apathy. Complacency and arrogance have indeed killed more companies than any strategic mistakes. Wealth can act as a sedative, inducing nations, firms, and people to become insensitive to change. "We are so good . . ." Competitive organisations are often *hungry* for success – wealthy ones are simply not as hungry. Such attitudes are understandable, but the hungry organisations have a stronger drive and motivation toward success, and this is a key determinant of competitiveness.

Wealth is a thus a double-edged sword, supporting or hindering competitiveness. The theory of competitiveness would summarise the issue as follows:

> *What you have does not matter as much as what you do with what you have . . .*

1.1.4 Competitiveness is more than power

For almost a decade, Japan has endured harsh economic conditions – 1996 was the last year when Japan showed a GDP growth rate above 3 % – 3.6 % to be precise. Since then, Japan has lingered on the borderline of recession. Although today, Japan's economic performance seems to be improving, the stigmas of these difficult years still remain. Japan – the unrivalled leader of competitiveness in the early 1980s – has lost its dynamism and aura. The elements of its competitiveness model, previously acclaimed the world over, are now widely criticised – the tight links between the banking and the business community; the famous, but now infamous, *keiretsu* family of companies; the long-term business investments perspective; active government support for research and industrial policy; the legendary cohesion of the Japanese firm and society. In short, all of the factors that made Japan "unique", and were researched thoroughly by scholars for decades, are now vilified.

Nonetheless, Japan remains a formidable economic power – it has the world's second largest GDP, just behind the US, at $4667 bn in 2004, far ahead of third-place Germany with $2704 bn (US GDP stood at $11 733 bn in 2004). Despite its economic woes, Japan remains a formidable force in the world economy that should not be written off.

The fate of Japan illustrates how a country can lose its competitiveness standing, while still remaining an economic power. The opposite can also be true: a country can display significant increases in

competitiveness for a number of years, while being a smaller economic power, as illustrated by the case of Singapore. Since gaining independence from Malaysia on 9 August 1965, Singapore has displayed a remarkable economic performance – 10.3 % GDP growth in 2000 and 8.4 % growth in 2004. Yet, Singapore's potential as an economic power is inherently limited by the constraints of its relatively small population and land base. With a land area of only 692 km^2 – roughly 3.5 times the size of Washington, D.C. – Singapore has a population of 4.4 million inhabitants, producing a total GDP of $106 bn (2004). Singapore – with all the intelligence and astuteness of its government and people – can potentially match the power of a country like Sweden, with a GDP of $343 bn and a population of 8.9 m people. Yet, even with an aggressive international trade and foreign direct investment policy, it is highly unlikely that Singapore could ever match the economic power of China or the US.

Power, from an economic point of view, can be visualised as a function of a *country's wealth* and its *population size* (Figure 1.2). At first

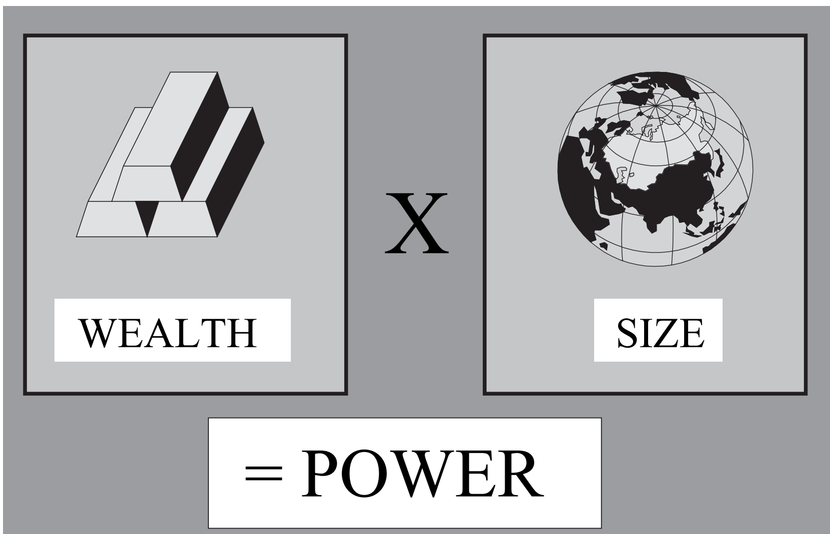

Figure 1.2 – A formula for economic power. Economic power is more than just the overall GDP data of a country. For example, despite the fact that the overall GDP of China or Russia is relatively modest, the potential economic power of these nations is determined partly by their enormous size: China in population, Russia in land. As shown by Singapore or Finland, wealth can only mitigate a lack of size to a certain extent. Ultimately, in a modern and global world, size is a key competitiveness factor.

glance, it might appear that the overall GDP of a nation could be a good approximation of a *country's wealth*. Unfortunately, GDP is an indicator of a *flow* of annual added value, and not of *accumulation* of wealth. Therefore, in the absence of any such direct measurement of a nation's wealth, we are obliged to use the overall GDP as a proxy: by taking separately the overall GDP of a nation and its relationship with the population, we can obtain an approximation of the potential economic power of a nation. It is the *combination* of these two components that actually defines the limitation, or the potential, for the power of a nation.

