EMPLOYMENT PERFORMANCE

McKinsey
Global
Institute

with assistance from
Orley Ashenfelter
Martin Baily
Ted Hall
Bob Solow
Christian von Weizsäcker

Washington, D.C.

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Preface

This report is an end product of a year-long project by the McKinsey Global Institute on employment performance in the leading economies of the world.

The idea for this project arose during the conduct of our studies of service sector and manufacturing productivity.[1] In that work, we concluded that differences in productivity among the leading economies were caused more by differences in competitive intensity in the product markets than by differences in labor force flexibility. However, we planned a follow-on project to explore in more depth the differences in labor market flexibility and the relationship between the labor market and the product market.

By the time we had completed the productivity studies, unemployment levels in Europe had reached post-war highs in several countries. Our McKinsey offices in Europe became strongly interested in contributing to the solution of what was widely viewed as Europe's most serious economic problem.

Thus, in organizing our work for this project, we broadened the scope to address unemployment. As we report in Chapter 1, aggregate level analysis led us quickly to conclude that the differences in unemployment among the leading economies were caused primarily by differences in net job creation. Thus, we have focused this project on determining relative net job creation or employment performance among the leading economies and on explaining whatever differences we found.

With this project, we have completed our analysis of the most fundamental components of economic performance among the leading economies. GDP per capita is the single best indicator of the overall performance of an economy. That measure, of course, is determined by the product of productivity and the fraction of the people in a society who work. This study complements our earlier productivity studies by addressing the latter factor.

This report consists of five chapters and an executive summary. Chapter 1 describes our objectives and approach for the project. Chapter 2 describes the analysis and conclusions from our work at the aggregate level. The aggregate level analysis includes results for the economies as a whole as well as at the sector level of agriculture, manufacturing and services. Chapter 2 includes our conclusions about what can be learned from aggregate level analysis and which questions cannot be answered at that level and have to be addressed at the industry case study level. Chapter 3 includes our seven industry case studies, three in manufacturing, three in services and the construction case. Each case gives the results of our employment performance calculations and discusses the reasons for the differences we found. Each case is preceded by a one-page summary of the results of the case. Readers more interested in our general results and less interested in the specifics of some or all of the cases may choose to read the summary rather than the entire case. Chapter 4 presents a synthesis of our findings including our overall conclusions. Chapter 5 gives implications for policy and for corporations.

The undertaking of this project is part of the fulfillment of the McKinsey Global Institute's mission to help business leaders: (1) understand global economic developments, (2) improve the

[1] Service Sector Productivity, McKinsey Global Institute, Washington, D.C., October 1992; Manufacturing Productivity, McKinsey Global Institute, Washington, D.C., October 1993

performance of their corporations, and (3) work for better national and international policies. The working team for this project consisted of a core group of four McKinsey consultants transferred from their home offices to the Global Institute and a group of McKinsey experts. The Global Institute consultants and the cases they worked on were Thomas Gerstner (Stuttgart) – automotive; René Limacher (Zürich) – construction; Mike Longman (Cleveland) – furniture; and Mineki Toyama (Tokyo) – computers. Three additional McKinsey consultants were temporarily assigned to this project to conduct case studies. These consultants were Michele Appendino (Milan) – banking, Tomás Calleja (Madrid) – retailing; and Michel Paulin (Paris) – retailing. Two McKinsey Global Institute economics specialists were full-time members of the working team and contributed to the aggregate analysis and conducted case study work. These experts were Kathy Huang (MGI) – film/TV/video; and Eric Zitzewitz (MGI) – retailing and banking. René Limacher and Mike Longman shared the responsibilities for the day-to-day project management.

McKinsey sector experts worked directly with the working team in the conduct of the case studies. The sector experts were Glenn Mercer and Jeff Sinclair (Cleveland) – automotive; Mike Nevens (San Jose) – computers; and Heino Fassbender (Frankfurt) – banking. Administrative support was provided by Ronni Brownlee, Erika Shepherd and Rebecca Wright, and the graphic production team was led by Ralph Romano and Anthony Hudson.

We were fortunate to have an outside Advisory Committee for this project. The Advisory Committee was chaired by Bob Solow, MIT and consisted in addition of Orley Ashenfelter, Princeton University; Ted Hall, McKinsey; and Christian von Weizsäcker, University of Cologne. The working team had five all-day meetings with the Advisory Committee to review progress during the course of the project. Heino Fassbender (Frankfurt) and Martin Baily of The Brookings Institution and of the University of Maryland, and until recently a Fellow at MGI, collaborated with me in the direction of the project.

Throughout the conduct of this project we benefited from the unique worldwide perspective and knowledge of McKinsey consultants on the industries investigated in our case studies. McKinsey sector leaders provided input to our case studies and reviewed our results. Their names are given following this preface. We would also like to recognize the contributions of McKinsey consulting teams worldwide who provided us with invaluable information on the structure, dynamics and performance of all the industries we studied, while at the same time, preserving the confidentiality of information about specific McKinsey clients. McKinsey's research and information departments around the world provided invaluable information and insight under very tight time constraints. Finally, we appreciate the warm welcome and useful information we received in our interviews with corporations, industry associations and government officials.

Bill Lewis
Director of the McKinsey Global Institute
November 1994

McKINSEY SECTOR LEADERS CONTRIBUTING TO CASE STUDIES

Automotive
Tamotsu Adachi – Tokyo
Javier Aznar – Madrid
Felix Brück – Munich
José Luis Cortina – Madrid
François Glémet – Madrid
Ralph Heck – Düsseldorf
Rolf-Dieter Kempis – Düsseldorf
Jürgen Kluge – Düsseldorf
Glenn Mercer – Cleveland
Wilhelm Rall – Stuttgart
Günter Rommel – Tokyo
Jeff Sinclair – Cleveland
Andreas Zielke – Berlin

Banking
Claudio Bombonato – Milan
Lowell Bryan – New York
John Dowdy – Los Angeles
Philippe Giry-Deloison – Montreal
Juan Hoyos – Madrid
Milt Gillespie – Los Angeles
Neil Janin – Paris
Yuko Kawamoto – Tokyo
Lenny Mendonca – San Francisco
Massimo Michaud – Paris
Luis Mondero – Madrid
Juan Ocampo – New York
Rodrigo Sousa – Madrid
Frank Spellerberg – Frankfurt
Vittorio Terzi – Rome
Ryuji Yasuda – Tokyo

Computer
Joanne Guiniven – New York
Ulrich Horsmann – Cologne
Sonosuke Kadonaga – Osaka
Ken Kurtzman – Houston
Eberhard von Löhneysen – Berlin
Tetsuya Mori – Tokyo
Mike Nevens – San Jose
Lothar Stein – Munich
Thilo Weser – Munich
Yuka Yamada – Tokyo

Construction
Zafer Achi – Paris
Peter Barrenstein – Munich
Giacomo Di Nepi – Milan
David Gee – Houston
Miguel Angel Peirano – Madrid
Corrado Ruffini – Milan
Rodrigo Sousa – Madrid

Furniture
Jack Dempsey – Pittsburgh
Yoshi Kato – Tokyo
Toni Sacconaghi – Toronto
Steve Schwarzwaelder – Pittsburgh
Jennifer Watkins – Cleveland

Film/TV/Video
Matthias Beck – Frankfurt
Willie Burkhardt – Los Angeles
Vittorio Colao – Milan
Tom Eisenmann – New York
Michael Jung – Vienna
Paul-Bernhard Kallen – Vienna
Pietro Sterpos – Paris

Retailing
Peter Barrenstein – Munich
Karen Barth – New York
Herman De Bode – Brussels
Peter Child – Paris
François Glémet – Madrid
Julie Hayes – Chicago
Nancy Karch – Chicago
Nancy Killefer – Washington, D.C.
Tatsuo Ohbora – Tokyo
Kanoko Oishi – Tokyo
Christiana Smith Shi – San Francisco
Hugues Witvoet – Paris
Hirokazu Yamanashi – Tokyo

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Executive summary

Unemployment is widely viewed as the most serious economic problem in most industrial countries. In Europe it has climbed steadily for the past 25 years and has reached post-war highs (Exhibit 1). In the U.S., unemployment has been cyclical, with the average below that in Europe for the past 10 years. Japan has experienced low unemployment levels, although the early stages of economic reform in Japan and the recent rise in unemployment suggest the risk of increased unemployment in the future.

Considerable recent research has been conducted to determine the causes of unemployment. Most of the work has focused on macro analysis of the labor market. The findings are based on sound economic principles, but the evidence available to test the findings is not conclusive. Although references are made to the possible impact of the market for goods and services (product market) and the capital market on unemployment, no work to date has been able to understand or quantify their impact.

To test the conclusions about the effect of the labor market on unemployment and to investigate the role played by product and capital markets, the McKinsey Global Institute has studied employment performance in France, Germany, Italy, Japan, Spain, and the U.S. from 1980 to the early 1990s. We conducted analysis at the economywide level and also studied employment in seven industries: automotive, computers, furniture, construction, banking, general merchandise retailing, and film /TV/video.

Our principal findings are:

- Japan and the U.S. have lower unemployment than Europe because they have created jobs in the market part of the economy whereas European countries have experienced net job destruction there (Exhibits 2 and 3).

- Product market restrictions were as important, if not more important, than work force rigidity in explaining why job creation in Europe was below the U.S., especially in high growth service industries.

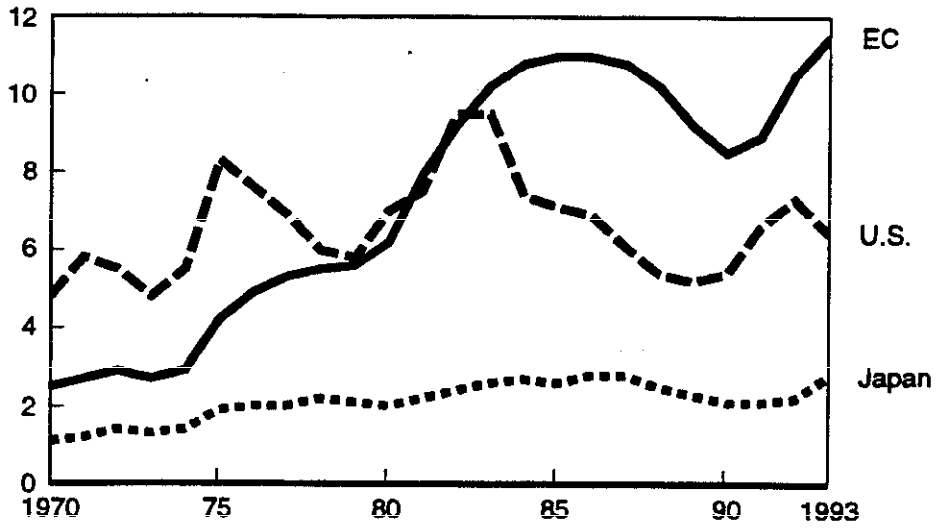
- The creation of large numbers of service sector jobs in the U.S. has not hurt the quality or wages of jobs

  - The U.S. has created more high skill jobs than Germany and France (Exhibit 4). Those countries have improved their job skill mix primarily by destroying low skill jobs.

Exhibit 1

STANDARDIZED UNEMPLOYMENT RATES 1970-93

Percent of total labor force

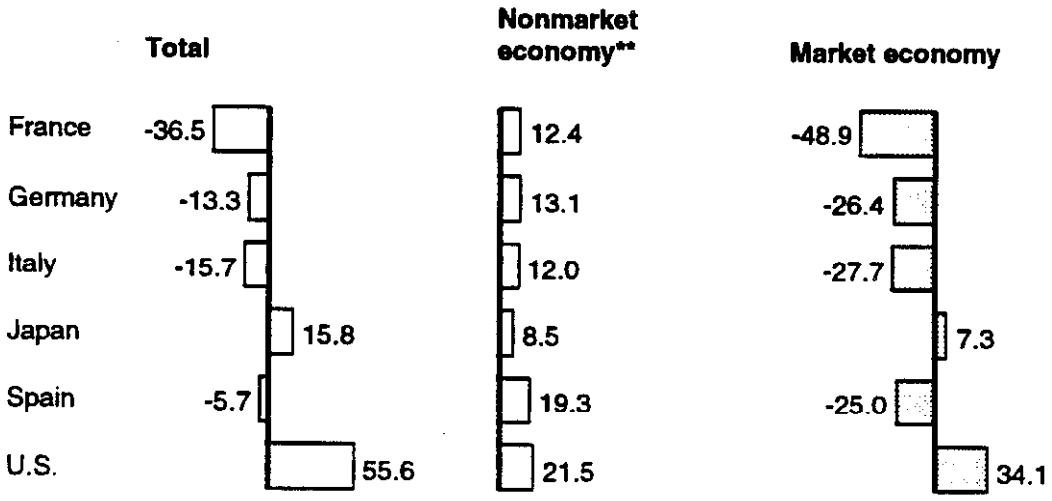


Source: OECD Labor Force Statistics

Exhibit 2

EMPLOYMENT PERFORMANCE 1980-90

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including government, private and public education, private and public health care, etc.

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

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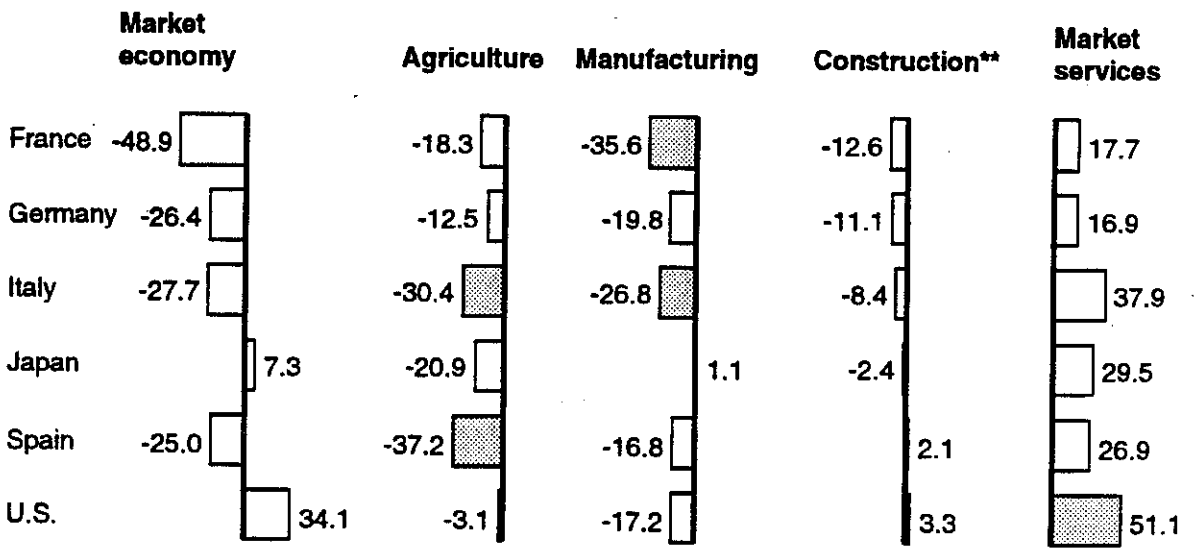
Exhibit 3

EMPLOYMENT PERFORMANCE – MARKET ECONOMY 1980-90

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including mining and utilities

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

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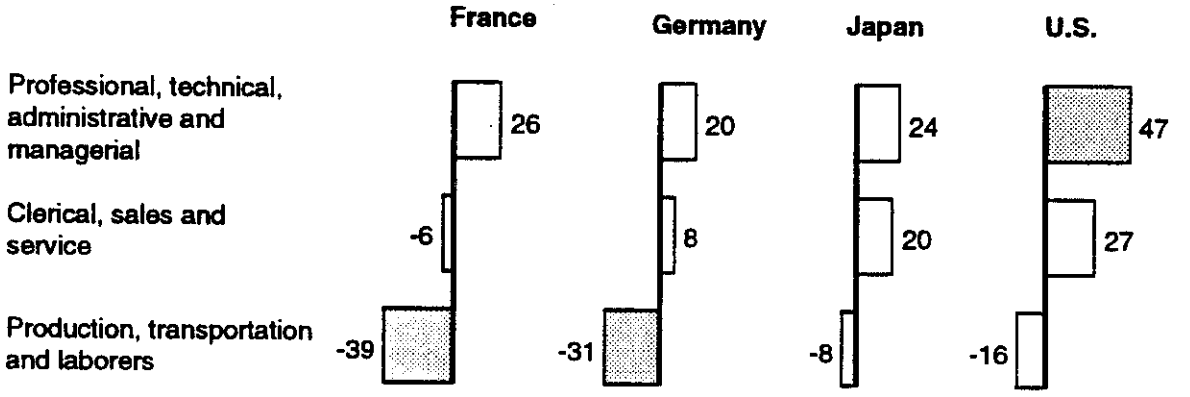
Exhibit 4

GROWTH OF EMPLOYMENT BY OCCUPATION 1980-90*

Jobs created per thousand working age population**



* France, 1982-91; Germany, 1980-91; Japan, 1979-90; U.S., 1979-90; all countries extrapolated to 1980-90; figures do not add up to total employment performance (Exhibit 2) since agricultural workers are excluded

** Adjusted for growth in the working age population

Source: OECD Jobs Study; McKinsey analysis

COUNTRY SUMMARIES

France had weak job growth in both manufacturing and services during the 1980s. Restructuring occurred in manufacturing and in many traditional parts of the service sector because of slow demand growth and the disadvantaged productivity/wage position of many companies. Numerous product market restrictions have inhibited new job creation in services and construction. High benefit levels and payroll taxes have further reduced employment opportunities in lower wage industries such as retailing.

Italy experienced strong employment growth in the service sector, but it was not sufficient to compensate for heavy losses in manufacturing and agriculture. Employment declines occurred in all branches of Italian manufacturing as high productivity growth was unmatched by output growth. The pace of restructuring was more rapid in Italy than elsewhere because of the low initial productivity of many Italian manufacturers. Companies that had historically faced little competition in Italy's oligopolistic markets began to face pressure to become more cost competitive. Service employment grew, but much of this occurred in traditional products rather than in emerging areas like mortgages, securities, new retailing formats and cable networks.

Spain began the 1980s at an earlier stage of economic evolution than did most other countries in Europe. Large numbers of people were still occupied in agriculture and traditional manufacturing industries. During the decade farm jobs were lost as productivity increased. Spain also lost manufacturing jobs despite low initial penetration of investment goods. High real interest rates dampened demand growth in investment goods while low productivity levels, increasing wages, and a real appreciation of the peseta caused the increase in demand which did occur to be fulfilled by imports. Spain did increase service sector and construction employment, but numerous product market barriers kept this from being enough to absorb the outflow from manufacturing and agriculture.

Germany began the 1980s with a high level of manufacturing productivity relative to the rest of Europe. This helped its manufacturing companies to gain market share in Europe during the 1980s and postpone major restructuring. The resulting small loss of employment in manufacturing allowed Germany to have better job creation performance than the rest of Europe despite the slowest growth in service sector employment. Product market restrictions in services and construction and high total labor costs have reduced job creation in many of the emerging sectors of the economy. The unsustainability of this development became obvious at the beginning of the 1990s when large numbers of layoffs in the manufacturing sector could not be absorbed by the service industries and consequently led to an increase in the unemployment rate.

Japan experienced employment increases in both manufacturing and services during the 1980s, though the sustainability of many existing jobs remains in question because the country avoided much of the restructuring which took place in the U.S. and Europe. High productivity industries like auto and machine tools were able to increase employment while extending their worldwide lead in productivity because Japan experienced an extraordinary increase in demand for investment goods during the bubble economy of the late 1980s. Lower productivity industries like retailing and food processing were often protected from foreign competition and prevented from evolving rapidly and thus remained uncompetitive. Significant employment dislocations are likely to occur in both types of industries in the future. Demand for consumer durables and investment goods will slow now that product penetration levels have approached western levels and industries are experiencing overcapacity. Consumer pressure for lower prices will force productivity to rise in the lagging industries or will result in increasing imports.

The U.S. lost a few manufacturing jobs as a direct result of its increasing trade deficit, but it lost even more to the corporate restructuring which took place in response to intensified Japanese competition. Its overall employment performance did not suffer, however, because the country created very large numbers of service sector and construction jobs. These were stimulated by relatively few restrictions in product markets and some facilitating regulation. About half of the jobs created were high skill jobs, but low unemployment benefits and low payroll taxes also made it possible to expand employment in low skill, low wage industries such as retailing.

- The wage distribution of service jobs in the U.S. is almost identical to the distribution in manufacturing (Exhibit 5).

* * *

Summaries of our results for each country are in the box on the facing page.

WHY EMPLOYMENT PERFORMANCES DIFFER

Differences in employment performance ultimately stem from differences in the rates at which industrial economies evolve. All economies are driven by natural evolutionary forces. As agriculture evolved beyond the point of providing for food self-sufficiency, the productivity increases made labor resources available for both manufactured goods and services. As a result, employment in both manufacturing and services rose as a fraction of total employment in all industrial countries during the first half of the twentieth century. In the second half of this century, manufacturing employment peaked in all the industrial countries. Service employment, however, continued to increase.

Today, productivity increases from innovative new products and processes continue to drive economic evolution and turnover in the labor market. Contrary to popular wisdom, these productivity increases do not generally lead to increased unemployment and declining overall economic performance. Productivity increases provide more income for workers in old jobs and new workers to fill jobs created by entrepreneurs. These entrepreneurs, in turn, produce innovative new products and services, which workers with increased income want to buy.