Let's compare The Netherlands and Russia as an example. In 2004, The Netherlands had a GDP of $579 bn, just slightly lower than that of Russia at $588 bn. These figures don't really tell us anything about the potential economic power of either nation. Why? Because, The Netherlands' economic power is based on a population of 16 m and a GDP per capita of $35 629, while Russia reached a comparable GDP with a population of 145 m people and a GDP per capita of only $4083. It is safe to argue that, because of its limited land area, The Netherlands will never reach a population of 145 m. Who is more competitive? Clearly, The Netherlands – it reached such a GDP with a population of 16 million, relative to Russia's 145 million. Dutch residents are, overall, individually more prosperous than those of Russia. Yet, in the perspective of economic power, Russia could potentially overtake The Netherlands. It is very likely that the GDP per capita of Russia will grow much faster in the coming years than the demography of The Netherlands. Hence, barring unforeseen circumstances, such as war, epidemics, or natural catastrophes, Russia has the potential to become a true world economic power, but The Netherlands does not.

Larger markets will dominate competitiveness

In 2050, the more developed regions of the world will account for 1155 bn people, against 7754 bn people in the less developed regions [7]. The labour force of China alone is estimated at 787 million people – approximately twice the labour force currently going to work in the entire industrialised world (Figure 1.3). China, because of its land area and the size of its population, can be turned more easily into a world economic power with a lower level of competitiveness per capita than would be required for a smaller nation. With a growth rate of 9.5 % in 2004 (and average annual growth rate of 8 % over the past decade), China is well on its way to becoming a considerable player in the world economy.

Size is an important determinant for the competitiveness of nations. During the early stages of economic development, the size of a country's domestic market can act as a magnet for foreign investment. Countries such as China, India, and Russia today are advancing their attractiveness

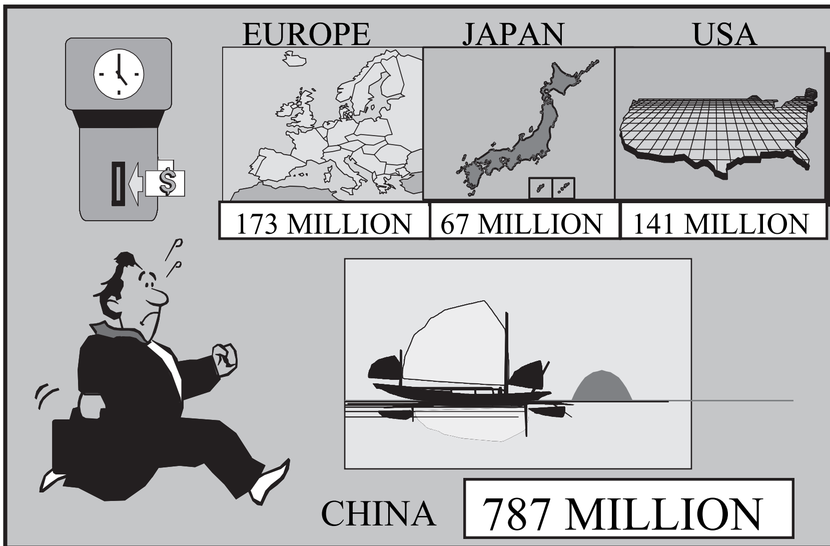

Figure 1.3 – Going to work every morning. The size of the labour force in China (787 m) or in India (444 m) is a formidable reserve of development and power for these nations. Increasingly, the integration of Chinese and Indian workers into the global labour force will have important economic repercussions, including on the hourly salaries of workers worldwide.

by stressing the potential of their large domestic markets. At later stages of development, a nation's size encourages larger capacity for the production and export of goods, services, and investments. Advanced industrial economies like the US, Germany, and Japan rely upon the size of their domestic markets to build economies of scale in the production of their goods and services. Such large nations use their size as a means of achieving economic or political power.

Since the publication, in 1973, of the famous book *Small is Beautiful* by E.F. Schumacher, there has been a tendency to believe that size is no longer that important [8]. Modern communications and transport technologies, and the opening of world markets, have allowed small companies to play a significant role in international markets. Companies such as Nokia, Microsoft, eBay, and Vodafone can be world leaders in their fields without necessarily being large companies – this is one of the most interesting developments in modern management. We now see that small companies can be "big," and have a competitive edge over larger players – they can become significant actors in international markets. In the old days, the international game was the reserve of the very large

organisation, which could devote important resources to the management of its international operations. Today, global niche firms, small but highly competitive, conquer the business world thanks to the development of the Internet and efficient logistics around the globe. Nowadays, the most competitive firms are far smaller than their predecessors of four decades ago. In an open world, firms have unlimited access to resources and talent wherever they are – a privilege that nations do not share.

The population boom changes the power game

Just five nations will account for 50 % of the world population growth during the next 50 years: India, China, Pakistan, Bangladesh, and the USA. In 2050, the world population will reach 8.9 bn people, almost a 50 % increase compared to the present (Figure 1.4). By then, the only industrialised nation that will make it onto the list of the 12 most populous nations of the world, i.e. having a population above 100 million people, will be the United States.

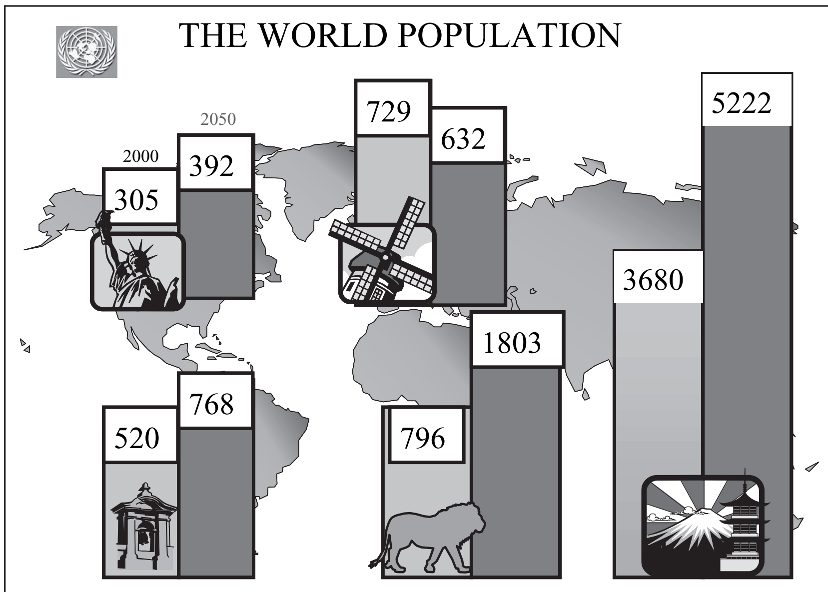

Figure 1.4 – World population growth between 2000 and 2050. According to the United Nations, with the exception of Europe, every part of the world will see an increase in population during the next 50 years. The most significant demographic explosion will occur in Asia, with 1542 m additional people, and in Africa, which will more than double in population size [7].

In Europe, only six countries (seven if one includes Turkey) have a critical mass of over 35 million inhabitants that could allow them to have some kind of weight in international economic affairs. They are: Germany, the United Kingdom, France, Italy, Spain, and Poland. All the other nations, more than 20 according to this definition, are small countries. They can legitimately hope to become highly competitive and to ensure the economic prosperity of their people, but, alone, they cannot expect to play a significant role on the world economic scene.

The world population has been growing faster and faster. From 1804 to 1927, it took 123 years to increase the world population by one billion people. However, in just 12 years, between 1987 and 1999, the world population increased by the same one billion people! Thus, the world population is growing more rapidly, but not everywhere. In Europe, during the same period of time, the population decreased by almost 100 million people. In addition, the "greying" of the population will have a huge economic impact. In 2050, for example, one out of every three people in Europe will be over 60 years old. By then, 10 % of the population in 21 nations around the world will be more than 80 years old.

The US and Europe produce two-thirds of global output, with only about one-tenth of the world's population. Yet, their share of the global population is falling – by 2050, their combined population is estimated to be only 7.7 % of the world's total (Figure 1.5). Will they maintain their current share of world GDP? Most likely not.