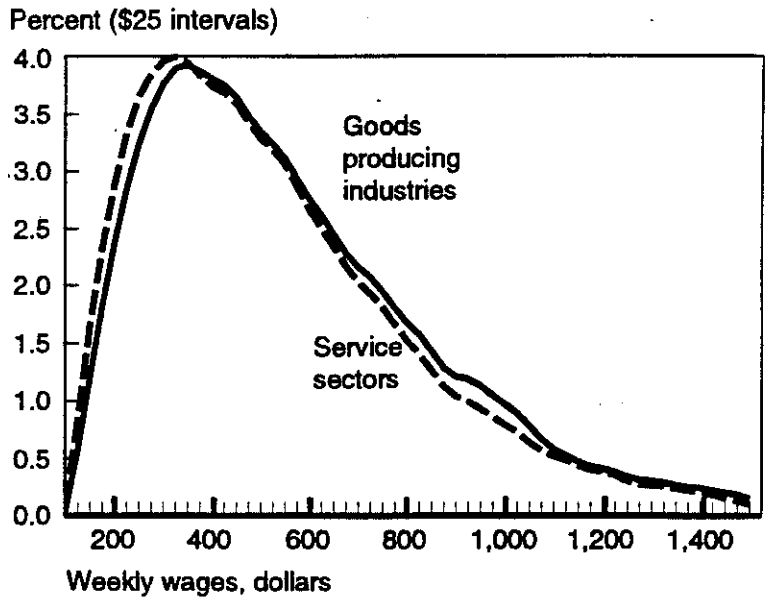
The overall supply-demand balance in the economy is not automatic. An imbalance in one direction can generate inflation; an imbalance in the other direction can frustrate growth and bring recession. The evidence is that slow productivity growth does not relieve recession nor does rapid productivity growth exacerbate it.

We would expect to see a pattern of primarily productivity improvements in the older industries (agriculture and manufacturing) and both productivity improvement and output growth in the newer industries (services). Our results are broadly consistent with this pattern.

Governments are the primary reason why this process is working better in some countries than in others. Their actions to control and manage the evolution of their economies, are the most important factors explaining differences in employment performance. Most of these government actions regulate individual service sector industries through restrictions in the product market. These product market restrictions hurt either productivity or employment or both. If wages are free to fall, then employment can be maintained, but the loss of

Exhibit 5

U.S. WAGE DISTRIBUTIONS 1992

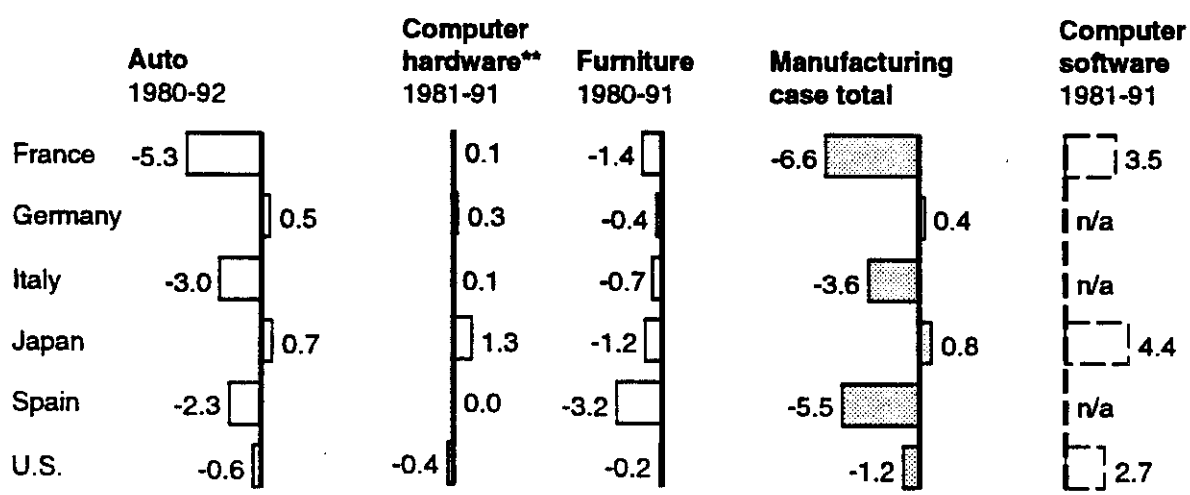


Source: Cleveland Federal Reserve Bank; U.S. Department of Labor; BLS

Exhibit 6

EMPLOYMENT PERFORMANCE IN MANUFACTURING

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including semiconductor manufacturing

Source: National household and establishment surveys; McKinsey analysis

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productivity keeps real wages low. If wages are maintained, then restrictions show up in unemployment.

Since product market restrictions are specific to industries, aggregate analysis is inadequate for identifying them and determining their impact. We have had to analyze them at the industry case level. This case level work constituted the main effort of our study and differentiates our work from most other work on the unemployment problem. In contrast, the manufacturing sector is less subject to government influence than services because market pressure coming from trade and foreign direct investment influences manufacturers more.

Manufacturing declining

None of the industrial countries should look to manufacturing for net job creation. This is clearly shown in the computer case: job creation from the computer innovation is now coming from the "service" of applying the innovation (software and distribution) rather than from the manufacturing of the computer itself. The overall impact on employment performance from high-tech computer hardware manufacturing is almost negligible. Even in a high-tech industry, virtually all the net job growth is coming from services.

Our analysis also indicates that there were two important reasons for Japan's superior employment performance in manufacturing. The first was catching up with the U.S. in plant and equipment per employee. The second was overinvestment in capacity in heavy manufacturing and electronics during the bubble economy of the late 1980s. Almost half of Japan's growth in GDP came from investment rather than consumption. Since the production of investment goods is concentrated in the manufacturing sector, it is not surprising that Japan had such high growth in manufacturing output. Seventy-one percent of the growth in manufacturing value added came from machinery, equipment and electronics, where investment goods are primarily produced. Employment levels in these industries are now beginning to drop because of overcapacity.

Japan had the highest growth in manufacturing productivity over the 1980s. France and Italy also had high levels of productivity improvement. Because European countries did not have high growth in domestic demand, their high levels of productivity improvement led to large net job destruction in manufacturing.

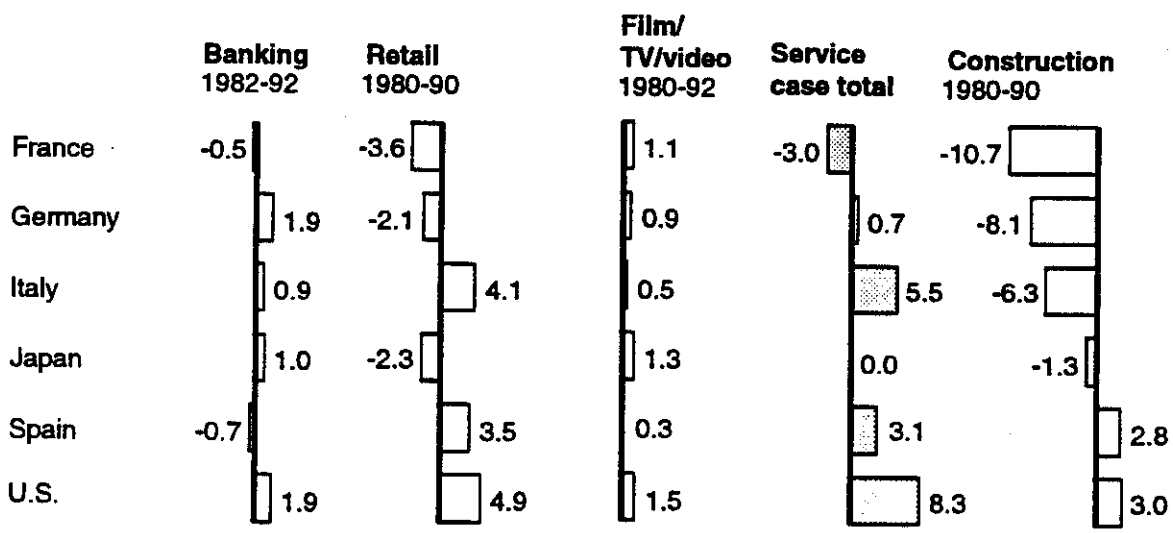
Exhibit 6 shows the employment performance in all six countries for the three manufacturing cases studied, automotive, computers and furniture, along with the total employment performance for these three cases taken together. The auto case illustrates the relatively strong employment performance of Japan and the relatively weak employment performance of France and Italy.

Japan had significantly stronger domestic demand growth for automotive products because of lower levels of domestic market penetration in 1980. However, the high rate of demand growth was also partly from the bubble

Exhibit 7

EMPLOYMENT PERFORMANCE IN MARKET SERVICES AND CONSTRUCTION

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

Source: National household and establishment surveys; McKinsey analysis

economy. As a result, Japan overinvested in automotive capacity. Japan's performance was also better in automotive because of its improving trade balance in that industry. However, this case only illustrates that trade can have an impact on employment at the industry level. Our aggregate level analysis showed that these employment effects resulting from improving trade performance in autos were entirely offset by declining trade performance in other parts of manufacturing.

In the automotive case, we also conclude that a significant portion of the decline in employment performance in France and Italy in manufacturing came from competitive pressure from the German industry through trade. At the beginning of the 1980s the industry in Germany had a significant cost advantage over the industry in France and Italy primarily because of significantly higher productivity. This competitive pressure led to massive restructuring of the French and Italian auto industries, resulting in a significant drop in employment in autos. Thus, trade can also have an indirect impact on employment performance through competitive intensity.

Product market barriers constrain service growth outside U.S.

Services comprise the only area of the industrial economies that is growing. In services we chose our cases to understand why the U.S. had significantly higher employment performance than any of the other countries. Thus, we intentionally picked cases where the U.S. had higher employment performance. Exhibit 7 shows the employment performance for the three cases selected – banking, general merchandise retailing and film/TV/video. We also chose construction as a case because it illustrates the higher employment performance of the U.S. and is such a large sector of the economy in its own right.

Exhibit 8 gives the relative importance of factors in explaining the differences in employment performance between the country with the highest net job creation, the U.S. in all cases, and all the other countries. Employment growth rates are directly determined by the growth rates of output and productivity. These growth rates are, in turn, determined by industry dynamics and in particular, competitive intensity, innovation and trade performance. Finally, industry dynamics are determined by conditions in the markets for capital, labor and products.

The service cases along with construction show that the U.S. had higher output growth across the board. We found that this difference in output growth came from important factors both within and outside each industry. Important factors within the industry were more innovation and new product development and fewer product market restrictions. The innovations that made major differences were securitization and derivatives in banking; specialty retailing formats in general merchandise retailing; and new films, cable television channels, and video rental formats in the film/TV/video industry. Industry specific

Exhibit 8

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Service sector cases

● Important
○ Secondary
X Undifferentiating

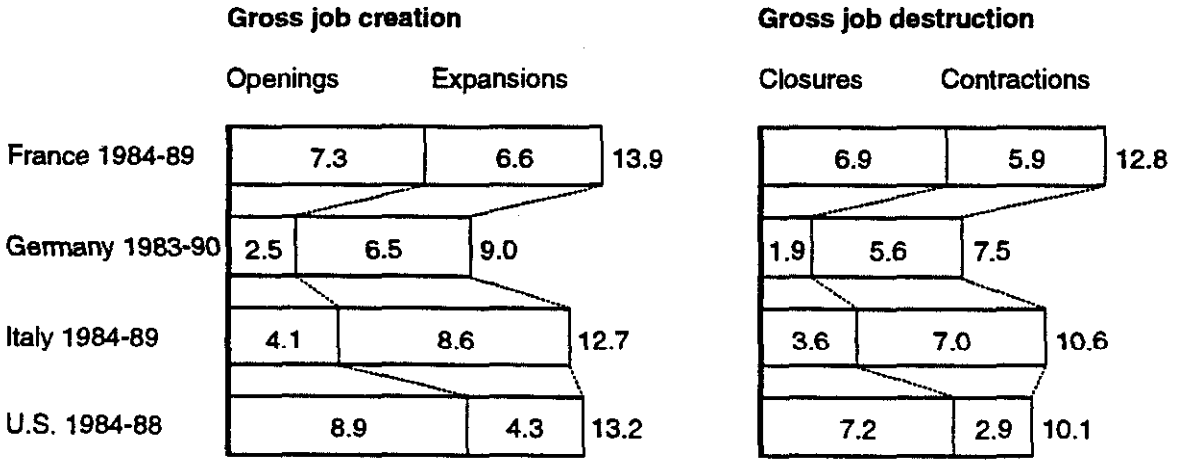
	Banking	Retailing	Film/TV/ video	Service sector case average	Construction
Benchmark	U.S.	U.S.	U.S.		U.S.
Capital market					
• More pressure from owners	X	X	X	X	X
• Less government ownership/support	X	X	X	X	X
• Readily available capital	n/a	X	X	X	○
Labor market					
• Low labor cost	X	●	X	○	○
• High availability/low benefits	X	○	X	○	○
• More flexibility	○	○	X	○	X
Product market					
• Fewer restrictions on output and competition	●	●	●	●	●
• More new business facilitation		X	○	○	X
• Rapid demand growth	●	○	○	○	○
Industry dynamics/competitive intensity					
• Better trade/FDI performance	○	X	○	○	X
• More price competition/restructuring	X	X	X	X	X
• More innovation/new products	●	●	●	●	X
Higher output growth	●	●	●	●	●
Higher productivity growth	○	X	X	X	X
Lower productivity growth	X	○	X	○	●

Source: McKinsey analysis

Exhibit 9

GROSS JOB CREATION AND DESTRUCTION

Average annual rates in percent of total employment by operating site



Source: OECD Employment Outlook 1994

restrictions that constrained employment performance in Europe and Japan included product prohibitions and lack of transparency in banking; zoning laws and controls on the forms of competition in retailing; and a series of constraints in the various segments of film/TV/video.

Construction showed the same pattern of important product market restrictions. Here zoning laws limit land use, thereby raising prices and suppressing demand for housing. These same restrictions on land use spill over to banking and retailing through lower demand for mortgages and less land area for shopping centers.

Factors outside the industries resulted in demand growth for banking and retailing services that was considerably higher in the U.S. than in other countries. These factors were productivity increases across the economy and new business formation, both of which led to higher per capita incomes that increased demand for these services.

We found that in service cases and construction, labor market factors probably did not have as much impact on employment performance as product market factors. The one significant exception is that relatively high labor costs in retailing in Europe suppressed demand through higher prices and made some new types of retailing less economic. These high costs come from union bargaining power, high minimum wages and high levels of unemployment benefits, which leave workers understandably unwilling to work at low wages. This problem is particularly acute in Europe at present. In France, for example, the result is that the average retailing wage is higher than the average manufacturing wage.

Contrary to conventional wisdom, the availability of skilled workers from the apprenticeship program in Germany has not prevented an employment problem; almost half (43 percent) of the unemployed in Germany have been through such a program. Moreover, data on gross job creation and destruction indicates that business operations in Europe create and destroy jobs about as much as in the U.S. (Exhibit 9). Thus, unions do not appear to limit work force flexibility to the extent commonly believed.

We believe that product market restrictions in services are probably the most important factor explaining the differences in employment performance. For low wage industries, such as retailing and construction, high minimum wages and high unemployment benefits are also important.

POLICYMAKERS SHOULD REMOVE PRODUCT MARKET RESTRICTIONS

The main implication of our findings for policy is that if the industrial countries want to improve employment performance, they must remove product market restrictions in services and let the natural evolution of the economy proceed.

Product market restrictions are in place primarily to protect existing interests including existing jobs. Our findings strongly indicate that such efforts inevitably fail. In fact, in most cases they have exactly the opposite of their desired effect. Preserving existing jobs in any industry slows productivity growth and weakens the competitiveness of that industry. Sooner or later competition from best practice comes, and when it comes, restructuring is severe and the end result is fewer jobs in that industry than would have resulted from continuous productivity improvement.

In low productivity industries such as retailing and construction, we have found that lowering the minimum wage and unemployment benefits will also help create employment. We believe it is better for low skilled workers to be employed in these industries than to be unemployed. The overall performance of the economy is better, and income distribution objectives can be better dealt with by adjusting after-tax income rather than through intervening directly in the working of the market economy.

Lifting product market restrictions will also affect some noneconomic dimensions of society. Some of the objectives potentially affected are the agricultural base, green space, structure of urban development, popular culture, confidence in the banking system, not creating losers through changing the rules of the game and stability in individual lives. We have not investigated the trade-off involved with these other objectives. However, the unemployment situation, especially in Europe, is so serious that lifting product market restrictions and adjusting some of these trade-offs appear necessary. If European countries had matched the job creation performance of Japan and the U.S. over the 1980s without suffering a productivity penalty, their GDPs would be 5 to 15 percent higher and their unemployment problems would have gone away.

CORPORATIONS SHOULD IMPROVE PRODUCTIVITY

Corporations clearly have a stake in the overall health of the societies in which they operate. Because unemployment now threatens the cohesion of some of the industrial countries, it is a natural concern of corporations. As a result, some have been reluctant to restructure to improve their performance because they fear that job losses would exacerbate the problem. Our findings show that these reactions do not contribute to improving the long-term health of the societies in which they operate. Instead, they merely postpone an unemployment problem and make it worse when the inevitable restructuring finally occurs.

Corporations can best serve the societies in which they operate by improving their performance through continuous productivity improvements and innovations leading to successful new business formation. The primary barriers lie in current restrictions in the product market that lower competitive pressure on corporations in the short term and allow them to postpone restructuring. These regulations appear to be in both shareholders' and employees' interests. In

reality, these restrictions are not in the interests of either group in the long term. Therefore corporations, especially those with potentially superior performance, should urge that governments lift these restrictions.

Chapter 1: Objectives and approach

WHY STUDY EMPLOYMENT?

High unemployment and a slow increase in "good jobs" have been concerns of policymakers throughout the industrial age. These issues have again taken on great urgency around the world during the last 20 years given Europe's increasing unemployment rates, declining growth rates in real wages in the U.S. and building pressure on Japanese employment practices.

Unemployment rates in the European Community have climbed rapidly since the mid-1970s (Exhibit 1). In 1970, Europe had a Japanese-like unemployment rate of slightly more than 2 percent. By 1993, unemployment had surpassed the United States and stood at more than 10 percent of the labor force. U.S. unemployment levels remained relatively stable at the 6 to 8 percent level during the 1970s and 1980s, but average real wage growth slowed. At the same time, Japan began a reexamination of historic labor practices like lifetime employment, seniority-based pay, and policies which result in lagging productivity in some industries and in white collar positions. Many people in Japan are concerned that addressing these issues without fundamentally altering job creation performance will cause unemployment to rise well above its current 2 to 3 percent level.

The social and economic cost of unemployment

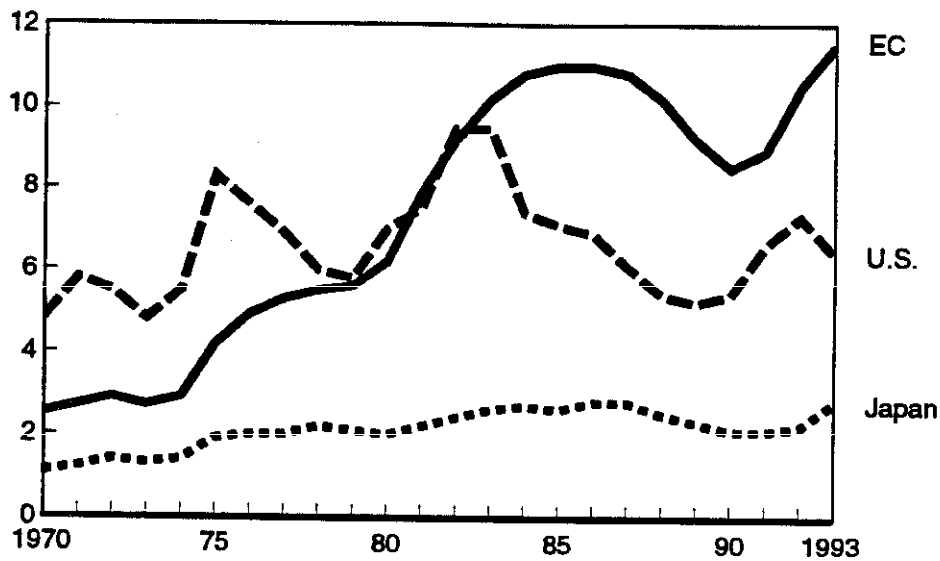
Policymakers are concerned about unemployment because of its social, political and economic impact. The effects of poor employment performance are much more concentrated than those of sub par productivity. The people who become unemployed or underemployed quickly lose their self esteem and skills and, depending on a nation's benefit program, potentially their income as well. Social cohesion also suffers as people are viewed as differentially adding to and drawing from common resources rather than commonly contributing to society. Some evidence even suggests that extremist political groups begin to gain influence as the unemployment rate approaches double digit figures.

Unemployment also has an effect on national economies. People who are not working do not produce goods and services and thus income. The resulting drag on the economy can be significant in some countries, though it is seldom as large as the differences in productivity in the market sectors of the economy.

Exhibit 1

STANDARDIZED UNEMPLOYMENT RATES 1970-93

Percent of total labor force

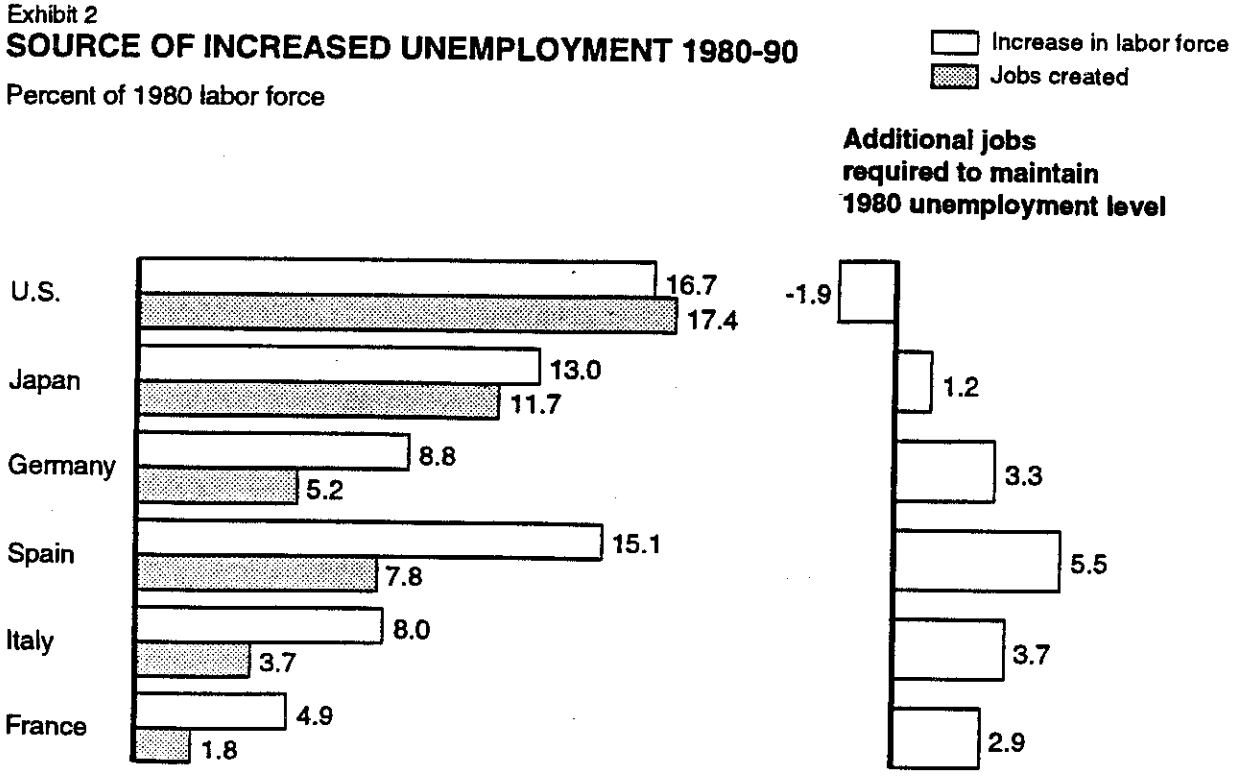


Source: OECD Labor Force Statistics

Exhibit 2

SOURCE OF INCREASED UNEMPLOYMENT 1980-90

Percent of 1980 labor force

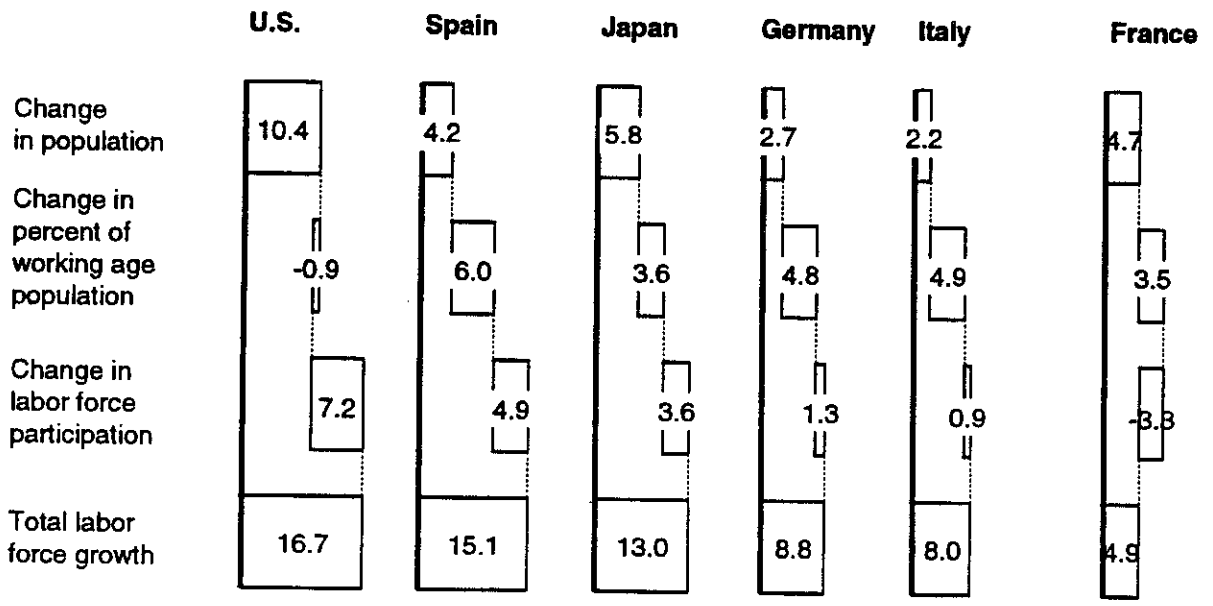


Source: OECD Labor Force Statistics; McKinsey analysis

Exhibit 3

SOURCE OF LABOR FORCE GROWTH 1980-90

Percent of 1980 labor force



Source: OECD Labor Force Statistics; McKinsey analysis

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Unemployment linked to job creation

Exhibit 2 shows that the countries that came closest to creating enough jobs to keep unemployment constant, the U.S. and Japan, had larger than average increases in the labor force. It appears that Europe's rise in unemployment can be attributed primarily to slow job creation rather than an unusual increase in labor supply. The labor force grew relatively slowly in Germany, Italy and France despite large demographic shifts in the percent of these country's populations that were of working age. This occurred because participation rates remained low and overall populations grew slowly (Exhibit 3). Unemployment continued to rise, however, because all four European economies, France, Germany, Italy and Spain, created an average of less than five net new jobs per hundred people in the 1980 labor force during the 1980s. The U.S. and Japan performed better, creating 17.4 and 11.7 jobs per hundred people in the labor force.

To maintain 1980 levels of unemployment, the European nations would not hav had to fully match the employment performance of Japan and the U.S. during th 1980s because Europe had slower population growth and a smaller increase in labor force participation. To adjust for this, and to recognize that low labor force participation rates reflect some hidden unemployment, we used the number of net jobs created per thousand people in the working age population adjusted for growth in the working age population as our primary measure of employment performance at the aggregate and case level (see Exhibit 4 for two alternative ways of expressing this measure).

This measure factors out differences in working age population growth and emphasizes a country's ability to create jobs relative to its potential supply of labor. With this adjustment, the performance of the U.S. looks stronger. It created more than three times as many jobs as any other country (Exhibit 5). The four European countries all needed to create approximately 20 additional jobs per thousand people in the working age population in order to maintain unemployment at the already historically high 1980 levels.

The measure focuses exclusively on net jobs. No differentiation is made betwee a country that creates large numbers of gross jobs and destroys large numbers of other jobs and another country that may have lower levels of both behaviors. This type of "churn data" is one interesting explanation of how a nation achieve its performance, but net employment is a better measure of a country's ability to employ its citizens. Our performance measure also does not reflect changes in the number of hours worked per employee. This allows countries that chose more leisure or instituted work sharing programs to look somewhat better than they might have otherwise. Shifting to an hours worked measure would not change the direction of our observation however, since it would widen rather than reduce the employment difference between the European countries and the U.S. and Japan.

Exhibit 6 shows that the countries had smaller differences in job growth in the nonmarket part of the economy (e.g., health care, education, government) than i

Exhibit 4

PRIMARY EMPLOYMENT MEASURE

$$\text{Employment performance} = \frac{\text{Emp 1990} \times \frac{\text{WA pop 80}}{\text{WA pop 90}} - \text{Emp 1980}}{\text{WA pop 1980}}$$

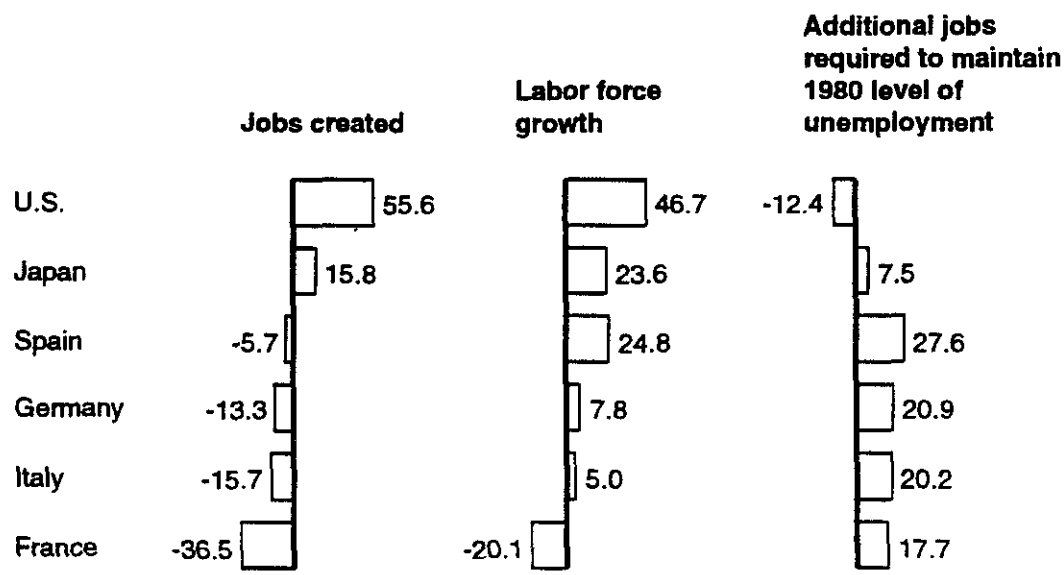
$$= \frac{\text{Emp 1990}}{\text{WA pop 90}} - \frac{\text{Emp 1980}}{\text{WA pop 80}}$$

Note: WA pop = working age population (15-64 years)
Source: McKinsey analysis

Exhibit 5

JOB CREATION CHALLENGE 1980-90

Per thousand working age population*



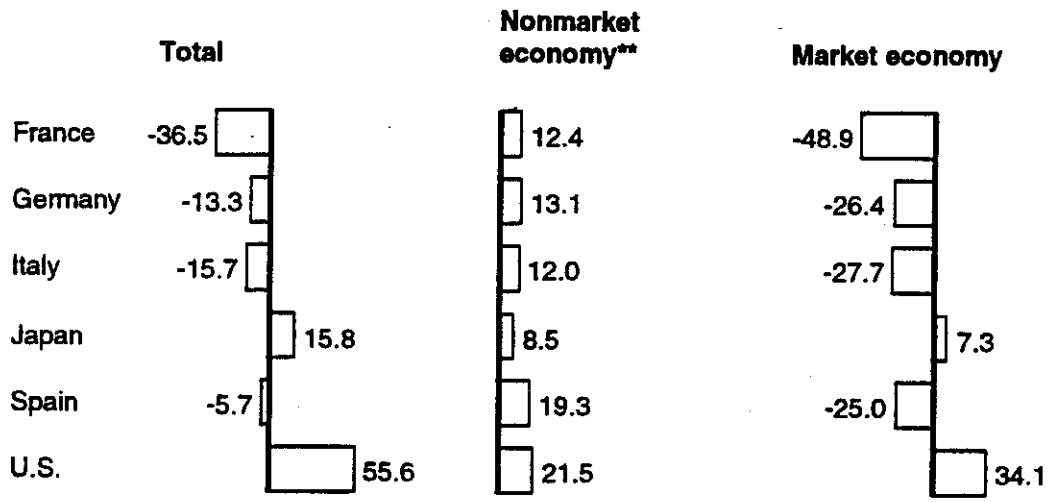
* Adjusted for growth in the working age population

Source: OECD Labor Force Statistics; McKinsey analysis

Exhibit 6

EMPLOYMENT PERFORMANCE 1980-90

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including government, private and public education, private and public health care, etc.

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

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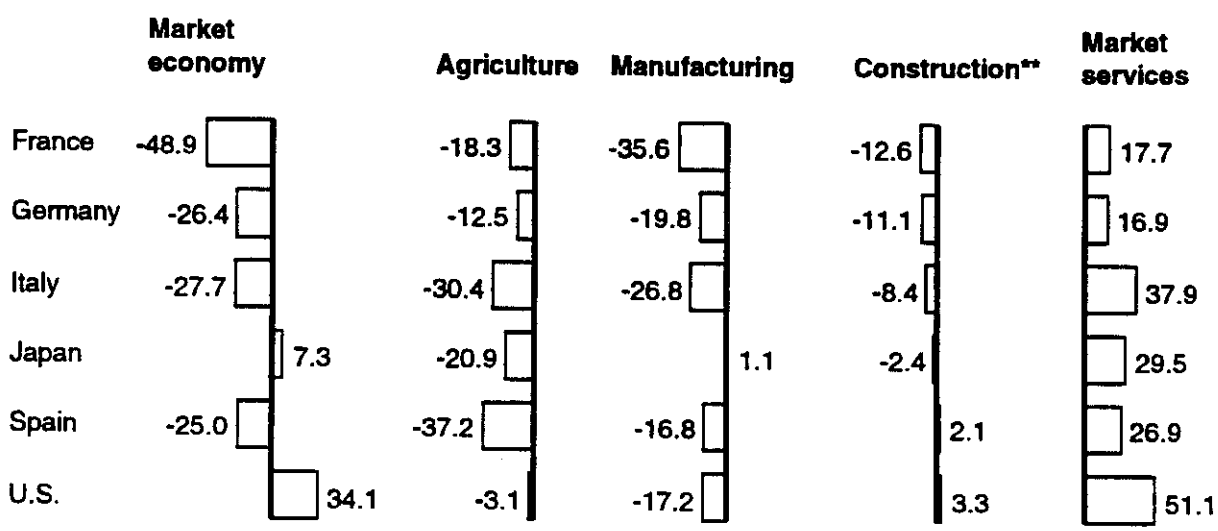
Exhibit 7

EMPLOYMENT PERFORMANCE – MARKET ECONOMY 1980-90

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including mining and utilities

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

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the market part of the economy. The U.S. created a substantial number of market jobs, Japan also had positive results and all the European countries destroyed jobs. The decline was most severe in France.

An examination by sector (Exhibit 7) yields insight into the reasons for these different patterns. The U.S. leads the pack because it created significantly more market service jobs than any of the European economies. It also had little employment reduction in agriculture because the restructuring of this sector in the U.S. was completed well before 1980. Japan retained its share of manufacturing jobs while all other countries failed to increase these at anywhere near the rate of the growth in the working age population. Japan's success, however, was not entirely manufacturing driven. It was third among the six countries we examined in the creation of market service jobs. The overall employment declines in France and Italy can be attributed to particularly rapid declines in manufacturing, construction and mining, and agriculture for Italy, while Spain's decline came primarily from agriculture and a lack of market service growth.

Job creation and economic performance

These differences in job creation affected the overall economic performance of the nations we studied. The best overall measure of economic performance is GDP per capita. This measure is the product of productivity and the fraction of a society's population that works. If France, Germany, Italy and Spain had matched the job creation performance of Japan and the U.S. over the 1980s without suffering a productivity penalty, then their GDP per capita would have been 5 to 15 percent higher than it actually was in 1990.

Key drivers of job creation not yet fully understood

This type of aggregate analysis and the information contained in the next chapter helped us to isolate where major differences in employment performance occurred, but they were not sufficient to explain why jobs were created in one country and not another. To get to this understanding, we selected a cross section of seven industries to study in depth: banking, retailing, film/TV/video, construction, automotive, computers and furniture. While these may not statistically represent entire economies, they do reflect the trends taking place in the manufacturing and service sectors, emerging and declining industries, small and large companies and domestic and traded goods.

Potential for McKinsey to add a helpful perspective

There is no shortage of reports on unemployment, though there are somewhat fewer studies focused on job creation. Labor economists have studied employment for years and the OECD has recently released its own *Jobs Study*. Much of this work has focused on rigidities in the labor market. Numerous

plausible hypotheses have been advocated and partially supported, including beliefs that: (1) wages are too inflexible or too high relative to emerging countries; (2) minimum wages may prevent low skill workers from being hired; (3) hiring is overly risky since firing costs are high; (4) the job matching process appears inefficient; (5) the skills of potential workers do not match the requirements of employers; (6) unemployment insurance and other benefits may reduce incentives to work. A few others have suggested that barriers in the market where goods and services are sold (i.e., the product market) and the capital market may also play a role, though exact causes in these areas have not been explored. What appears to be lacking in this body of literature is evidence that could lead to a judgment on the relative importance of these factors, and an explanation of how they directly effect hiring patterns in companies and industries.

This study is based on the premise that understanding the causes of employment behavior at the industry level would allow us to determine the relative importance of particular labor, product and capital market factors in a way that could then be generalized to the entire economy. McKinsey's involvement in numerous countries and industries allows us to provide a picture of what is going on in specific industries as well as an understanding of why employment is growing faster in some countries than others. This industry approach permits us to leverage our strengths in examining microeconomic issues in the product, labor and capital markets. We address the macroeconomic issues and factors affecting employment across the board (e.g., monetary policy and benefit levels) that are often at the heart of discussions about employment, only if their symptoms (e.g., difficulty finding workers and insufficient demand) are found in a particular case. As a result, our findings can provide unique insight into how specific factors influence employment even if they do not allow us to exhaust all possible levers that policymakers can pull to improve employment performance.

OBJECTIVES OF THE STUDY

Identifying causes of employment differences

The purpose of our study is to determine employment performance differences across the leading economies of the world, identify the causes of these differences, determine their relative importance and draw implications for policy and management. This report focuses exclusively on improving employment. It complements two earlier studies done by the McKinsey Global Institute on productivity (Service Sector Productivity, October 1992 and Manufacturing Productivity, October 1993). Taken as a group, we believe these three studies point toward a set of actions that countries can take in order to significantly improve the material standard of living of their citizens.

MAJOR DATA SOURCES

Country specific sources

France	INSEE (National Institute for Statistics and Economics): Annuaire Statistiques de la France, Les Interprises du Commerce; Ministry of Industry; Bank of France; CCFA (Committee of the French Vehicle Manufacturers); CNC (National Center of Motion Picture Production); CSEA (Union of Video Publishers); UNIFA (Union of Furniture Manufacturers)
Germany	Statistisches Bundesamt (Federal Statistical Office): Statistische Jahrbücher, Statistik über das Produzierende Gewerbe; Bundesanstalt für Arbeit (Federal Employment Office); Bundesbank; VDA (Automotive Industry Association); ZDB (German Construction Industry Association); VDM (Association of German Furniture Manufacturers); Media Perspektiven
Italy	Central Statistical Institute; ISTAT; Bank of Italy; ANFIA (Association of the Italian Automotive Industry); ANCE (National Association of Construction Companies); ANICA (National Association of Film Producers); CSil (Furniture Sector Report); UNIVIDEO (Italian Association of Video Manufacturers)
Japan	Statistics Bureau, Management and Coordination Agency: Japan Statistical Yearbook, Establishment Census of Japan; MITI (Ministry of International Trade and Industry: Census of Commerce, Census of Manufacturers, Survey of Service Industries; Ministry of Labor: Basic Survey on Wage Structure; Ministry of Construction: Census of Construction; Bank of Japan; Japan Video Association; Japan Economic Planning Association; Motion Picture Association of Japan; Office Furniture Industry Association
Spain	INE (National Statistics Institute); Bank of Spain; AIDIMA (Association of Furniture Manufacturers); ANFAC (Association of Car Manufacturers); SernAuto (Association of Car Parts Manufacturers); SEOPAN
U.S.	Department of Commerce/Bureau of the Census: Statistical Abstracts of the United States, Census of Manufactures, Census of Retail Trade, Census of Construction, Annual Survey of Manufactures, County Business Patterns, United States Industrial Outlook; Bureau of Labor Statistics: Employment and Earnings, Employment, Hours and Earnings, International Comparison of Hourly Compensation Costs, Productivity in Selected Industries; Federal Reserve: Flow of Funds; FCC (Federal Communication Commission); AAMA (American Automobile Manufacturers Association); MPAA (Motion Picture Association of America); Mortgage Bankers Association; Shopping Center World; Dollars and Cents of Shopping Centers

International sources

General	Eurostat; ILO; IMF; OECD: National Accounts, Labor Force Statistics, Employment Outlook; Statistisches Bundesamt: Statistisches Jahrbuch für das Ausland
Automotive	Das Auto international in Zahlen (VDA); DRI World Car Industry Forecast Reports; Ward's Automotive Yearbook; World Motor Vehicle Data (MVMA); Annual Reports of Large Car Manufacturers
Banking	Bank of International Settelment; Assicredito
Computer	Dataquest; IDC (International Data Corporation); Elsevier Advanced Technology Group
Construction	Euroconstruct
Furniture	Databank, Frost and Sullivan
Film/TV/video	Datamonitor; International Motion Pictures Almanac; Screen Digest; Statistics from National Public Television Stations; Zenith Media Worldwide 1993
Retailing	Healey & Baker

Drawing implications for policy

We realize that employment is not necessarily a desirable goal in its own right. More employment may come at the expense of productivity increases, company profitability, wage levels and stay-at-home or leisure time. Maximizing job creation may also conflict with policies designed to maintain the agricultural base, protect the environment, invigorate urban centers or safeguard the reliability of the banking system. However, high and rising unemployment rates indicate that these societies, especially in Europe, want to work more. Thus, we believe that trade-offs between these other objectives and jobs can be best made after one builds a full understanding of what it will take to create more jobs.

OUR APPROACH

We selected six advanced countries to study in this report. In each country, McKinsey has an established presence and a desire to contribute to the ongoing debate about employment. The four European countries (France, Germany, Italy and Spain) provided us with an opportunity to examine a range of policy approaches and performance. Japan and the U.S. represent important points of contrast. Both were strong employment performers during the 1980s, though they utilized two very different approaches to labor and product market issues.

We analyzed each country at two levels. First, we looked at aggregate data on employment, output and trade. We tried to observe major trends occurring in the broad sectors of the economy (e.g., agriculture, manufacturing and services). Then we included each country in the examination of our seven case industries.

Sources of data

Our first step within each case was to develop a core set of data on employment and output/value added for each country (see box for a list of major sources). While this step sounds straightforward, obtaining or creating a complete time series for the period from 1980 to 1992 was often a major task. We originally intended to use household survey data to measure employment and national manufacturers' surveys to measure output and value added. In almost every instance, we shifted to using industry surveys for both items in order to maintain a consistent picture of the industry. In some cases this decision had a larger effect than we anticipated, since the household survey and employers' census occasionally suggested different levels and trends in employment. Using the latter source gave us reasonably reliable estimates of employment for every year rather than just end points. It also allowed us to gain confidence in our productivity calculations since both value added and employment typically came from the same source.

Not surprisingly the quality of available information varied widely by case and by country. The manufacturing sector was typically better tracked than services,

though even manufacturing industries were often defined very differently across countries. Several countries also posed unique problems. Spanish data were particularly difficult to obtain, especially for the early part of the 1980s. A large amount of data was not tracked at that time and much of what was collected was classified using a different scheme than was used in later years. This made it difficult to use published data to compare information over time. In some cases we had to apply trends observed in other sources to the 1990 levels of output and employment obtained from official sources. French numbers were typically better, though occasionally INSEE's results varied in magnitude and direction from judgments made by industry associations and experts. In these cases, we typically shifted to industry sources since their employment data painted a picture that was more consistent with the causal story suggested by trends in output. Italy was an intermediate case between Spain and France. Spain and Italy were entirely excluded from the examination of the computer industry because of difficulties getting meaningful data on such a small industry. Finally, the German data were often quite good though slight adjustments were occasionally needed to ensure that small companies were adequately represented and major differences did not occur because the data were collected on a company rather than an establishment basis.