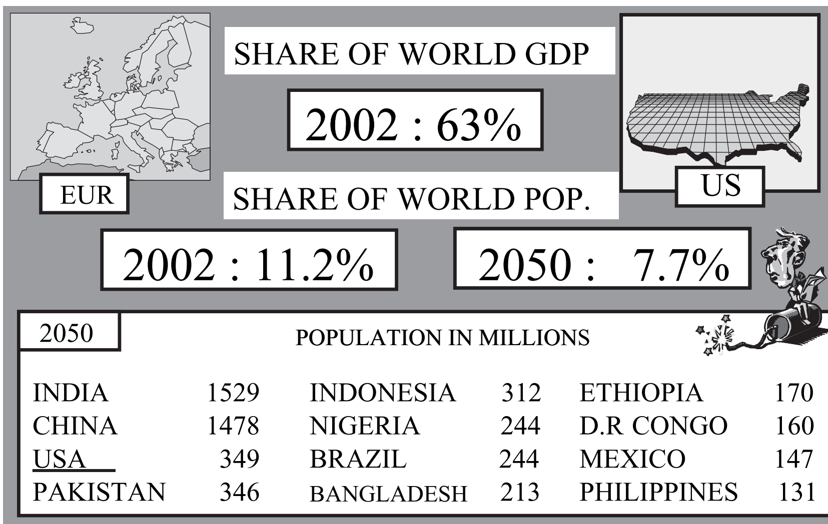

Figure 1.5 – Where will the markets be?

Can smaller nations survive?

Demographic perspectives are not encouraging for smaller nations. The clock is ticking against them – how will they continue to matter in the future? A small company has a better chance of becoming a significant player on world markets than a small nation. Such a situation is epitomised by the relationship between Nokia and Finland, both very competitive organisations in their own right. Nokia could theoretically be just as successful and powerful if operating from another home base, such as Denmark or Singapore. Thriving on technology and globalisation, Nokia represents a new type of competitor on world markets, somewhere between a large global player and a local niche player. This type of firm could be described as *global-niche players*, for whom location and size are less important.

The global marketplace

Figure 1.6 shows the world marketplace as it appeared in 2001. These figures, as well as their relative importance, have evolved in recent years. For example, the market capitalisation of listed companies worldwide is now generally superior to world GDP. Foreign direct investment (shown here as annual flows from countries to countries, and as stocks), which represents the foreign

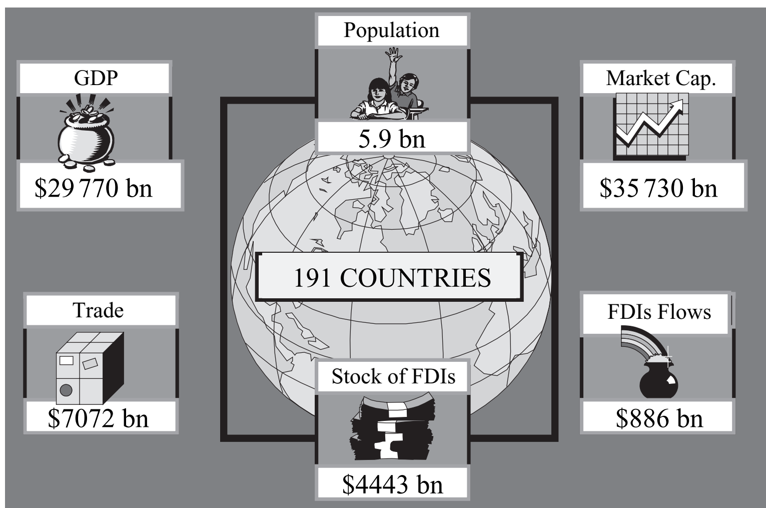

Figure 1.6 – How big is the global marketplace?

ownership of productive assets, has increased drastically as a result of globalisation. Trade is also expanding quickly as borders become more permeable to business, and trade barriers vanish.

In such a world, size matters. The US alone accounts for one-third of world GDP! Including Europe and Japan, the advanced industrialised nations represent three-quarters of world GDP. This is thus a world of big players. Interestingly, as mentioned already, small enterprises have more scope to impact the global world than small nations. Nokia, for example, a $30 bn company, has rapidly become a global player. As a consequence, it has increased the competitiveness of Finland. In 1999, Nokia accounted for 25 % of Finnish exports, and contributed 1.5 % to the growth of GDP. It represented 60 % of the capitalisation of the Helsinki Stock Exchange, and had created more millionaires and big taxpayers than any other company in the country.

Small countries can host significant players, but the national ties of these firms can be weakened. Nokia can hire people from the world over to fuel its expansion, and to further develop a globalisation strategy. It can also acquire companies and, thus, new competencies and people. In Switzerland, Novartis and Nestlé, the two largest industrial companies in the country, generate less than 5 % of their turnover at home. The vast majority of their employees are non-Swiss. At Nestlé, even the majority of the managing board is non-Swiss, including both past and present presidents.