In several cases (e.g., construction) our basic information is not unique. Employment and output figures were readily available from Euroconstruct and national statistics, and we made only slight adjustments to make sure the data were comparable across countries. In other cases (e.g., media and furniture), complete and comparable information was often not available. We used national statistics and industry association data to develop a few well documented points, but filled in the rest with estimates from industry publications and experts and extrapolations based on observed trends or ratios. These figures were then adjusted several times as they were circulated and subjected to common sense checks. Our basic facts represent a good portion of the value of these cases. While they may not directly match the small amount of data that is published, they are more consistent over time and between countries than anything else we have found.

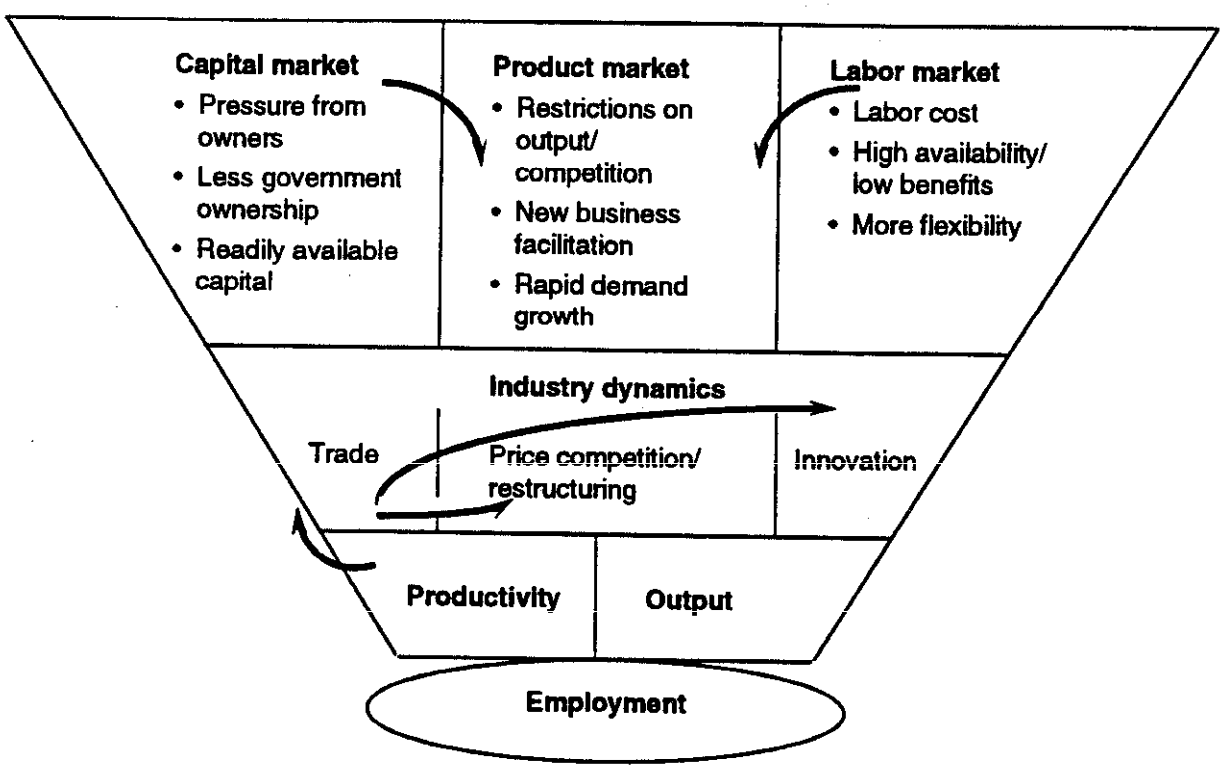
Generating and testing hypotheses

Our second task in each case was more complicated. It required us to explain why trends in employment, output and productivity varied by country. We used interviews with industry associations, company executives, and McKinsey experts to surface potential reasons for the differences. This was a highly efficient process in the sectors where McKinsey has deep expertise. We were quickly able to identify major differences in the product and capital markets and highlight labor issues worth exploring in more depth with specialists. In the areas where our Firm has little expertise, our approach was somewhat less targeted. Once issues had been highlighted, we attempted to quantify and catalogue cross country differences and begin measuring the effect they had on employment.

Exhibit 8

CAUSALITY FRAMEWORK

CONCEPTUAL



Source: McKinsey analysis

We held review meetings with our Advisory Committee every other month to review progress and test our findings. During these sessions we developed a list of questions to pursue in order to make subsequent rounds of our analysis more compelling and more easily understood.

Causality framework

In order to identify and explain the causes of observed employment differences across countries, we developed a framework that captures the major possible causes of differences in employment (Exhibit 8). The items used in this framework were developed in a highly iterative way. Originally they were designed to test the relative importance of factors already identified by academic work or conventional wisdom. New items were added and others were removed as the cases progressed and we gained a better understanding of the drivers of superior employment performance in the countries that created a large number of jobs. Detailed definitions for each line are included in the appendix to this chapter.

For each item, we made an analytic judgment about the importance of the factor in explaining employment differences between each country and the benchmark for the industry. The benchmark was defined as the country with the largest number of jobs created relative to its working age population. We placed a dark circle in a cell whenever the factor explained approximately 30 percent or more of the difference in employment between the country in question and the benchmark, an open circle whenever the factor explained 10 to 30 percent of difference in employment and an X whenever there was little difference in the factor, a difference in the opposite direction of what would be expected (noted by an X* if the effect was significant), or a difference that did not affect employment by more than 10 percent. The result is a series of bilateral comparisons that are then aggregated to a net judgment by weighting the observations by the extent of the country's employment difference to the benchmark.

The relationship between product market, labor market and capital market factors and employment was often very complex. Several factors could both hurt and help employment. In these situations we tried to assess the net effect on employment. The relationship between productivity and employment is a good example of this complexity (see box entitled "Productivity, Output and Employment). We limited our assessments to the direct effects of each factor. Many of the items examined also had important indirect effects on employment. Trade, for example, can greatly increase competitive intensity and restructuring even if it does not directly result in much change in output or employment. Similarly, owners or labor unions might have a significant influence on employment through their influence on product market regulations. These effects were counted in full under the headings "Price competition/restructuring" and "Product market restrictions" and were not counted at all under trade, capital market, or labor market.

PRODUCTIVITY, OUTPUT AND EMPLOYMENT

The relationship between productivity and employment is complex and often misunderstood. Business leaders, policymakers and the general public often fear that aggregate employment will decline if worker productivity improves. This skepticism is understandable. Productivity improvements can result in fewer people required to produce the same output. As a result, employment in relatively mature industries, like many of those examined in this report, declines as productivity increases.

This negative relationship between productivity and employment holds, however, only if output remains constant. If increases in productivity help stimulate output then productivity and employment can rise simultaneously. When workers are displaced either the products they used to produce become cheaper, shareholders experience increased returns or their former colleagues make more money. All of these factors increase consumer buying power and create demand for additional goods and services. In order to satisfy this additional demand, companies and entrepreneurs must hire new workers. It is this dynamic process that allows people who have been displaced from traditional industries to become reemployed in new sectors. The wages paid and shareholder income earned in these new industries allow aggregate national income and GDP to rise. Whenever this redeployment is blocked, national income and therefore demand remains constant and the country suffers increased unemployment.

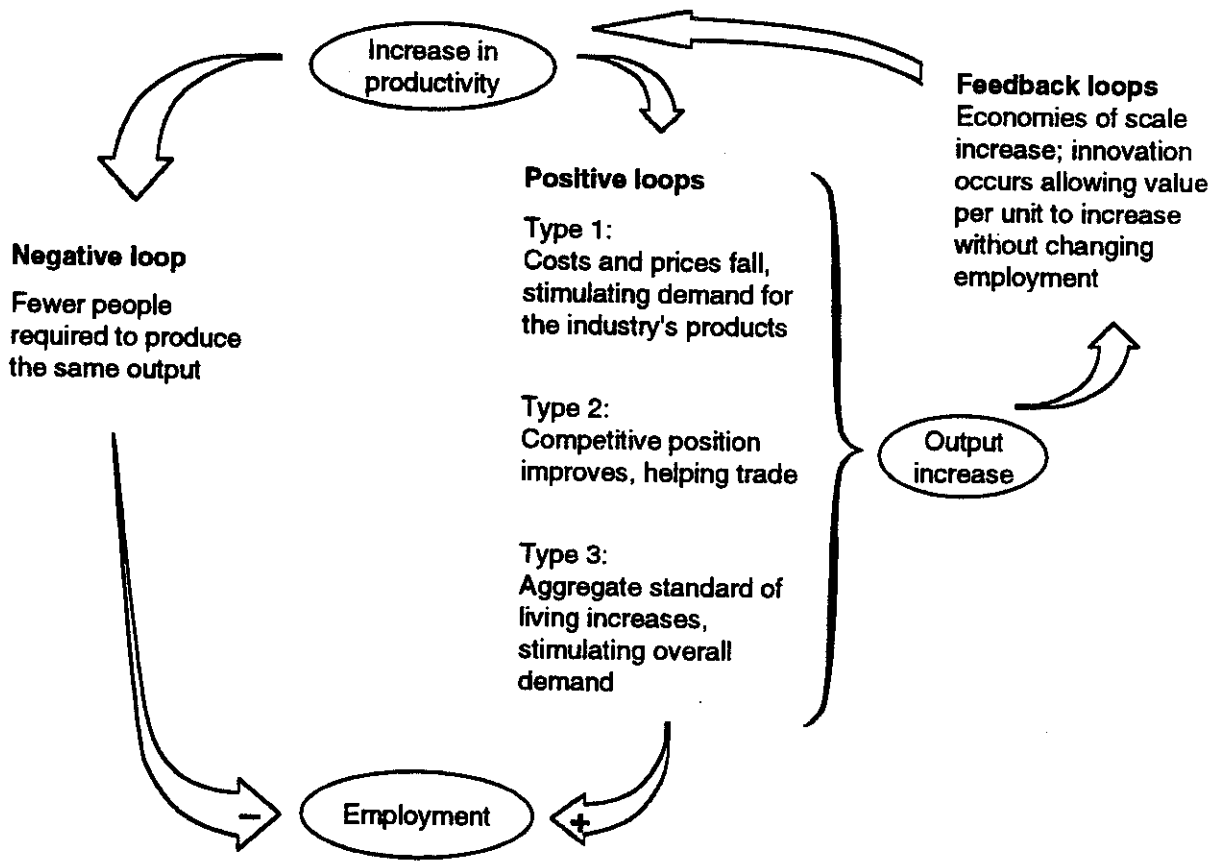
Exhibit 9 illustrates these different effects. The negative relationship between productivity and employment is shown on the left hand side of the chart. This is the type of correlation we found in our furniture, automotive and computer hardware case studies. Industry employment declines despite some increases in output, because fewer people are required to produce each unit of value. The middle of the chart describes the three types of positive effects productivity increases can have on employment. Types 1 and 2 are easily understood and can offset the negative loop at the industry level. Type 3 effects are harder to see since they cut across industries. This positive relationship occurs when the income generated from increases in productivity in furniture or automotive manufacturing creates additional demand for retailing or entertainment. Our aggregate analysis in Chapter 2 suggests that this type of aggregate positive productivity loop occurred much more strongly in the U.S. than elsewhere given that country's ability to recycle displaced workers. Whenever this redeployment and income generation is blocked, a country suffers from unemployment.

The far right of the chart illustrates the feedback effects in this process. Productivity can rise as a second order effect of an increase in output without having any definitive influence on employment. This can occur in a number of different ways. First, increases in output in industries with significant economies of scale can result in higher productivity. This might result in fewer additional workers for each incremental unit, but would still lead to more employment than would have been the case without the output and productivity increase. Second, if increased demand for new products generates higher value added per hour worked, there is, apriori, no negative impact on employment.

Exhibit 9

CONCEPTUAL

RELATIONSHIP BETWEEN PRODUCTIVITY, OUTPUT AND EMPLOYMENT



Source: McKinsey analysis

The goal of the framework is to demystify these relationships. We use it to show which factors were most important in determining cross country differences in employment at the case level. The insights we derive from this approach will then help us better understand the fundamental economic forces discussed in the next chapter.

Synthesis and implications

Once we developed a detailed understanding of employment causality at the case level, we stepped back and looked for patterns across cases. We then tried to tie our case findings to the aggregate data. Usually these two approaches reinforced one another, but occasionally they appeared to be contradictory. In the latter situation, we worked to understand and explain the apparent inconsistencies.

Our next step was to draw conclusions about the relative importance each factor had on overall employment. This required us to determine which items easily translated from our cases to the entire economy and which had more limited applicability. We tested these general conclusions in a number of country-specific syntheses and then circled back to the main conclusions to be sure they were as concrete as possible.

Finally, we drew some implications for policy. These focused on what could be done to increase employment in Europe. We explicitly surfaced trade-offs between increasing employment and other societal objectives, but, of course, left the question of the appropriate balance of these items to the political process.

APPENDIX – FRAMEWORK DEFINITIONS

The lowest level of causality in our framework is represented by the bottom three lines on Exhibit 10. It examines the mathematical relationship between changes in employment, output and productivity. Higher employment growth during any time period must come about as a result of greater output growth or slower productivity growth in the benchmark country. Faster productivity growth was also included as a line because this factor can actually have a positive effect on employment if its effect on output (through a positive productivity loop) outweighs its direct negative influence on employment.

Differences in output and productivity growth occur because of a series of higher level factors. The most direct of these are clustered under the heading, "Industry Dynamics/Competitive Intensity." Price competition, innovation and trade are the three factors we found to be important. More price competition can have either a positive or negative effect on employment. The positive effect comes about when competition forces companies to cut costs and reduce prices in traditional products and thus stimulates output. Innovation has a similar positive effect on output. We have defined innovation as the commercially successful application of new products and services and new forms of business. Cross country differences in this regard may occur because of varying willingness of managers to take risks, regulatory barriers or differences in national demand. Finally, trade was deemed important if a change in an industry's net trade position significantly added to or detracted from employment in an industry, by moving jobs directly from one country to another.

At the highest level of causality are factors in the capital, labor and product markets. These factors can effect employment by influencing industry dynamics or by directly affecting output and productivity.

The three items examined under the capital market heading are designed to test whether more jobs were created where the capital market makes it more necessary or possible for managers to alter their way of doing business. The first item, more pressure from owners, can force managers to try to improve their financial returns by increasing output through more innovation or more price competition or by increasing productivity through restructuring. The second, less government ownership and support, operates in a similar way. The third factor, readily available capital, would effect entrepreneurs' ability to take advantage of new business opportunities.

Three categories are also used in the labor market. The first and third factors, low labor costs to employers and labor flexibility, are designed to test possible differences in the demand for labor. Employers may be less likely to hire if they have to pay more for a worker as a result of: strong union power, industrywide wages rather than company level bargaining, a high national minimum wage or a comparatively large social burden or tax on employment. Companies may show a similar reluctance to hire if there are severe restrictions on flexibility either in terms of layoffs or stringent work rules which prevent them from deploying people in the most productive way possible. The second factor,

Exhibit 10

DEFINITION OF FACTORS EVALUATED IN CAUSALITY FRAMEWORK

Factor	Conditions in the benchmark leading to a circle
Capital market	
• More pressure from owners	Greater demand for financial returns leading to lower prices or more innovation and thus higher output (either in the form of trade or consumption)
• Less government ownership/support	Less government ownership leading to more aggressive corporate behavior, higher levels of productivity and greater output
• Readily available capital	Capital availability making it easy for entrepreuners and existing enterprises to fund expansions and new products/business formats
Labor market	
• Low labor cost	Industry labor costs that are low or increasing slowly relative to a country average leading to higher consumption. Low international labor costs or a favorable wage setting process leading to a cost advantage in trade
• High availability/low benefits	Sufficient number of workers with adequate skills willing to work for the prevailing industry wage. Benefits/wage minimums that do not create disincentives
• More flexibility	Companies are willing to hire employees despite cyclicality or uncertainty because of an ability to lay them off if results are poor. Few constraints on redeployment within firms leading to more innovation and higher productivity
Product market	
• Fewer restrictions on output and competition	No laws or practices in place that directly block output, raise the cost of production or inputs, or raise prices as a result of limited competition
• More new business facilitation	Government actions supporting industry development or reducing ambiguity in the rules of competition
• Rapid demand growth	Favorable nonprice factors (e.g., GDP growth, demographics, low initial levels of product penetration and tastes) leading to greater demand and output growth
Industry dynamics/ competitive intensity	
• Better trade/FDI performance	Improving trade surplus or declining deficit leading to higher output. Transplants may play a significant role by replacing imports or stimulating exports
• Price competiton/restructuring	Active competition for revenue or nonlabor inputs resulting in lower prices, more innovation and higher output
• More innovation/new products	High levels of invention, adoption or proliferation of new products and business formats that fundamentally improve existing price/value relationships
Higher output growth	Rapid increases in the value added or revenue of the industry
Higher productivity growth	Rapid increases in output as a result of productivity-led reductions in price or improvements in value
Lower productivity growth	A slow decline (or increase) in the number of workers required to produce a given output

worker availability, tests the supply side of the employment equation. It received a circle if there was a lack of adequately skilled people willing to work at the prevailing wage. A supply shortage could be due to the education system's failure to train adequate job candidates or it could stem from a benefits system which makes not working more attractive than looking for a new job.

The final three factors we examined are grouped under the heading product market. We use this category to cover all factors which affect the market in which firms sell their goods and services. This heading also occasionally refers to restrictions on land or other nonlabor and noncapital inputs to a company's production process. The first two factors, restrictions on output and competition and facilitating regulation, focus on governments' role in these industries. The first line concentrates on instances when explicit government actions like zoning laws, restrictions on opening hours, or the granting of monopolies or oligopolies retards employment by constraining output or preventing a positive productivity loop. The second line is designed to pick up instances when government action helped employment by clarifying the rules of competition or creating new supportive bodies (e.g., Fannie Mae's role in securitizing mortgages). The final line of the highest level of causality, rapid demand growth, encompasses a range of factors largely exogenous to the industry that might cause demand to be higher in one country than another. These factors include: rapid GDP growth, increased penetration or "catching up" from a low usage base, shifting demographics, increased government procurement, tax policies and subsidies, and consumer tastes and preferences.

Chapter 2: Aggregate analysis

Before embarking on detailed industry case studies, we reviewed the previous literature on employment creation and unemployment,[1] and examined publicly available aggregate data on the labor markets of the six countries in our study. The main purposes of this chapter are to present the key findings that can be deduced from the aggregate data, to provide our perspective on the previous literature, and to identify gaps we would hope to cover using case studies. We will use the material in this chapter together with the case studies to summarize our findings and derive implications in Chapters 4 and 5. In preparing the case studies, interviews were conducted in Europe, the U.S. and Japan, focusing mainly on case-specific questions. We have, however, also sought to test hypotheses that cut across the case studies, and will mention findings related to these questions together with the aggregate analysis in this chapter.

There are two main strands to the literature on labor market economics. The first comes from macroeconomics and examines the job creation problem in relation to monetary and fiscal policy, the effectiveness or ineffectiveness of Keynesian policies, and the dangers of inflation induced by stimulating aggregate demand. The second strand examines persistent unemployment in Europe as a problem of labor market institutions, and concentrates on such issues as unemployment insurance, wage bargaining institutions and worker mobility. We do not try to provide a detailed summary of these strands of the literature. This would be an unnecessary task, given that there are already a number of summaries available. Instead, we draw on both parts of the literature and offer our own perspective on the reasons for Europe's employment difficulties.

In the main body of this chapter, we first argue that modern economies are characterized by constant change. The shares of employment in different sectors of the economy evolve. The labor needed to produce established products often declines while new products and services are constantly being developed. Technological advances stimulate many of these changes and result in shifting skill requirements. Substantial labor mobility and the rapid creation of new jobs are necessary in order to replace the jobs that are disappearing.

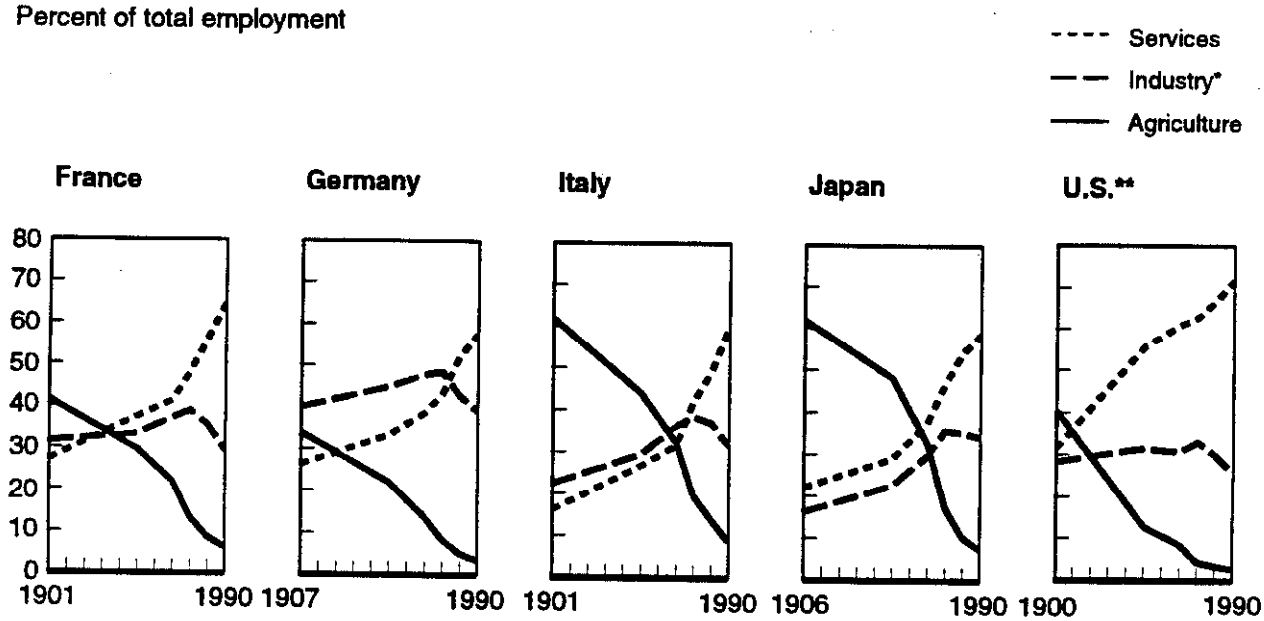
In the second section, we identify barriers to this transition, looking at individual markets (product, labor and capital markets) as well as the interactions among

[1] A detailed bibliography is available upon request. Among the more important studies taken into account for this chapter, refer to *Unemployment* by R. Layard, S. Nickell and R. Jackman (1991); *Barriers to European Growth* by R. Lawrence and C. Schultze (1987); "European Unemployment: A Survey" by C. Bean (1994); "The OECD Jobs Study" (1994).

Exhibit 1

HISTORIC SHARES OF EMPLOYMENT IN DIFFERENT SECTORS 1900-90

Percent of total employment



* Manufacturing, utilities, mining

** For 1900-60, services include public utilities

Source: OECD Employment Study

them. Economies that have created barriers to mobility and the creation of new jobs will have lower overall job growth and will experience rising unemployment. This has happened in many European economies; they have faced a continuing decline in agricultural and mining employment and an accelerated restructuring of manufacturing, but they have not allowed or facilitated adequate growth of service sector employment.

Finally, we identify how these barriers have led to a differential employment performance across economies. We judge from our review of the aggregate material that many important issues remain unresolved. Specifically, there is little evidence on the relative importance of factors influencing unemployment and job creation. Ways are examined in which case studies can contribute to a fuller understanding of the barriers and restrictions to job creation.

EVOLUTION AND STRUCTURAL CHANGE

As economies grow and become more productive, they shift consumption and employment from manufacturing to services. This requires economies to constantly reallocate jobs, leading to gross job creation in one sector and job destruction in another. Entrepreneurial activities, innovation, changes in technology, rising incomes and the increasing integration of world economies are important forces driving this evolution. These are considered to be largely inevitable and unstoppable in the long run. Individual country policies have limited influence over the pace and nature of the evolution and are largely unable to insulate parts of their economies.

Three dimensions are first presented of the economic evolution (by sector, by skill level and by firm size). The second section analyzes whether gross job creation figures indicate differing degrees of flexibility in adjusting to structural change. Finally, we identify the main reasons for economic evolution as discussed in the economics literature.

Three dimensions of economic evolution

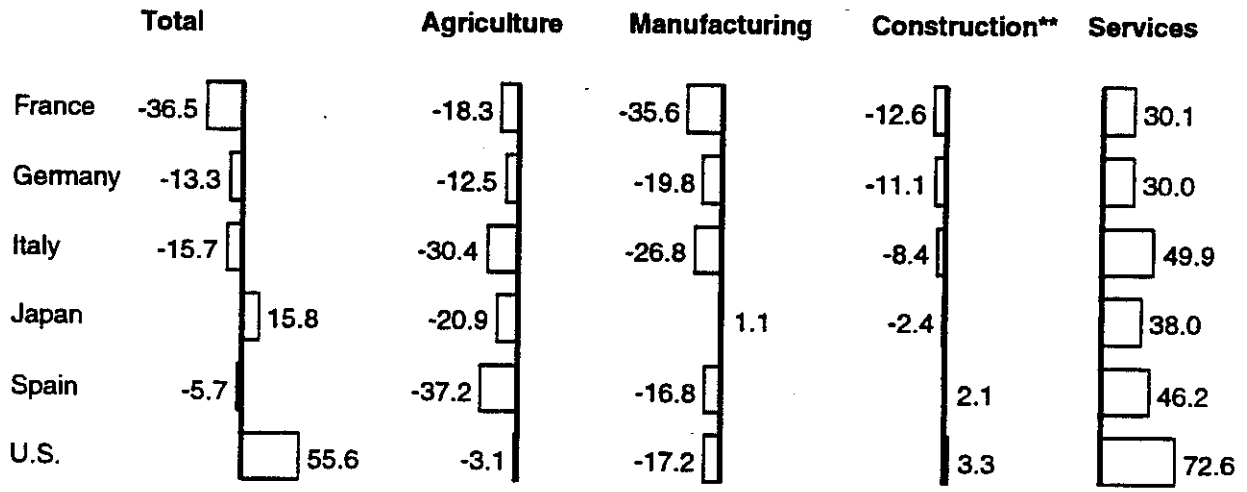
Economic evolution results in a shift of employment from manufacturing to services and from low skill to high skill jobs. The stronger employment growth in small firms seems to be closely linked to the sectoral evolution.

1. Sectoral change. Economic evolution has led to a relative decline of manufacturing employment in all countries analyzed. A majority of today's employment is in services. Exhibit 1 shows the shares of employment in different sectors of the economies of five countries over the period from around 1900 to 1990. In the early years of this century, Japan and Italy had over half of their employment in agriculture. In Japan, this proportion was close to

Exhibit 2

EMPLOYMENT PERFORMANCE 1980-90

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including mining and utilities

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

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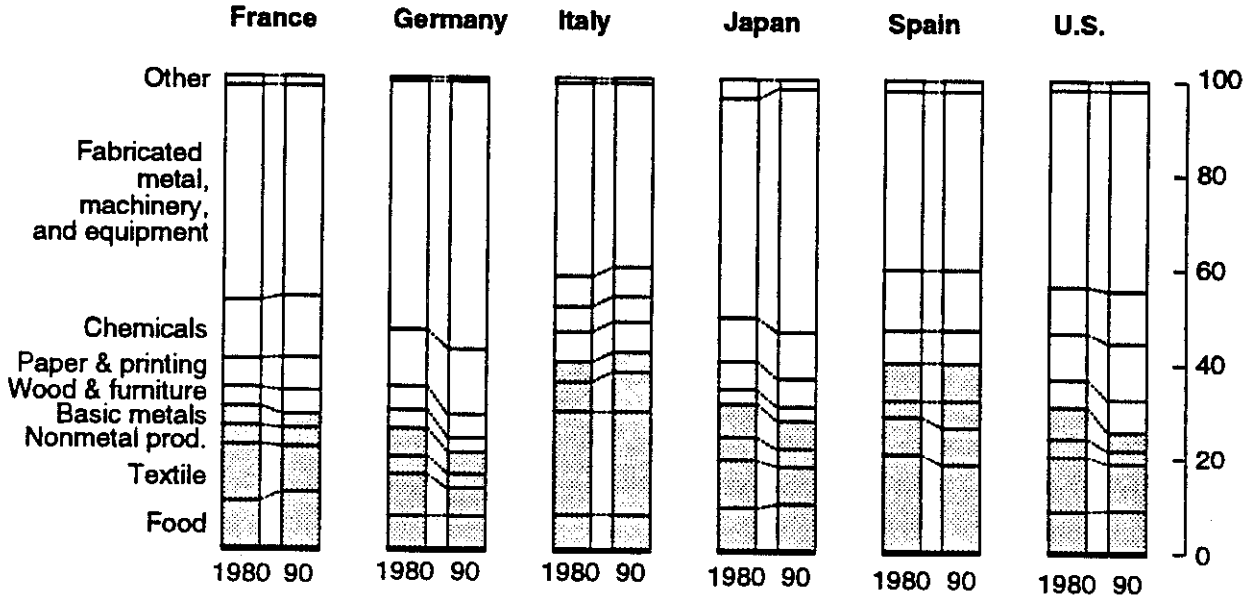
Exhibit 3

MANUFACTURING EMPLOYMENT BY SECTOR

Mature sectors

Percent of total manufacturing employment



Source: OECD; McKinsey analysis

50 percent as late as 1950. By 1990, all countries analyzed had reduced their agricultural employment to less than 9 percent.

Manufacturing employment grew as a share of total employment in the first half of the century but this share has peaked in all the countries. Advanced economies are undergoing a process of "deindustrialization," comparable to their experience with agriculture. The pattern of employment change by sector over the 1980s illustrates the relative decline of manufacturing (Exhibit 2). It reveals two distinctive features of employment in the countries analyzed. France and Italy experienced large declines in manufacturing employment while Spain and Italy underwent large declines in agricultural employment. These economies were faced with major job reallocation problems associated with the restructuring of their manufacturing or agricultural sectors and the consequent need to create large numbers of service jobs as replacements.

The process of reallocation is apparent even within manufacturing (Exhibit 3). Mature industries such as food, textiles and basic metals are generally declining in their share of manufacturing employment (the exceptions being Spain and Italy with lower GDP per capita). The reasons for this decline vary. Economies that are far along the path of evolution with relatively high wages find that jobs in labor-intensive, traded industries are moving to low wage countries. Economies at an earlier point in their evolution with largely traditional or craft industries find that they lose jobs rapidly in these industries as best practice production techniques are introduced. Across the six countries studied, newer, more innovative sectors such as chemicals and machinery (which includes electronics, computers, instruments, cars, etc.) are growing in relative terms. We found that approximately 50 percent of manufacturing employment in 1990 was located in sectors that grew in employment during the 1980s (Exhibit 4). Their growth, however, was not sufficient to offset the decline experienced by more mature manufacturing sectors.

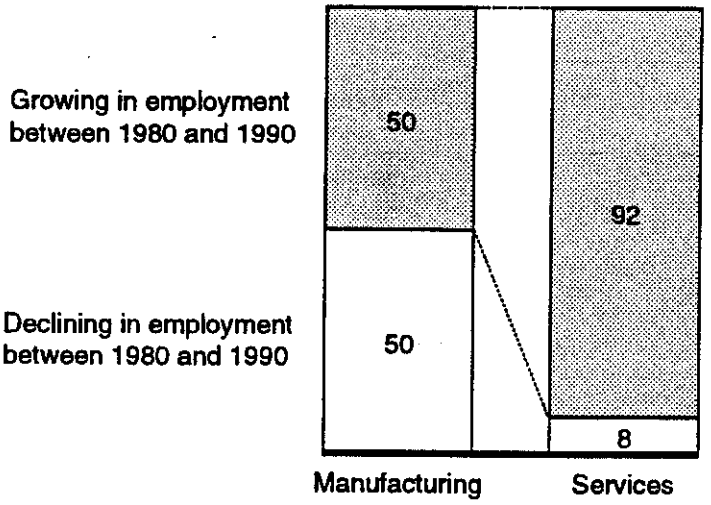
It is clearly the service sector that has created most of the new jobs. Employment in services already exceeded employment in manufacturing prior to World War II in most of the countries, and the employment growth has been the most rapid in this sector. In most countries, services represent the only significant area of employment gains. One of the distinctions that has been suggested in the literature to be important for understanding employment differences is the distinction between market and nonmarket services. In Exhibit 5, we examine this issue and find a result that differs from the conventional one. Contrary to suggestions in the literature that the nonmarket sector accounts for most of the differences in service sector employment, we find that these differences arise more from market services. The U.S., Italy and Spain had the largest increases in service sector employment and this was derived mostly from their growth in market services.

Despite the short-term problems that can be created by the evolution of economies, we believe that this process should be viewed as desirable. Jobs may

Exhibit 4

GROWING AND DECLINING INDUSTRY SECTORS

Percent of total 1990 employment*



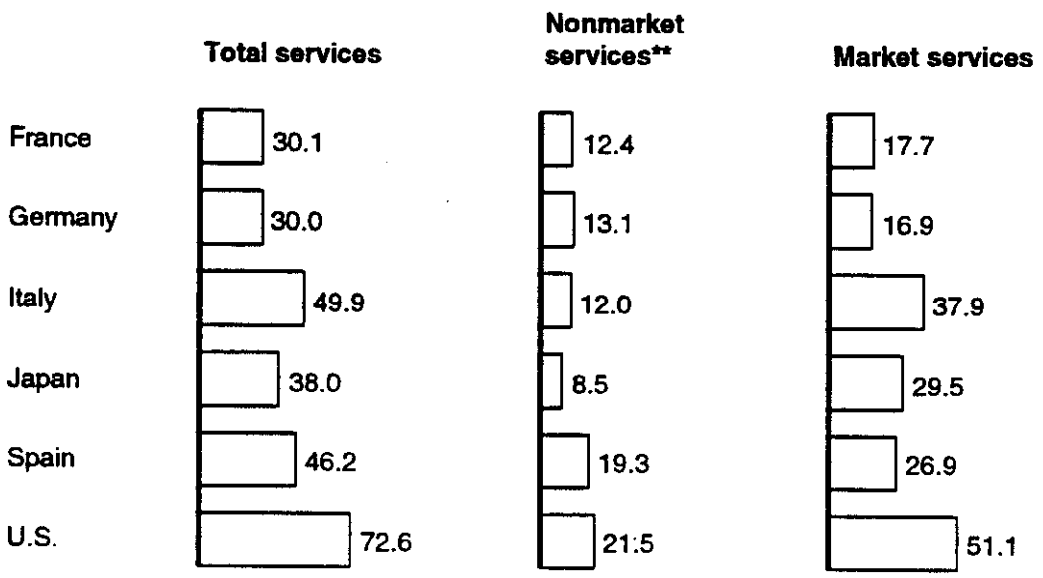
* Weighted average of U.S., Japan, Germany, France, Italy, Spain

Source: McKinsey analysis

Exhibit 5

EMPLOYMENT PERFORMANCE IN SERVICES 1980-90

Net jobs created per thousand working age population*



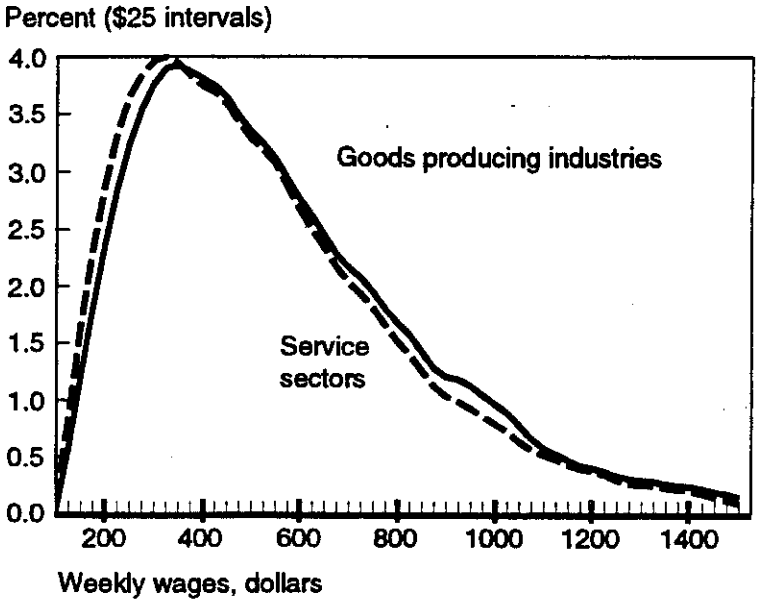
* Adjusted for growth in the working age population

** Including government, private and public education, private and public health care, etc.

Source: OECD Labor Force Statistics; national household surveys; McKinsey analysis

Exhibit 6

U.S. WAGE DISTRIBUTIONS 1992

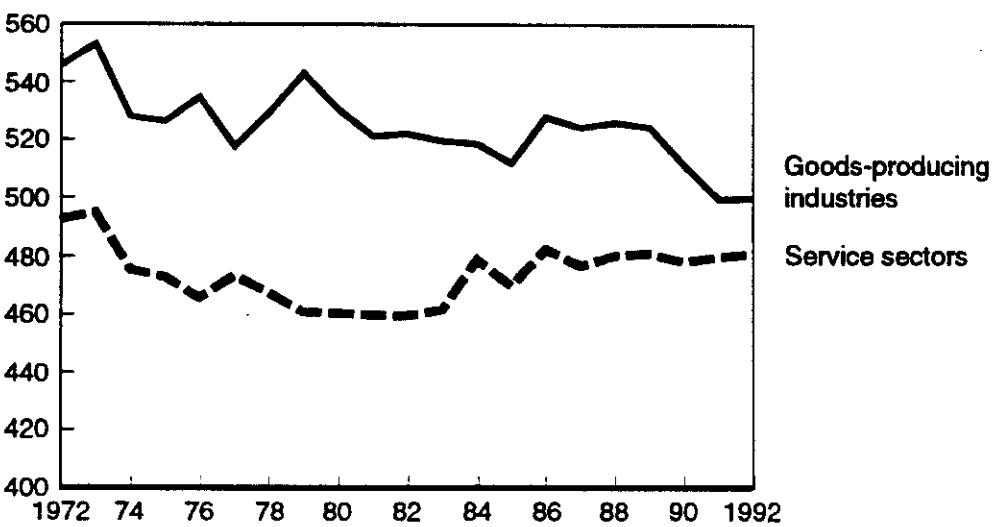


Source: Cleveland Federal Reserve Bank; U.S. Department of Labor; BLS

Exhibit 7

MEDIAN WEEKLY WAGES IN THE U.S.

1992 dollars



Source: Cleveland Federal Reserve Bank; U.S. Department of Labor; BLS

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be lost as a result of improvements in productivity in one industry, but this allows workers to move to other industries where output can be increased. The end result of this process is that the overall productivity of an economy increases. Even if jobs are lost to international trade, this is to be expected given comparative advantages which allow economies to specialize in the activities that they do best.

The increasing importance of services is viewed by some as an undesirable trend. Service sector output is seen as somehow less valuable than goods output and service jobs are thought to be "bad" jobs. This perception is important since it influences policymakers and may result in actions that try to restore jobs in manufacturing while inhibiting service sector employment growth. The earnings distribution of manufacturing and service sector jobs is remarkably similar in the U.S. (Exhibit 6). While it is true that service sector earnings are somewhat lower ($481 for median weekly earnings in services versus $500 in manufacturing), the differences are small and mainly due to wages in one sector, retailing and restaurants. In most other service industries, median wages are comparable to or higher than earnings in goods-producing industries. Furthermore, earnings differences between manufacturing and service sector jobs actually narrowed over time (Exhibit 7). The conventional wisdom that the shift to services is responsible for lowering median wages and widening wage dispersion in the U.S. is thus largely unfounded.

2. Shift in the mix of skills. Economic evolution changes not only the mix of sectors, but also the nature of the jobs that are available. A split of our employment measure by type of job underlines these changes (Exhibit 8). Four-fifths of the adjusted growth in employment in the U.S. occurred in high skill categories. France, Germany and Japan also created high skill jobs (adjusted for growth in the working age population), but only approximately half the U.S. rate. Between 1983 and 1991, jobs for lower skilled people in the U.S. also increased, but that growth was not much higher than the growth in the working age population. In the same skill categories, the adjusted growth in Germany and France was strongly negative. This destruction of low skill jobs in Germany and France was strongest for blue-collar, operating level workers. Japan largely avoided this decline. Differences in the two lower skill categories account for 55 to 70 percent of the total difference in employment performance between France, Germany and the U.S. (Exhibit 9).

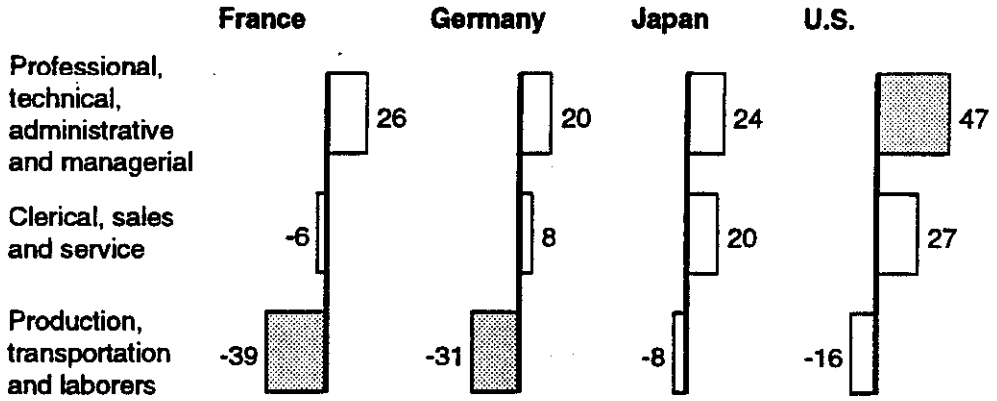
Changes in both the demand and supply of labor seem to have influenced the shift in skill levels. Trends in technology and changes in business systems led to an increased demand for people with high skills and educational levels. These phenomena are often associated with a widening of the earnings dispersion.[2] However, a number of other factors such as demographic changes and a slower

[2] For example "A Comparison of Changes in the Structure of Wages in Four OECD Countries" by L. Katz, G. Loveman, D. Blanchflower (1992); or "Rising Wage Inequality" by R. Freeman and L. Katz (1993).