In contrast, the future development of Finland is restricted by the size of the population, which is slightly above 5 million. Switzerland has a population of slightly over 7 million, in a geographical space much smaller than Finland. A country can, of course, rely on immigration to expand its power base – the United States, Canada, and Australia have done so. However, such a policy doesn't produce results overnight and may have deep political consequences. Theoretically, Finland could increase its population, because its land area is reasonably large (338 000 km^2); however, Luxembourg (2600 km^2), Hong Kong (1100 km^2), and Singapore (700 km^2) are stuck with their size, even if they are highly competitive.

The internationalisation of local firms, as well as increased attractiveness for foreign investments, can partially alleviate the constraints of size for a smaller nation. For places like Finland, Switzerland, and Singapore, future competitiveness can be achieved through the selection of activi-

ties with high added value and skills. Such policies will probably increase the general levels of prosperity in the countries. Nevertheless, the bottom line is that Finland, Switzerland, and Singapore don't have a future as world economic powers, as they are limited to their current respective sizes.

Switzerland, Finland, Singapore, and The Netherlands are homes to a large number of world-class, international companies that do not restrict their activities to the limited size of the domestic market. Companies from such countries are not subject to the same size restrictions that limit the power of their home countries. They can become significant global players: disproportionately influential in comparison to the small size of their home markets. Size is thus a constraint for a nation, but not necessarily for a firm.

1.2 Competitiveness: a change in the mindset

As we have just seen, the theory of competitiveness endeavours to go beyond the analysis of productivity, the accumulation of physical assets, the amassing of wealth, and the increase of power. Competitiveness is also about changing mindsets: looking at the world, nations, firms, and people from a different perspective. The wholeness of this view, the more holistic approach to the elements determining a firm's or a nation's prosperity, constitutes one facet of the theory.

Another important facet of the theory is how competitiveness profoundly modifies the frames of comparison used in examining these elements. Furthermore, competitiveness incorporates an analysis of time and space that is very different to that of conventional economics.

1.2.1 Forget the past, competitiveness is now!

In the mindset of competitiveness, we need to change our attitude to time and space as frames of comparison to measure our performance. As seen earlier, as a standard measure for the economic performance of a nation, GDP has multiple shortcomings – no accounting for the depletion of nonrenewable resources, no valuation of intangible assets, and no indication of accumulated wealth. The situation is similar when analysing firms – profit accounts show little or no regard for the value of brands and other intangibles, such as technology, processes, employees' skills – many of the elements that are crucial to the firms' ability to

produce output. The other drawback with conventional measures, such as GDP or profit, is that they lead firms and nations to be *inward* and *backward* looking when assessing their performance. They are more likely to consider their performance in comparison with what they achieved in the past, and in isolation from the rest of the world. Such an introspective approach to performance represents one of the most treacherous menaces to competitiveness – often perpetuating an illusion of success when, in fact, the reality has changed.

Gross Domestic Product in short . . .

The GDP defines all the final goods and services produced in an economy in one year, measured at market prices or purchase power parity adjusted. It includes:

- personal consumption;
- government expenditure;
- private investment;
- inventory changes;
- trade balance.

Competitiveness is like a race. It's not just about *you* running faster today than *you* did yesterday; it's about *you* running faster today than *all the others* in the race (Figure 1.7). Benchmarking – central to competitiveness – tells a company or a nation how its performance measures up with what its competitors are achieving in the same timeframe. Unfortunately, many politicians and CEOs prefer to compare their present performance with their past performance. While it might be interesting, it is most often irrelevant from the point of view of competitiveness.

Suppose an athlete concentrates his efforts and trains regularly to boost his performance in the 100 m dash. As the days pass, he runs faster and faster; at the beginning of his training, he would run 100 m in 15 seconds, now it takes him 11 seconds. In the absence of any other frame of comparison, he takes the improvement of his current timing versus his previous one as proof that he is highly competitive, and decides to compete in the Olympic Games.

At that stage, our athlete encounters a basic principle of competitiveness – *the performance of others matters as much as yours*. In an Olympic final, running the 100 m dash in 11 seconds is not good enough to win. To have any chance of winning, you have to do it in less than 10 seconds.