Exhibit 8

GROWTH OF EMPLOYMENT BY OCCUPATION 1980-90*

Jobs created per thousand working age population**



* France, 1982-91; Germany, 1980-91; Japan, 1979-90; U.S., 1979-90; all countries extrapolated to 1980-90; figures do not add up to total employment performance (Exhibit 2) since agricultural workers are excluded

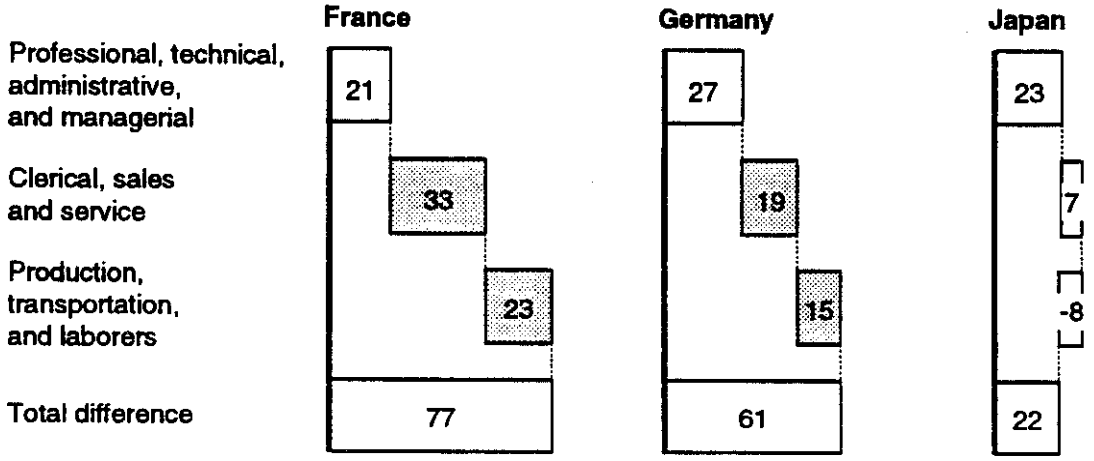
** Adjusted for growth in the working age population

Source: OECD Jobs Study; McKinsey analysis

Exhibit 9

DIFFERENCE IN EMPLOYMENT PERFORMANCE BETWEEN EACH COUNTRY AND THE U.S. 1980-90*

Jobs created per thousand working age population**



* France, 1982-91; Germany, 1980-91; Japan, 1979-90; U.S., 1979-90; all countries extrapolated to 1980-90; figures do not add up to total employment performance (Exhibit 2) since agricultural workers are excluded

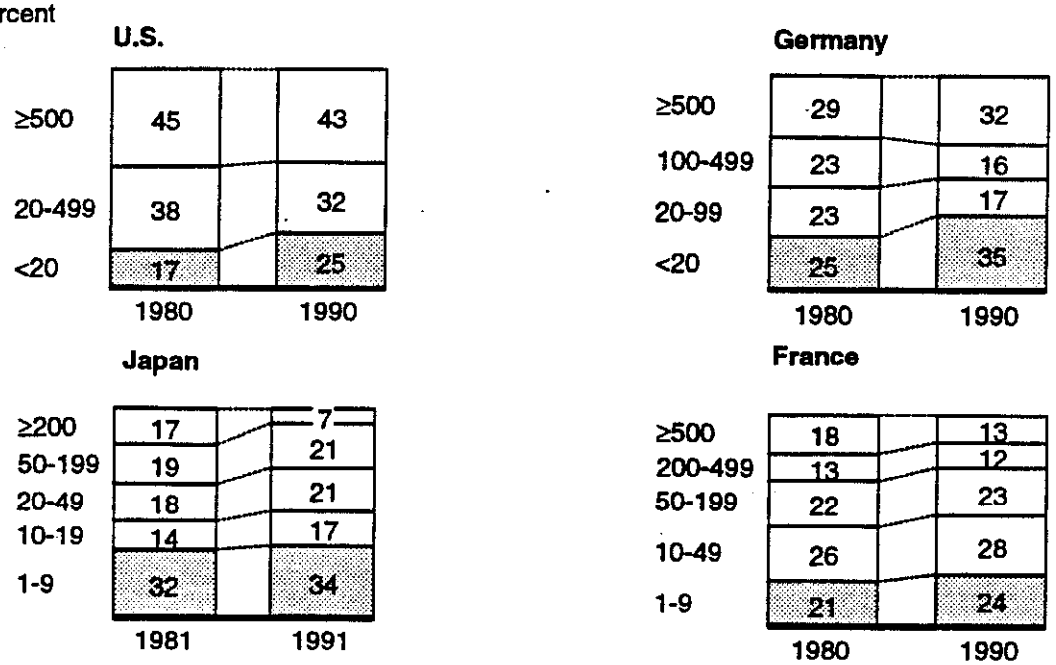
** Adjusted for growth in the working age population

Source: OECD Jobs Study; McKinsey analysis

Exhibit 10

EMPLOYMENT DISTRIBUTION BY FIRM/ESTABLISHMENT* SIZE

Percent



* Firms for U.S. and Germany, establishments for France and Japan

Source: U.S., The State of Small Business 1992; France, Annuaire Statistique; Japan, Establishment Survey; Germany, Institut für Mittelstandsforschung

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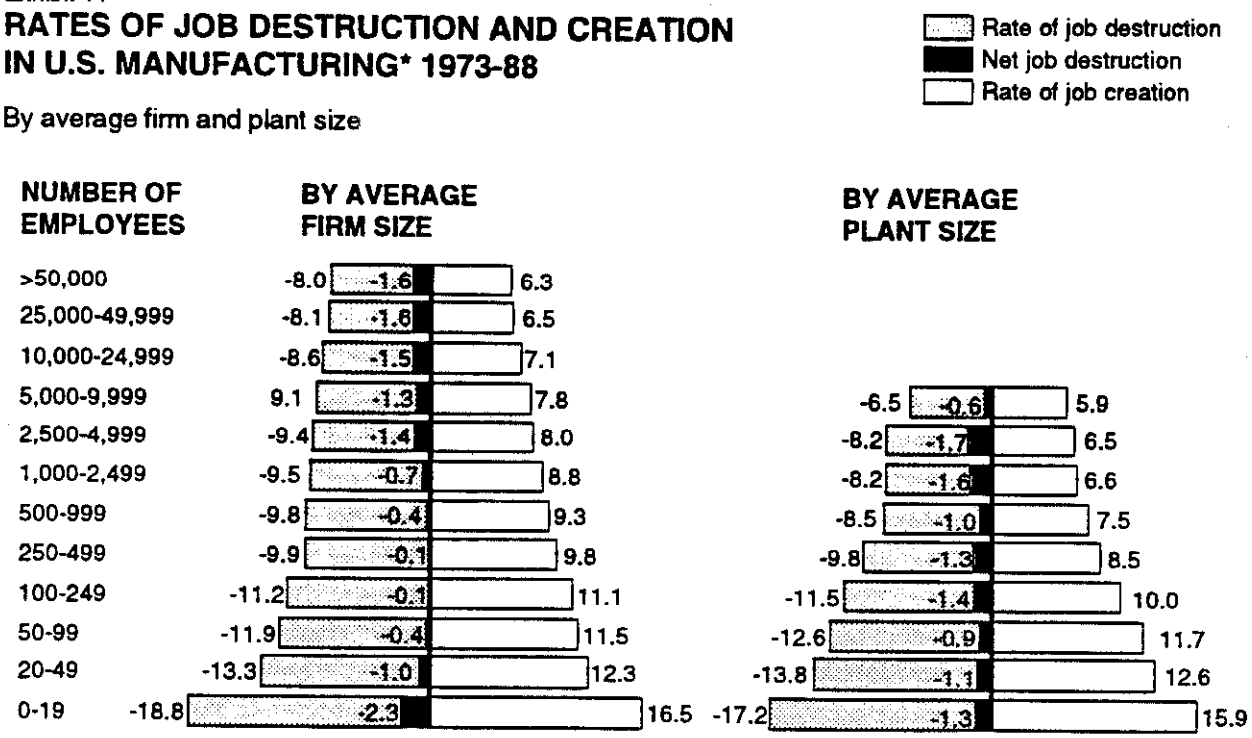
Exhibit 11

RATES OF JOB DESTRUCTION AND CREATION IN U.S. MANUFACTURING* 1973-88

By average firm and plant size



* Net employment changes at the plant/firm level over a 12-month interval

Source: Davis, Haltiwanger, Schuh (1993); Census of Manufactures (excluding auxiliary units)

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growth in college-educated people also affect the relative wages of different skill categories.[3] The aggregate literature does not allow us to conclude what the real causes of a widening earnings dispersion are.

3. Shift in the mix of firms. In addition to shifts by sector and by skill level, there are also observed shifts by size of firms, with small firms gaining in employment. We conclude, however, that this shift is not an important independent factor and that most of the observed shift is likely to be linked to the increase in service sector employment.

Between 1980 and 1990 the fraction of employment in small U.S. and German firms increased (Exhibit 10). Japan and France show smaller increases.[4] These data on firm size need careful interpretation, however. The shift to small firms does not come exclusively from newly created small firms. The downsizing of larger firms pushes some of them across the border between size classes. Some small firm employment growth has come from firms that were larger than 20 employees and then shrank. The results of one study of U.S. manufacturing that avoided the pitfalls of interpretation in examining job creation and destruction by firm size are shown in Exhibit 11. The study placed manufacturing plants and firms in size classes based on their average size over the entire period 1973 to 1988. The exhibit then shows the gross job creation and gross job destruction by size, together with the net job destruction. The difference by size class is primarily that small plants and firms both create and destroy more jobs than do larger operations. This may partially reflect a higher degree of "trial and error" taking place in small establishments. In terms of net job creation, there is little systematic pattern by plant size. By firm size, the smallest manufacturing firms and the firms with over 2,500 employees are the ones with most net losses.

As yet, there is no data for service sector companies that is comparable to the manufacturing establishment numbers. Service companies tend to be smaller than manufacturing companies; therefore, a significant part of the employment gains in smaller companies could be merely due to a shift from manufacturing to services.

Flexibility and gross job creation

We have described how the evolution of economies leads to a need for constant reallocation of employment. This process takes place within sectors, firms and skill levels, as well as among them. It is often argued that the better net employment performance of the U.S. is due to better gross job creation. A higher degree of trial and error leads to a higher number of jobs that survive. And a

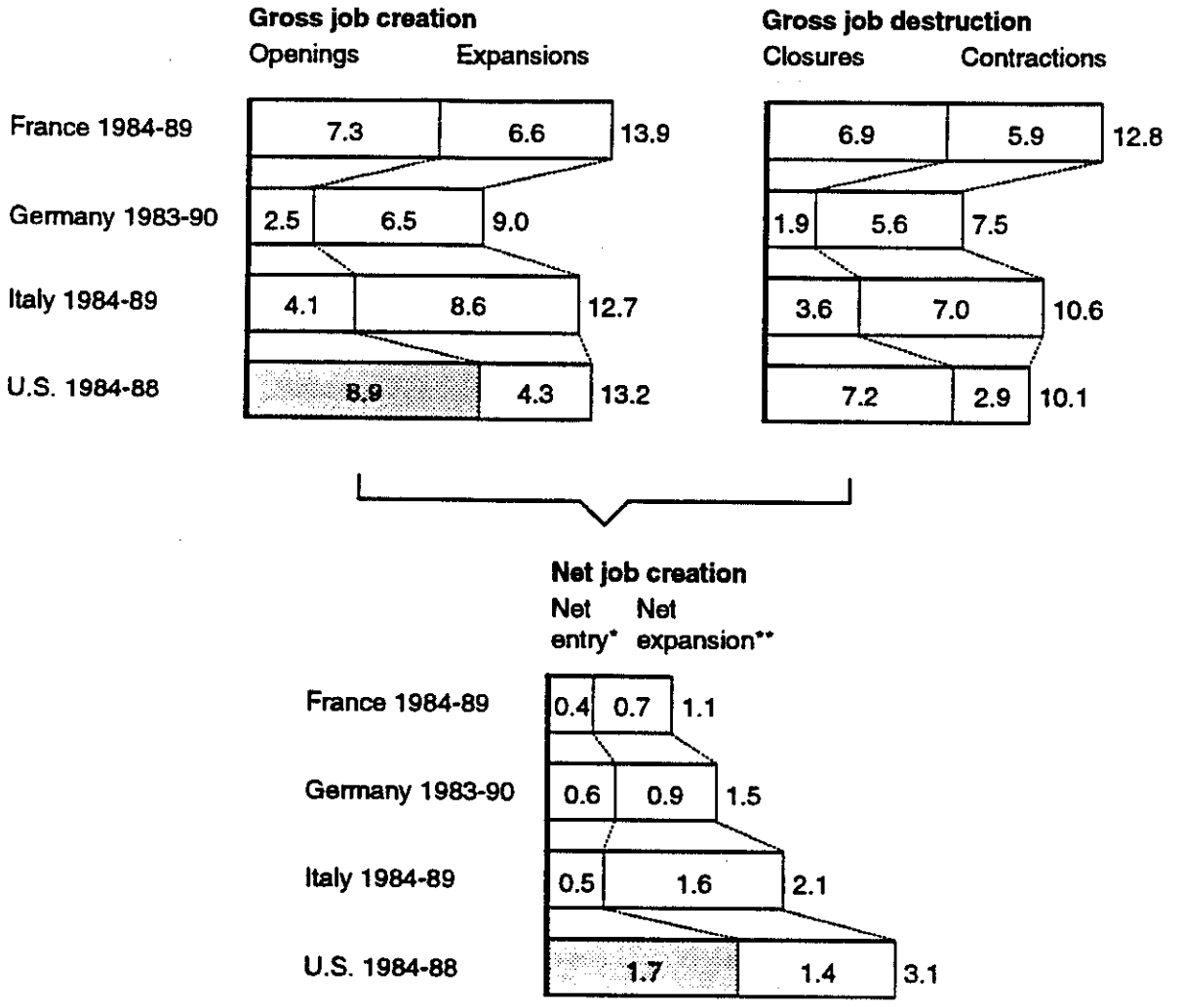
[3] Earnings dispersion figures are generally not adjusted for demographic differences. A recent study ("The Growth in Earnings Instability in the U.S. Labor Market," P. Gottschalk and R. Moffitt, 1994) has found that transitory earnings changes account for much of the differences in earnings dispersion.

[4] Their data is based on establishment surveys, which exclude very small firms and self employed people.

Exhibit 12

GROSS JOB CREATION PERFORMANCE

Average annual rates in percent of total employment



* Openings minus closures

** Expansions minus contractions

Source: OECD Employment Outlook 1994

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system permitting easier layoffs also facilitates more hirings. The aggregate data provide evidence that contradicts this view to a large extent.

Exhibit 11 illustrates just how large gross annual job changes are relative to net gains. Among U.S. manufacturing firms whose employment declined in a given year, the average rate of decline was 9 percent compared with an average net loss of 1 percent. In Exhibit 12, we compare several countries using figures from the OECD on plant openings, expansions, closures and contractions. There are some concerns about the data in Exhibit 12, including the fact that outside of U.S. manufacturing, there has been little work done to ensure that plant "closures" and "openings" are really what they seem, rather than being changes of identity or simply changes of employer identification numbers. Also, Exhibit 12 refers to a time period of economic growth in the mid-1980s and may therefore not accurately reflect the job creation and destruction process over a whole business cycle. The exhibit does, however, show clearly that the U.S. had more plant openings than the other countries, and that more of these openings lead to overall job creation. The difference between openings and closures in the U.S. was 1.7 percent per year on average, compared to 0.4 for France, 0.6 for Germany and 0.5 for Italy. This represents a significantly better performance in job creation if extrapolated over 10 years. It is surprising to find, however, that France and Italy seem to be just as good at total gross job creation as the U.S. Moreover, the gross job destruction rates were higher in France and Italy than in the U.S. This suggests that managers in Europe have more flexibility to lay off workers than commonly assumed. In terms of expansions and contractions, it appears that the rate of change was actually lower in the U.S. than in the other countries, at least in the mid-1980s. There were fewer expansions and fewer contractions. We conclude from this data that there may be some truth to the hypothesis that U.S. enterpreneurialism led to more job creation through plant openings. However, overall flexibility of the European economy does not seem to lag the U.S. in terms of total gross job creation and destruction.

These data, on the turnover of jobs, contrast with what we know about turnover of employees. U.S. workers change jobs more often than European workers and experience many periods of short-term unemployment. One explanation of this pattern is that U.S. firms use short-term layoffs in response to temporary declines in demand much more than European firms do, leading to frequent, short unemployment spells. In Europe, a reduction in work hours is the first response to an output decline. But European companies will not hold excess workers for long, and so year-to-year employment variations are not so different from those in the U.S. and spells of unemployment are much longer.

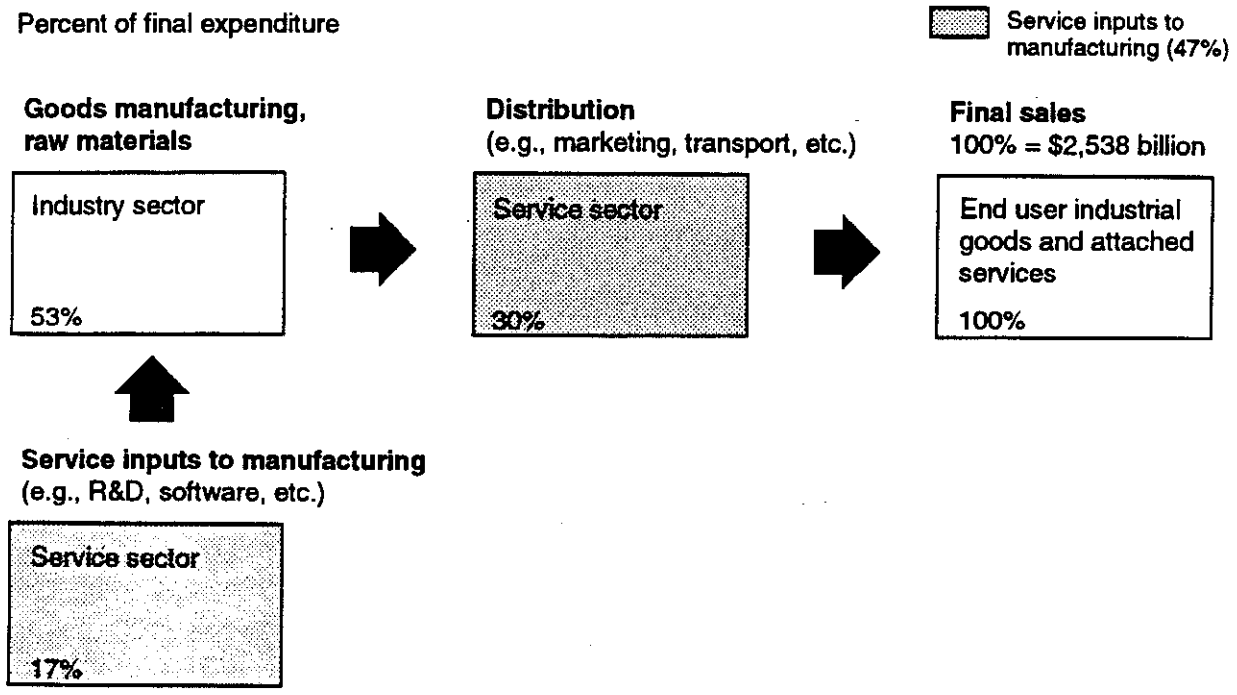
The reasons for economic evolution

Our review of the literature suggests that four fundamental factors affect the evolution of economies: productivity growth rates by sector, innovation and the emergence of new products and formats, trade and foreign direct investments,

Exhibit 13

VALUE-ADDED CHAIN IN U.S. INDUSTRIAL GOODS 1987

Percent of final expenditure



Source: Survey of Current Business, BEA 1992; McKinsey estimate

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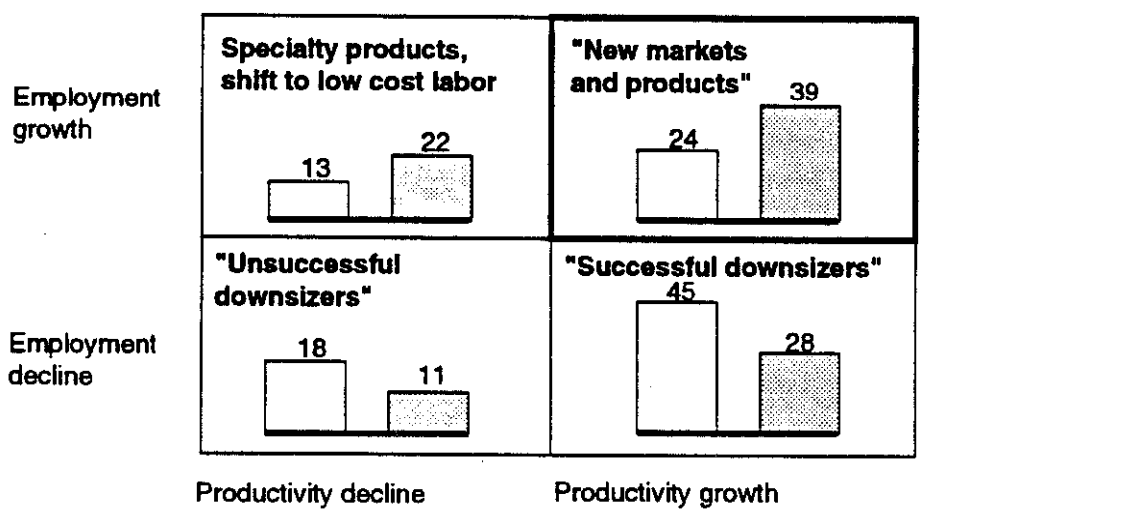
Exhibit 14

EMPLOYMENT AND PRODUCTIVITY CHANGE IN U.S. MANUFACTURING ESTABLISHMENTS

Percent of total manufacturing employment



Notes: Based on plants that were in operation in both 1977 and 1987; census data; productivity measured as gross output per employee (sensitive to changes in vertical integration)

Source: Baily, Bartelsman, Haltiwanger (1994)

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and consumption and investment patterns. The last factor is critical in explaining Japan's manufacturing employment evolution (compared to, for example, Spain, Italy and France). Trade, however, turned out to be less important than commonly assumed. Innovation in a broad sense is an important factor leading to growth in services.

1. Productivity growth. Current measurement techniques indicate that high productivity growth in manufacturing and low productivity growth in services are partially responsible for the employment shift towards services.

High productivity growth in a specific sector has two effects. First, it allows given levels of output to be produced with fewer and fewer people, but second, it lowers the relative price of that good. The first effect reduces employment in the fast productivity growth industries, while the second sustains demand and hence employment. Agriculture and manufacturing have achieved rapid overall productivity growth rates. This has led to a reduction of employment needed per unit of output. Consumer demand for these goods has reached the point where the effect of relative price declines on demand is small. Data at the sectoral level suggest that the decline in the relative price of manufactured goods has been only a weak stimulus to the demand for manufactured goods. That is to say, it seems as if there is only a weak positive productivity loop. Consumers devote increasing fractions of their incomes to health care, entertainment, and other services, and smaller fractions to the output of the farm and the factory.

This shift in expenditures combined with the general importance of services in the value-added chain results in a high importance of productivity growth in services. When people buy manufactured goods today, a high proportion of the value added is delivered by retailers or other service providers (Exhibit 13). Aggregate data show service sector productivity growth to be significantly lower than productivity growth in manufacturing. However, there is an important uncertainty about the output and hence productivity growth measures in the service sector. In the U.S., for example, productivity growth is assumed to be zero in up to one-third of the service sectors since real output growth is measured by using the number of employees as a proxy.

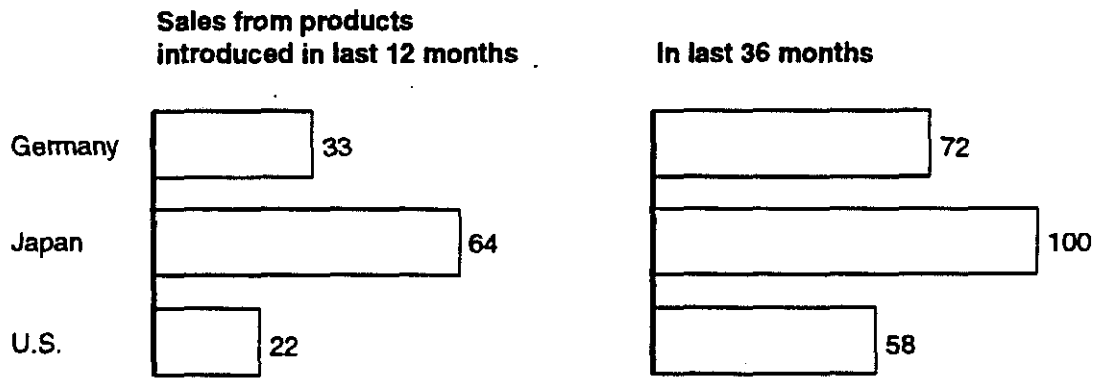
2. Innovation. At the level of individual industries and lines of business, innovation is a critical factor for job growth. Product innovations in manufacturing have allowed the growth of employment in the dynamic new parts of manufacturing, as illustrated by "high-tech" sectors. Innovations in services also have dramatically improved processes and introduced new business formats that have helped expand output and employment.

Innovation is closely linked to productivity. If companies innovate, the value added embedded in their products (and thus measured productivity) increases. Also, rapid demand growth often more than offsets initial productivity gains, leading to employment gains. A recent study of employment and productivity growth in U.S. manufacturing provides some information about the linkages between productivity growth and innovation (Exhibit 14). Thirty-nine percent of

Exhibit 15

PRODUCT LIFE CYCLE IN CONSUMER ELECTRONICS 1992

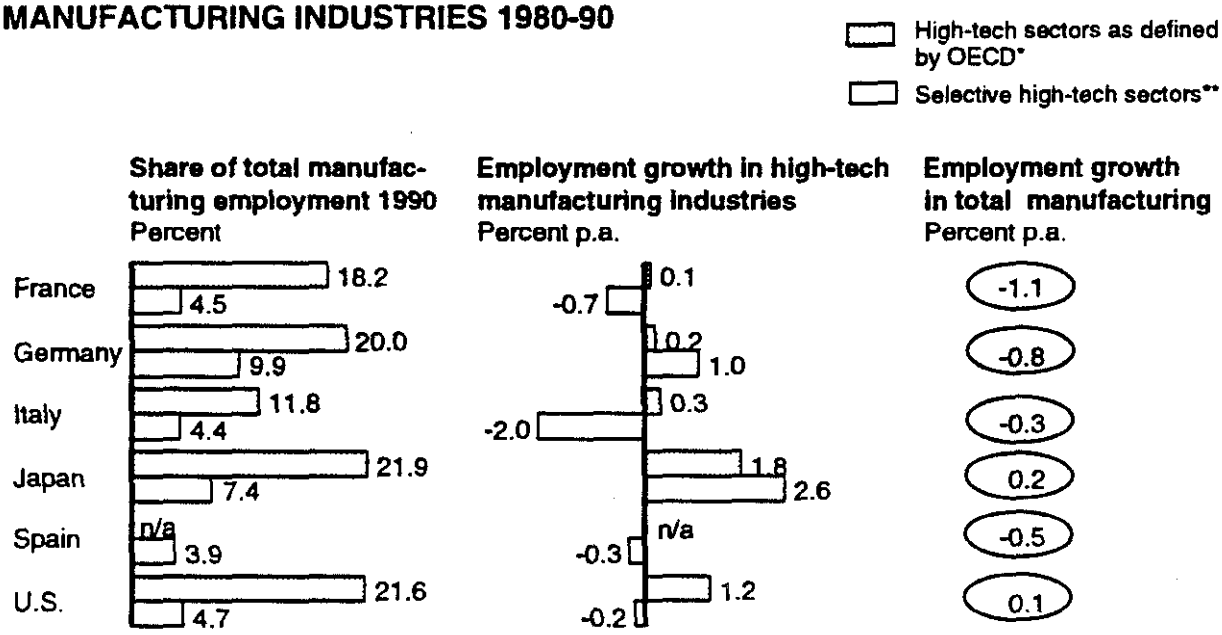
Percent



Source: Excellence in Electronics Survey (McKinsey)

Exhibit 16

EMPLOYMENT IN HIGH-TECH MANUFACTURING INDUSTRIES 1980-90



* Based on R&D investments, 1970-89

** Metalworking machinery, computers, instruments, drugs, chemicals and plastics, consumer electronics, other electrical machinery and equipment

Source: OECD STAN database; McKinsey analysis

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employment was in plants that increased both employment and productivity over the decade (top right quadrant). The study found that this group of plants had contributed as much to productivity in the sector as a whole as had the downsizers. The Manufacturing Productivity study by the McKinsey Global Institute also illustrates the importance of new products in the consumer electronics industry. Much of the industry's sales derive from products introduced over the previous 12 months, an even larger fraction from products introduced over the previous 3 years (Exhibit 15). These fractions are largest for the most successful consumer electronics industry, the one based in Japan.

There is a correlation between the employment growth in an industry and the extent to which it is "high tech" (Exhibit 16), even using different definitions. This is a natural result, as advanced countries evolve and their manufacturing sectors move into areas of comparative advantage. Despite this finding, we want to emphasize the difference between "high tech" and "innovation." Even high-tech manufacturing sectors can loose jobs, as the example of the computer case in the U.S. will illustrate. Many successful innovations create new customer value in the service sector. Software, new retail formats and video rental stores are just some examples. Service sector innovations are not "high tech" in the narrow sense of the term, although they are often based on the application of advanced technology. Exhibit 17 illustrates that service sectors are surprisingly heavy users of information technology, often more so than manufacturing firms.

3. Trade and foreign direct investment. The direct effects of changes in trade position (the movements of net output across borders) on employment growth are small. Trade can have, however, significant indirect effects as a result of productivity gains in firms that are exposed to imports or goods produced by transplants. Together, the two effects have a significant impact on economic evolution, affecting the composition of a country's employment. Over time, advanced, high wage countries move out of labor-intensive industries and concentrate on activities in which they have a comparative advantage. The same can be observed for individual companies within a given industry.

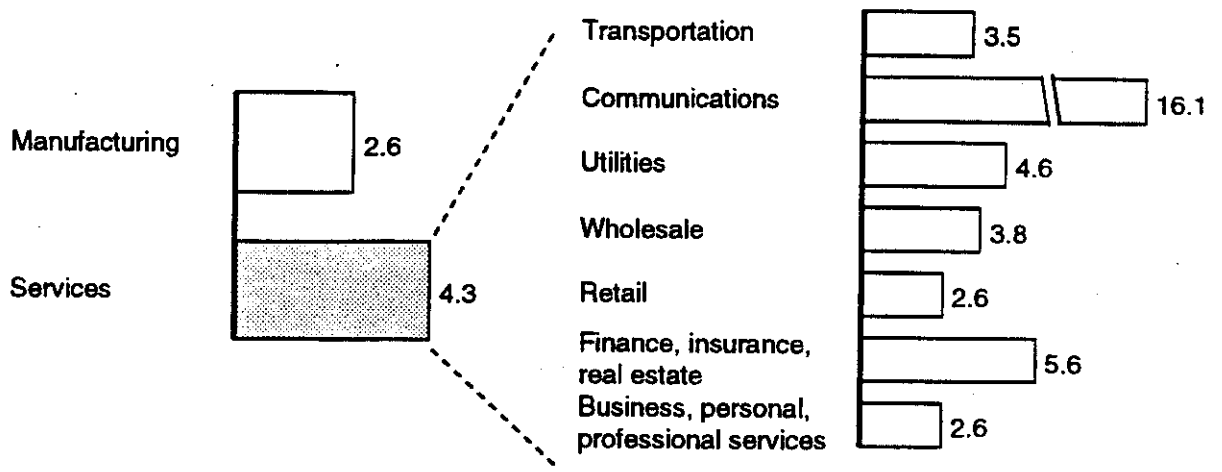
There is great concern over the **direct** impact of international trade on jobs in developed countries. Newly emerging economies have almost unlimited supplies of low wage labor, suggesting that they can compete away all of the manufacturing jobs in the developed countries. To many, it seems just common sense that if a country in Asia or Latin America has workers available at $1 a day, then no jobs are safe in high-wage countries. The countervailing view is that exchange rates will adjust in order to allow countries at different stages of development to compete on even terms. Also, developing countries have low wages because they have low productivity. They lack the managerial skills, technology, infrastructure and other factors that are available in rich countries. They need the low wages in order to compete at all.

We hope to shed some light on this debate by calculating the direct effects of international trade on employment in the six countries of our study. Exhibit 18

Exhibit 17

INVESTMENT IN INFORMATION TECHNOLOGY IN THE U.S.

Percent of GPO*



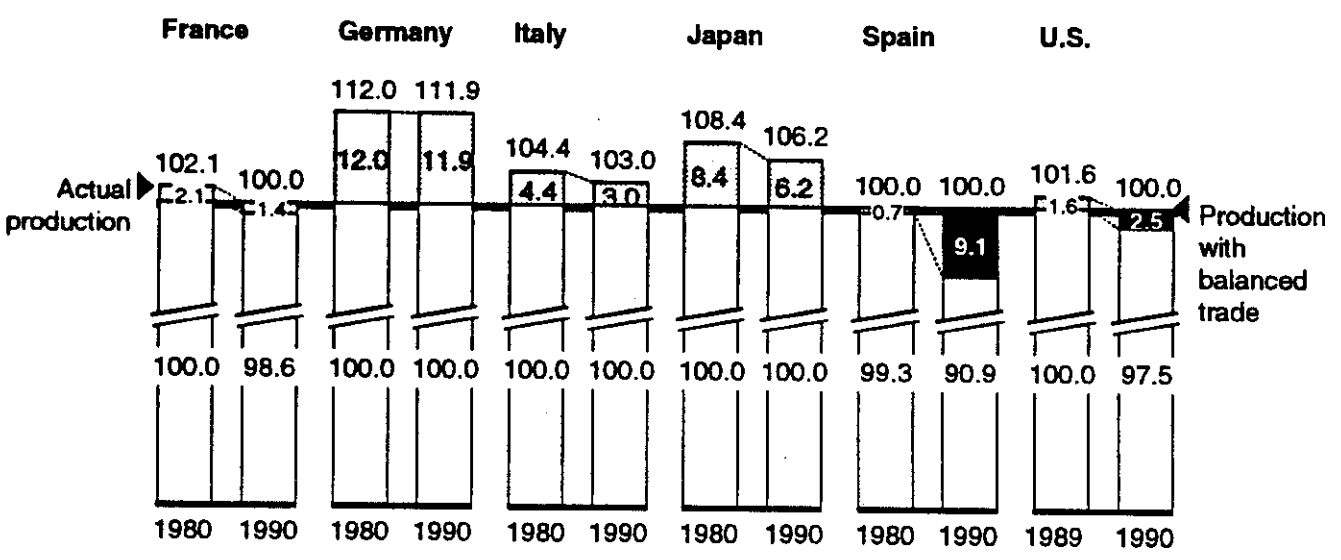
* Gross domestic product originating in the U.S.; the summed GPO of all industries equals the GDP of the economy

Source: OECD

Exhibit 18

PRODUCTION WITH BALANCED TRADE RELATIVE TO ACTUAL PRODUCTION

Index: 100 = production with balanced trade level



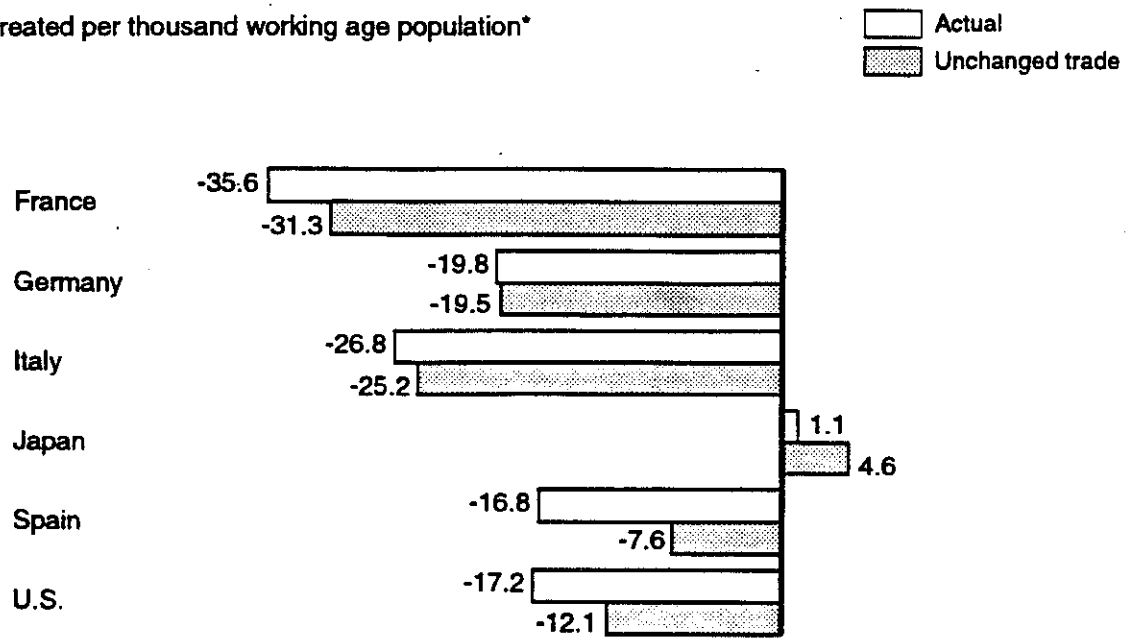
Source: OECD National Accounts; UN; McKinsey analysis

Exhibit 19

MANUFACTURING EMPLOYMENT GROWTH ACTUAL AND WITH UNCHANGED TRADE PERFORMANCE

ESTIMATE

Jobs created per thousand working age population*



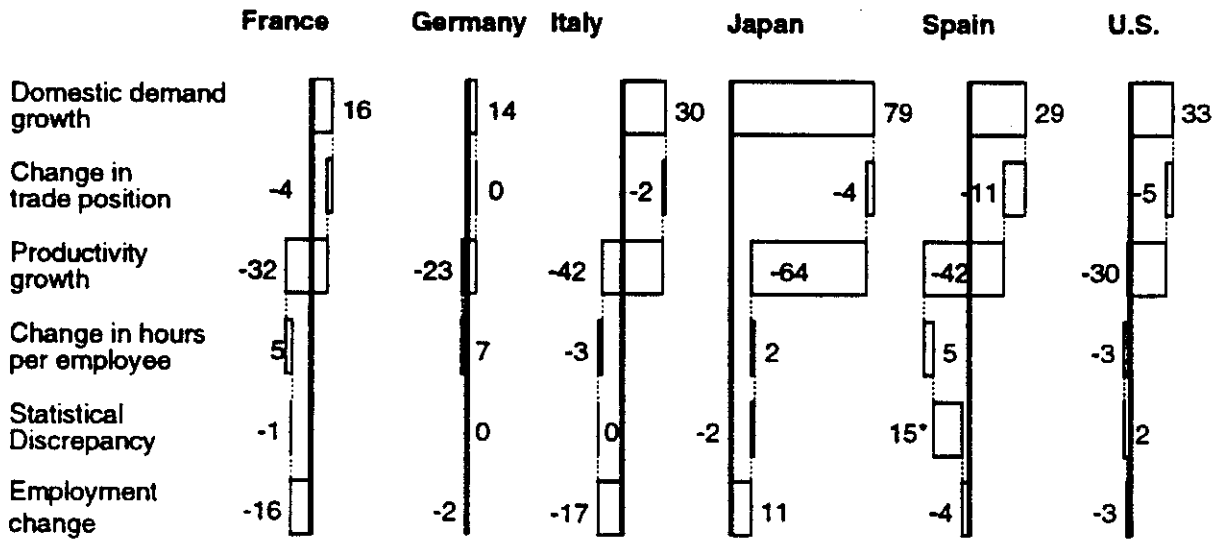
* Adjusted for growth in the working age population

Source: OECD National Accounts; UN; McKinsey analysis

Exhibit 20

SOURCES OF CHANGE IN MANUFACTURING EMPLOYMENT 1980-90

Percent changes over 1980



* Significant differences exist between household and GDP figures on one side and establishment survey data on the other side; productivity growth based on household survey employment data is likely to be smaller

Source: Household surveys; BLS; McKinsey analysis

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gives the net manufacturing trade surpluses and deficits in our six countries in relation to total manufacturing output. Japan, Germany and Italy had trade surpluses in both 1980 and 1990. The U.S. and France had surpluses in 1980 but deficits in 1990. Germany stands out as having had a very strong trade performance in 1980, with 12 percent of its manufactured output attributable to its surplus. It maintained this strong performance over the 1980s. Japan is somewhat surprising in that its trade surplus was a smaller fraction of its output in 1980 than Germany's, and its surplus declined as a percent of output in the 1980s. Spain also stands out. Starting with close to balanced trade in 1980, Spain developed a significant trade deficit by 1989.

We translate these findings, on a simple proportional basis, into an estimate of the direct effect of trade on manufacturing employment performance (Exhibit 19). With the exception of Spain, the direct effects of trade are small. All of the countries would have had somewhat higher employment growth if they had maintained their 1980 trade position, but the magnitudes are relatively small in most countries. Paul Krugman and Robert Lawrence have recently reinforced this point by showing that the bulk of the trade these countries engage in is actually among countries with relatively similar wage rates, not with low wage countries. Although the direct effects of trade are small, we judge that the indirect effects play an important role in explaining the difference between Japan and Germany on one side and Spain, Italy and France on the other.

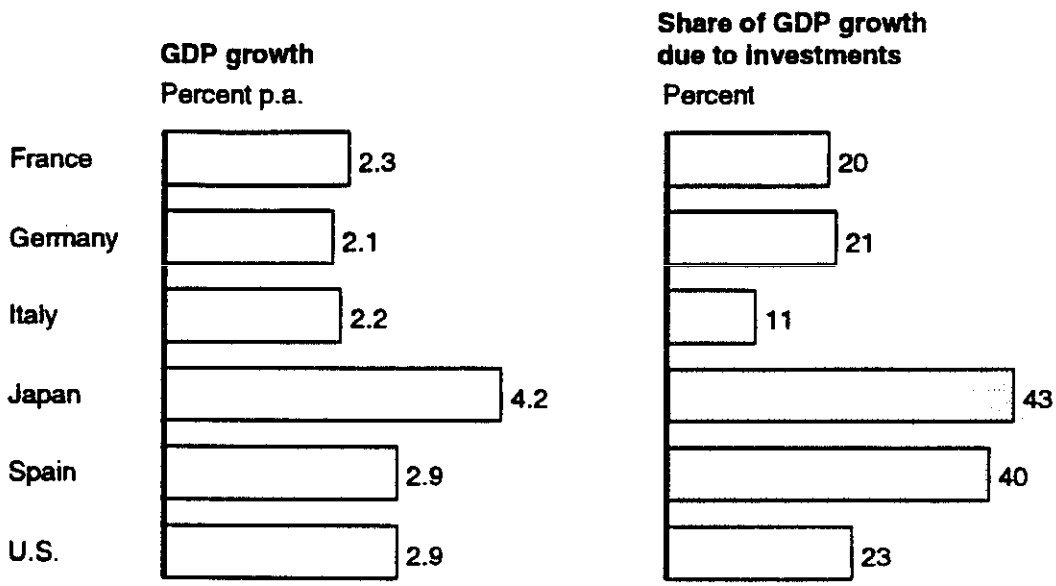
The competition resulting from international trade and transplants can have a significant **indirect** impact on domestic manufacturing employment by forcing firms to restructure and raise productivity in response to imports or transplants. In the aggregate data, the most striking examples are France and Italy. Both had high shares of manufacturing employment in mature sectors like steel, basic metals and textiles. These sectors were increasingly exposed to competition, either within the European Union or from emerging economies. As a result, both France and Italy had to improve their productivity and shed employment.

4. Consumption and investment. Japan achieved a much better employment performance in manufacturing during the 1980s than all the other countries. Yet we have seen that, for example, the impact of trade on employment was negligible. What other factors explain the differences in performance? Our analysis indicates that domestic demand represents by far the most important causal factor for Japan's better employment performance in manufacturing (Exhibit 20). Domestic demand growth in Japan was driven by the overall growth in GDP. Investments represent over 40 percent of the growth in Japan's GDP (Exhibit 21). Since the production of investment goods is concentrated in the manufacturing sector, it is not surprising that Japan had such high growth in manufacturing output.