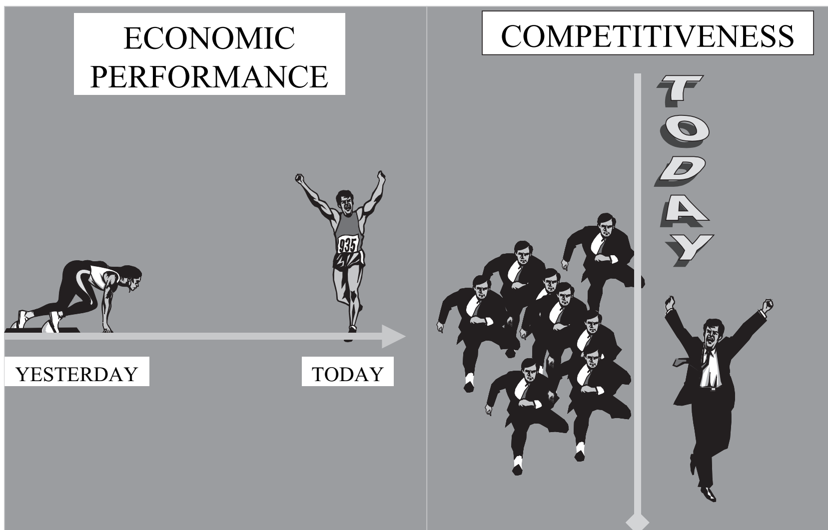

Figure 1.7 – Running against the others.

The frame of comparison is different. In the final, our athlete may very well achieve his best performance ever – perhaps running 100 m in less than 11 seconds – a major achievement for him, but not good enough to win. The winner most likely completed the race in less than 10 seconds. Both our athlete and the Olympic champion have excelled in their performance, but the *competitiveness* of one – the gold medallist – is greater than that of the rest of the field.

Nations can also succumb to the same delusion. In 2000, Switzerland posted 3.2 % growth in GDP – the first time since 1990 that the nation achieved a growth performance above 3 %. The Swiss business and political communities duly celebrated this "achievement." To really understand the implications, this apparent "achievement" has to be tempered by looking at the performance of Switzerland's competitors. During that very same year, forty out of the sixty economies that we monitor continuously at the IMD World Competitiveness Centre, displayed a GDP growth rate superior to 3 % (the same phenomenon occurred in 2004, globally a very good year for economic performance). The accomplishments of the Swiss economy were remarkable by Swiss standards and in comparison to the previous Swiss performances. However, when examined within the frame of comparison of *world* competitiveness, such "achievement" becomes markedly less impressive.

Disillusionment grew when the performance was assessed on a longer time scale – a decade. Within this timeframe, Switzerland only had one

year of growth above 3 %. In comparison, Sweden had five such years; The Netherlands, 6; Finland, New Zealand, and the US, 7; Australia, 8. Switzerland performed well according to its own previous standards, but not according to those of its competitors. Assessing one's performance through the prism of competitiveness can indeed be a very informative, if frustrating, experience.

Competitiveness is thus about *benchmarking* one's performance with others today, and not with oneself yesterday. In the 80s, American and European firms began to notice a great fall in the demand for their products, coupled with a rise in demand for Japanese products. American and European firms realised that it was not enough to compare their present results with those of the past, or even to compare themselves with other domestic competitors. To really make a difference, they had to compare themselves with the "best in the class", i.e. the Japanese firms. This process, benchmarking, provided a serious wake-up call for both nations and firms. Japanese firms seemed to be better, faster and, especially, cheaper than their American or European competitors.

In the early 80s, John Young, then CEO of HP (Hewlett-Packard), understood the impact and magnitude of the effect low-cost Asian producers were going to have on the American IT industry [9]. Not only the IT industry was affected, the consequences reverberated throughout all US industries, such as transport, household goods, and telecommunications. American leaders were determined to crack the secret of Japan's recipe for success. Young was one of the founders of the US Council on Competitiveness, gathering leaders from business, government, and academia to find remedies for lagging American competitiveness.

Young also took the challenge back to his own company: he instigated an internal process at HP to achieve a ten-fold improvement in quality. The strategy required a company-wide examination of methods and processes, and *Quality Directors* were appointed to reinforce the company's commitment to a quality strategy. Senior HP executives had to adopt quality enhancement as their primary goal. Yet, while HP employees found numerous ways to improve quality, they still believed such a drastic ten-fold improvement was unattainable. Through benchmarking, managers and employees systematically examined the processes employed by other companies and their performances. Thus, HP unblocked an inward-looking culture and unleashed innovation. Employees realised that goals which seemed to be unattainable were, in fact, everyday occurrences elsewhere. Pride came into the picture; "Why can they do it and not us?"

Young's policy on quality improvement and benchmarking was a resounding success, forming the basis of HP's strong competitiveness

during the 80s and 90s. HP *could* continue to compete, providing quality products at competitive prices. John Young had foresight and saw how the competitiveness of HP required a change in the *frame of reference*. To remain competitive, HP needed to break away from past moulds, challenge current practices, and question basic assumptions. It was competitiveness policy at its best!

1.2.2 Winning is not enough

The conceptual importance of winning is rarely challenged. However, in the competitiveness mindset, *winning may not be as good as you think*. Although being head of the class is certainly praiseworthy, nations and firms should also tackle a more fundamental question:

Are we winning the right race and, if so, by how much?

Choosing the right comparison basis, i.e. the right race to win, *and* defining the objective, i.e. by how much to win, are the two fundamental principles of competitiveness. The change in mindset produced by focusing on competitiveness can be seen through the following example.

Let's assume that a student wants to select her future career. While reviewing all her competencies, she assesses that, among other things, she is an excellent driver – she thinks, in fact, that it is what she does best. Thus, according to the conventional wisdom that a person should concentrate on what he or she does best, our student should become a driver. Yet, from a competitiveness angle, such a statement is terribly wrong. Millions of people around the world know how to drive a car; most think they are good drivers; a few even believe they are truly outstanding. However, being able to drive is not a competitive advantage – lots and lots of people know how to do it, and thus there is no uniqueness in being able to do so. In addition, even an excellent driver is not *that much better* than a good driver – or at least so much better that it actually makes an important difference. Most likely, the difference between a good driver and an excellent one is rather marginal. To really succeed in driving, one has to be at the level of a Michael Schumacher – little else will do.

Thus, when examining her career options with a competitiveness mindset, our student resolves that she should not earn her living from driving. So how should she decide on a career? The theory of competitiveness would suggest that she should look at all her other

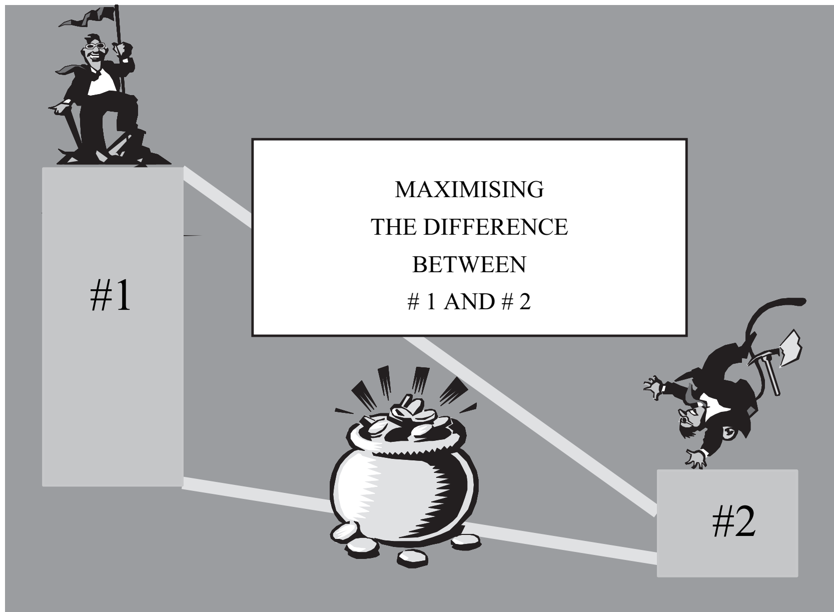

Figure 1.8 – Competitiveness is also about maximising the difference with followers.

competencies and identify the one where she commands the biggest advantage *compared* to competitors (Figure 1.8). If our student considers that her next best competency after driving is tax law, then she should embrace a law career, even if her skills are only average, provided she is in an environment where tax lawyers are relatively scarce. For competitiveness, being good is not enough to bring about success – being *different* is what really matters.

In practical terms, competitiveness theory underlines that success is about differences, according to the following principle:

> *Competitiveness thrives on maximising the positive difference (or comparative advantage) between a nation, a firm, or a person and their most direct competitor.*

A competitiveness mindset can have a great impact on a firm's profitability. In business, a situation that resembles a compact sprint – like in a cycling race when there is little space between competitors – generally doesn't command high margins. The retail food and computer

industries are examples of cutthroat competition with reduced profit margins. In these sectors, competitors are very close to each other in terms of product range, pricing, and strategy. The differentiating factors are minimal, and most often cost is the only thing that differs. In such situations, markets are unwilling to pay a premium for a firm's products if there is little uniqueness in comparison to those of competing firms. Whenever the customer enjoys a multiple choice of comparable propositions, prices and profit margins shrink inexorably.

In contrast, firms commanding a large advance on their nearest competitor generate high margins and earn strong profits. Luxury goods firms – because of their brand reputation – and software developers have enjoyed such privileged situations. Microsoft has a very large market capitalisation, as we have seen earlier, not only because the firm excels in technology and marketing, but also because the nearest direct competitors of Microsoft are much further behind in terms of market share. Some users may argue Microsoft's technologies are not the best around. While that may be the case, are there any other real alternatives open to consumers? Operating systems which could be considered as a threat to Microsoft's, such as Linux, have a very small market share in comparison to that of Microsoft – even if the adoption of Linux is growing quickly. Linux may well be a far better operating system than Microsoft's Windows. However, in a crude competitiveness approach, to safeguard the high valuation of the firm by stock markets, Microsoft should worry less about marginally improving technology, than about maintaining a huge competitive distance between the firm and its rivals.

Nations face a similar dilemma – their attractiveness is a key determinant of competitiveness. Foreign investments transfer capital, technology, employment, and skills into the host nation, thus contributing to its prosperity. Having recognised how foreign investments bring jobs, government leaders – generally preoccupied with unemployment, as it influences their re-election – actively support an attractiveness approach to competitiveness. During the past two decades, national investment agencies using incentive packages to lure foreign firms have proliferated; Ireland and Singapore being key references of such policies. However, the *packages* themselves are rather undifferentiated. Most nations promote the same advantages: grace period and preferential tax rates for investment, excellent infrastructure, low cost of operation, access to markets, government support, and so on. In this situation, firms have multiple locations to choose between for an investment, and can turn out to be tough negotiators in making their choice, pitting one nation against others to see who will provide the better bargain. When a situation of extreme and close competition occurs in a firm's context,

the consequence for the supplying firm is generally that prices are reduced and margins are squeezed.

In the context of national governments, most likely tax revenues will be reduced. Governments today realise they have little choice but to be competitive in the area of corporate taxes if they wish to attract foreign investment – it is, after all, what every other nation is doing. As a result of this competition among nations and the increased mobility of corporations around the globe, the margin of manoeuvre on corporate taxes is increasingly limited for nations, practically leading to a convergence in corporate tax rates all over the world.

The *compact sprint* among nations illustrates how building up a distance from competitors is a key concept to competitiveness. Nations may escape the pressure of corporate demands by focusing on different competitive advantages – the ease of doing business, quality of life, an international culture, openness, protection of intellectual property, and security of goods and people – and build a different model based on a package of unmatched competitiveness advantages. However, most government leaders are elected to cure the “wrongs” of the previous administration. Understandably, these leaders concentrate on improving the past and showing their electorate how much better off they are now. In doing so, they favour pursuing a minimalist approach: *as long as it is better than before . . .*

The theory of competitiveness requires government leaders to change their own *frames of comparison*: they should examine the performance of their nation in light of the performance and achievements of other comparable, competing nations during a specific period in time, and then seek to maximise their advantage. Such a change in mentality constitutes a real challenge for leaders who have focused generally on local politics and issues. Nevertheless, in an exposed international environment, where information and capital flows around the world move even more freely and quickly than products, hiding from certain realities is no longer an option. Nations are also compelled to abide by the laws of competitiveness.

In summary, this first chapter illustrates how the theory of competitiveness provides a more comprehensive, holistic approach to those interested in identifying what drives prosperity, and how to enhance it. Firms and their managers cannot forever thrive on dividing up everything – production, markets, customers, goals, even business units and competencies. Neither can nations neglect the development of a common value system, a cohesive set of goals, and an established, widely-accepted blueprint for the creation of prosperity. Divergent goals and means need to be reconciled within any organisation – typically at

the most senior leadership level – so that they can provide a guiding sense of purpose for the future.

The theory of competitiveness provides a framework for conducting this reconciliation process. The theory stresses the importance of:

1. *Going beyond* productivity, tangibles, wealth, and power as sole determinants of success.
2. *Shifting the frames of reference* from short-term benefits to long-term sustainability; from past individual comparisons to benchmarking performance with present competitors; from being complacent in success to maximising comparative advantages.

While competitiveness is a recent addition to the field of economics, the insights and the development of the theory did not occur overnight. The concepts that set the grounds for the theory have been in the making for most of the past three centuries. In the course of the next chapter, we will go through a brief overview of the long winding road to competitiveness, and see where it leads.