The importance of investment goods in Japan is even more striking when looking at details of production data within manufacturing. The production of many investment goods is concentrated in the "machinery, equipment and fabricated

Exhibit 21

SOURCES OF GDP GROWTH 1980-90

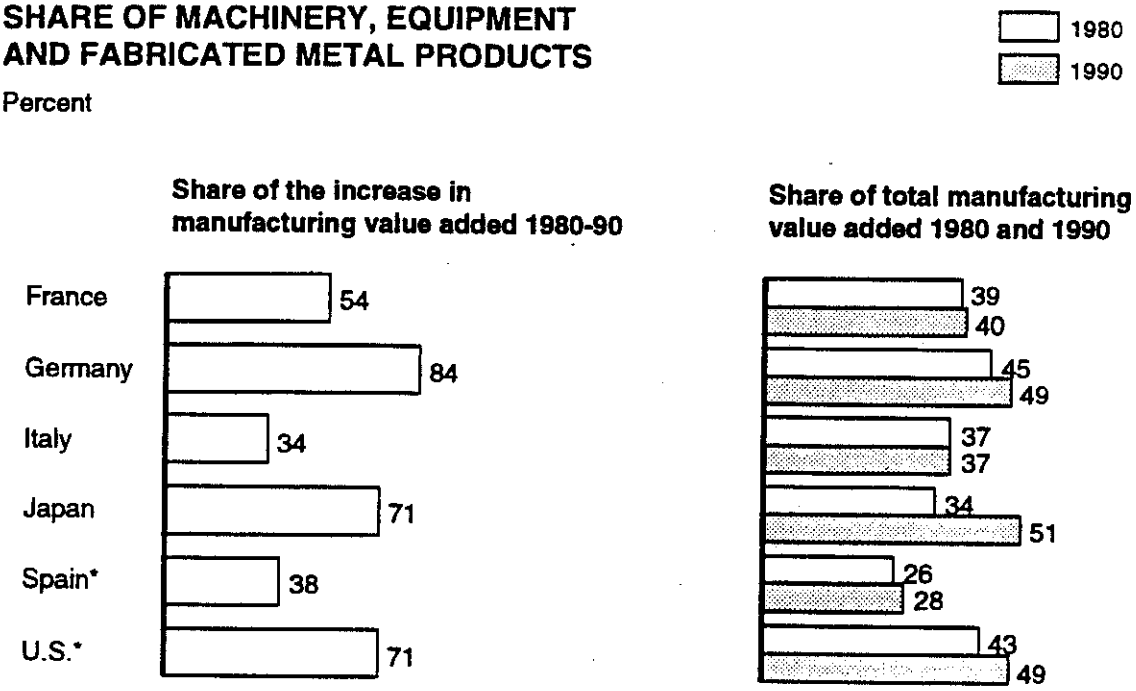


Source: OECD National Accounts

Exhibit 22

SHARE OF MACHINERY, EQUIPMENT AND FABRICATED METAL PRODUCTS

Percent

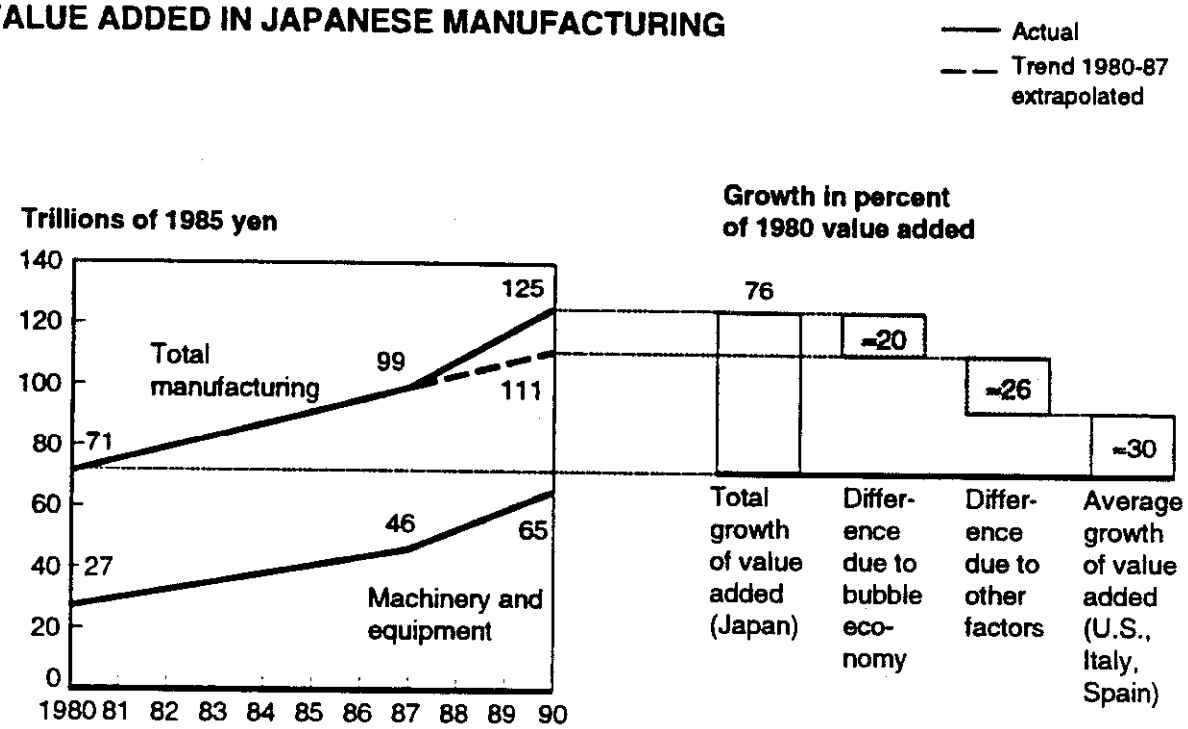


* Spain 1986-89; U.S. 1980-87

Source: OECD National Accounts; BLS; McKinsey analysis

Exhibit 23

VALUE ADDED IN JAPANESE MANUFACTURING



Source: OECD National Accounts; McKinsey analysis

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metal products" sector. Taking this sector as a proxy for the importance of investments, we observe again that a large part of Japan's increase in output is due to investment goods (Exhibit 22).

The bubble economy explains approximately half of the domestic demand growth differences in manufacturing between Japan and other countries (Exhibit 23). Between 1987 and 1990, the inflation of real estate and equity prices as well as the low costs of capital led to exceptionally strong growth in investments. The growth of value added in manufacturing accelerated significantly, driven mainly by strong growth in the machinery and equipment sector. When the bubble burst in 1990, companies were left with significant levels of overcapacity. Exhibit 23 also shows, however, that Japan experienced a strong growth in manufacturing value added in the early 1980s. This underlying trend can be attributed mostly to a "catching up" effect, both in terms of consumption and investments. Japan's levels of capital intensity (gross stock of structures and equipment per employee) increased from 53 percent of the U.S. level in 1973 to 87 percent in 1990 (Exhibit 24). While a few sectors (e.g. steel) showed above average growth rates and surpassed U.S. levels by 1990, the catch up in capital intensity could be observed across a broad range of sectors. However, Japan still has sectors, such as food, where capital intensity is significantly lower than in other countries. These sectors could represent growth opportunities for the future.

Exhibit 22 also illustrates differences between Japan and Spain. While Spain shows a strong growth of investments in its national accounts, the output growth in "machinery and equipment" is much lower. This indicates that demand for investments was satisfied by imports rather than by domestic production. Spain's increasing trade deficits over the 1980s can be almost entirely explained by growing imports of capital goods. Spain's investment in the goods sector is underdeveloped due to three factors: low productivity levels and growth, rapidly increasing wages in the 1980s, and a real appreciation of the peseta. Furthermore, high real interest rates in the second half of the 1980s led to a slowdown in investments and to a new period of recession after 1990.

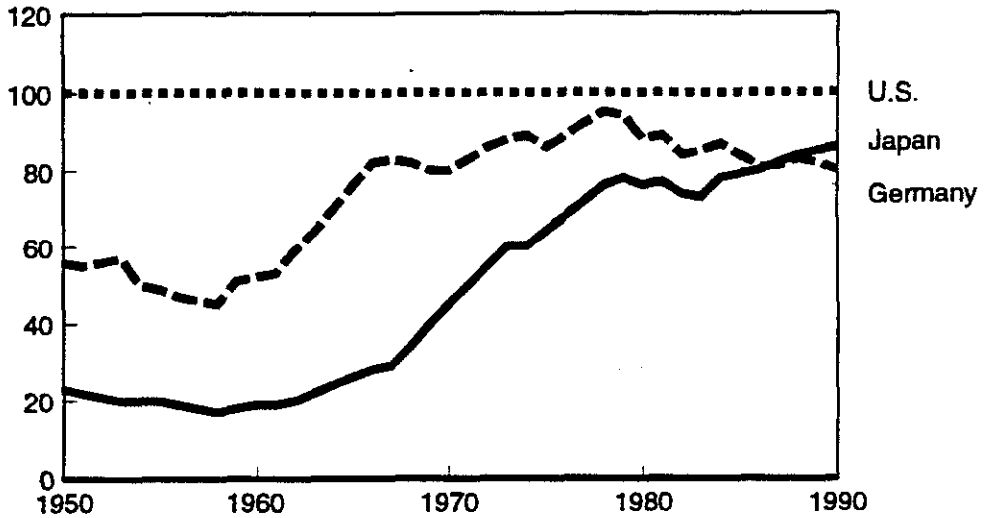
DIFFERENTIAL BARRIERS TO THE EVOLUTION OF ECONOMIES

Sectoral evolution and the rise and fall of industries and companies will often require labor to move from one job to another, and will change the location and content of new jobs relative to existing jobs. Our fundamental hypothesis is that if there are barriers to the evolution of economies that prevent the transfer of resources into expanding firms and industries, then the result can be a slowing of overall job growth.

Exhibit 24

CAPITAL STOCK PER EMPLOYEE IN MANUFACTURING 1950-90

Index: U.S. = 100

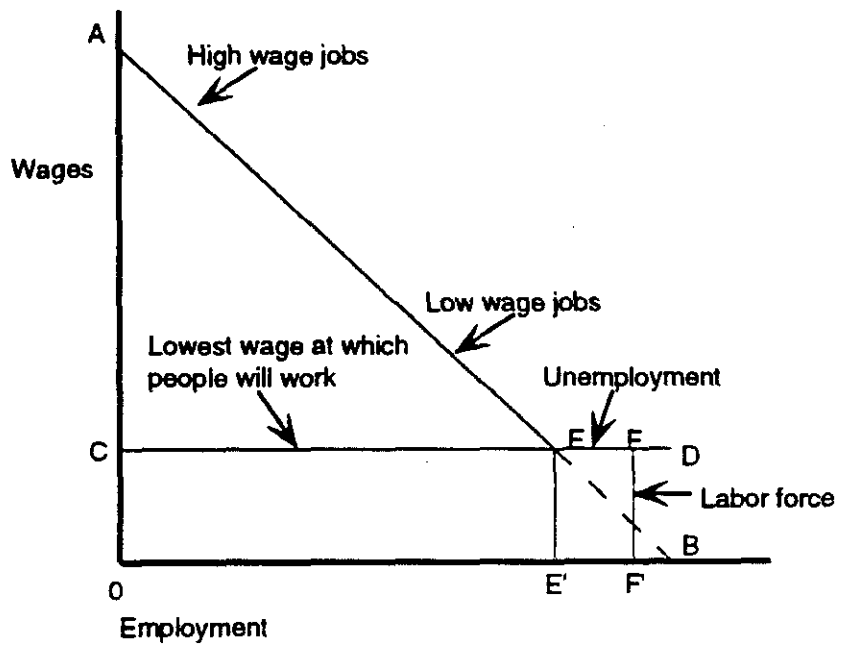


Source: Van Ark and Pilat 1993

Exhibit 25

IMPACT OF BENEFIT SYSTEMS ON EMPLOYMENT

ILLUSTRATIVE



Source: McKinsey analysis

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The barriers that have been suggested to explain slow employment growth are in three markets: the labor market, capital market and product market. Most of the literature has been centered on the labor market and its institutions, including the level and growth of labor costs, availability of workers and labor flexibility. We find that benefit systems do affect employment levels to some extent. The impact of different wage bargaining systems and of varying degrees of information and flexibility, however, often seems exaggerated. There is a perception that barriers in the capital and product markets may also be playing an important role in explaining employment performance. There is little evidence of this relationship in the aggregate literature, but our case studies will provide many opportunities to examine this critical link. Finally, there may be linkages between the different markets, e.g., between wages and prices. These linkages again may represent additional barriers to the process of adjustment to structural change and thus to employment growth.

Labor market barriers

Grouped labor market factors affecting job creation in four categories are: benefit systems, wage setting institutions, information and flexibility and skill shortages.

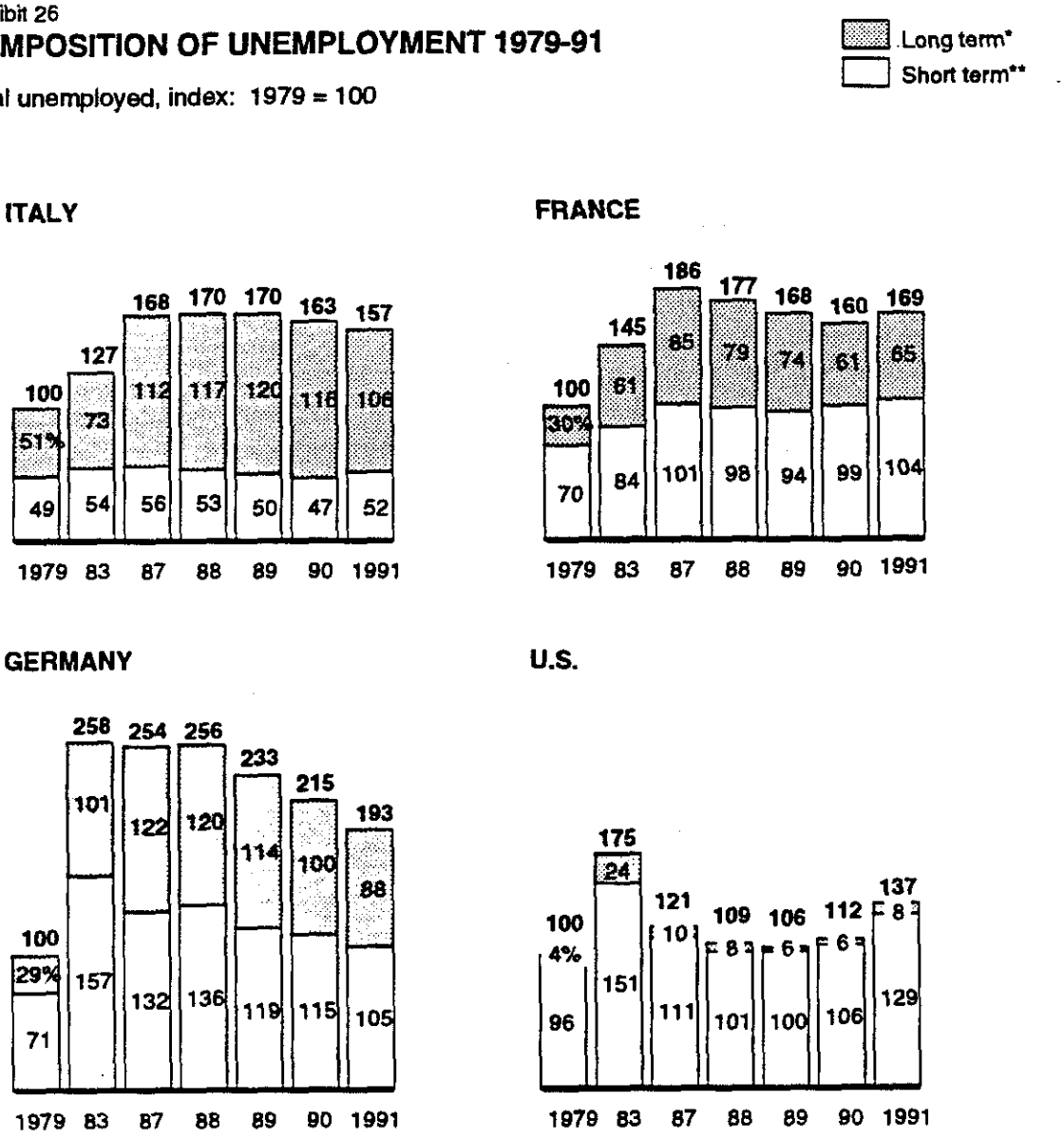
1. Unemployment insurance and other social benefits. A potentially important explanation for high unemployment is that the unemployed receive unemployment insurance (UI) or other transfer income that makes some of them unwilling to take the necessary steps to be reemployed. The argument is that some will not accept low wage jobs, will not search as hard, or are unwilling to relocate in order to find better jobs. A number of studies have found conflicting evidence, leading to no clear conclusion about the importance of these disincentives.

A theoretical economic framework can illustrate how the existence of benefits can raise reservation wages and thus decrease aggregate employment. In Exhibit 25 we draw an "employment line" AB, showing the distribution of wages and productivities by skill level. The horizontal line CD represents the reservation wage, the lowest wage at which people are willing to work in this economy. It depends, among other things, on the level of UI and other benefits available, on taxes, on legal minimum wages, on the content of work, and on individual preferences regarding work and leisure. Removing all unemployment benefits and wage minima would induce more low wage employment and would eliminate all but search or frictional unemployment. It is obviously a simplification to assume that there is only one reservation wage in the economy, and we have included in our framework the possibility of multiple reservation wages for different categories of workers. Also, one has to assume that wages are at least partially rigid, i.e., employees with high wages can be unemployed while vacancies exist for people with lower skills. Exhibit 25, however, does illustrate that by raising the reservation wage, policymakers reduce the aggregate employment level in the economy, as can be seen on the horizontal axis.

Exhibit 26

COMPOSITION OF UNEMPLOYMENT 1979-91

Total unemployed, index: 1979 = 100



* Persons unemployed for more than 12 months

** Persons unemployed for less than 12 months

Source: OECD, Labor Force Statistics, 1992; OECD, Employment Outlook, 1992; OECD, Intermediate Report on Unemployment, 1993; McKinsey analysis

Does the empirical evidence support this simplified view of the economy? Some studies indicate that unemployment insurance and other benefit systems had a large impact on unemployment.

- One of the striking differences between the U.S. and Europe is that a much larger fraction of the unemployment in Europe is long term. In France and Germany, 30 to 40 percent of the unemployed have been out of work for over 12 months, compared to less than 10 percent in the U.S. In Italy over 70 percent of unemployment is long term (Exhibit 26). Comparing years when the U.S. and European unemployment rates are the same, about 10 times as many workers became unemployed in the U.S. as in Europe, but they remain unemployed only a tenth as long.

- A statistical explanation of unemployment rates in the OECD (in Layard, Nickell, Jackman) concluded that both the level and duration of unemployment benefits have important effects in raising unemployment rates. It is argued that the length of time for which benefits are offered may be more important than the generosity of them. If the unemployed can collect benefits for several years, as is the case in some European countries, this may encourage persons to remain on the unemployment rolls. There is a correlation between the duration of extended benefits and the percent of long-term unemployment (Exhibit 27).

Other studies, however, question the significance of this impact and do not find a causality between benefits and unemployment levels. It is argued that UI cannot account for the rise in unemployment in Europe because the above empirical studies do not suggest a responsiveness of behavior that is large enough.

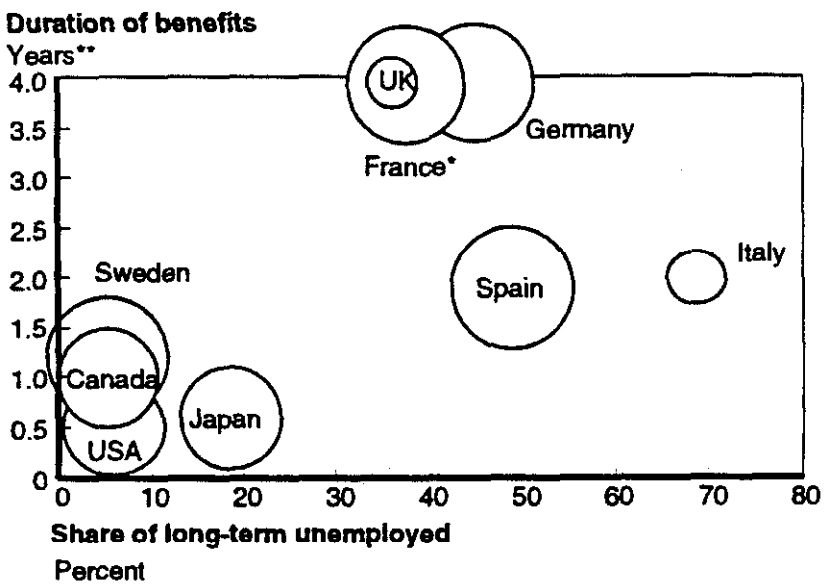
- The correlations underlying the statistical explanations may not imply causality. They could arise from the fact that countries with serious unemployment problems provide more generous or more long-lasting UI programs.

- Individual states in the U.S. differ in the generosity of their UI programs and the way they are financed. Empirical studies have often found that changing the generosity of benefits or the method of financing has only a modest impact on the duration of spells of unemployment or on the frequency of layoffs.

- Italy appears to have significantly more unemployment than its benefit levels might suggest (even if programs such as the "Cassa Integrazione" are taken into account). In both Italy and Spain, first time job seekers represent a significant share of the unemployed, and these people are often supported by their family. Germany's experience also looks inconsistent with the idea that UI plays a dominant role. It has very generous social benefits and yet has had less severe unemployment

Exhibit 27

DURATION OF UNEMPLOYMENT BENEFITS VS. LONG-TERM UNEMPLOYMENT



* Replacement ratio is approximately 59% first year and thereafter gradually declining to approximately 25% of an average production worker salary

** 4 is used when benefits run indefinitely

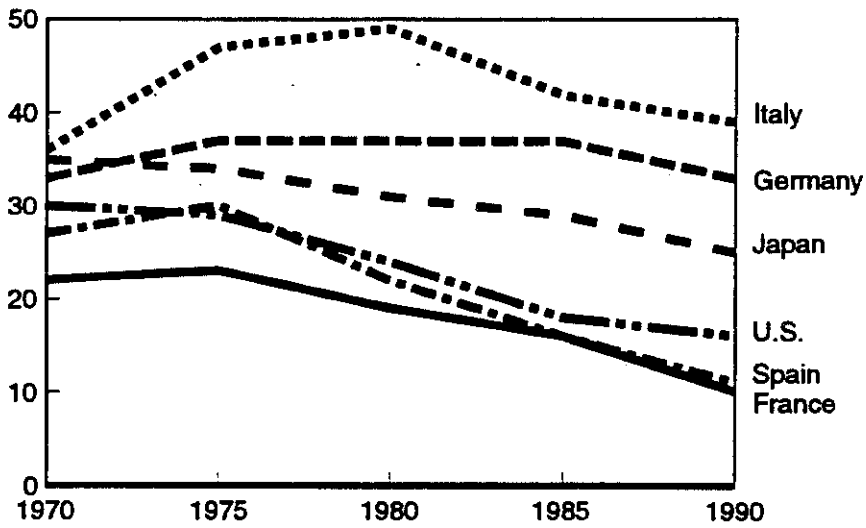
Note: Size of circle indicates size of replacement ratio

Source: National statistics; McKinsey analysis

Exhibit 28

UNIONIZATION RATES 1970-90

Percent of all civilian employees (private and public sector)

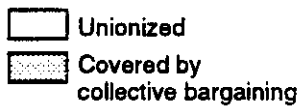


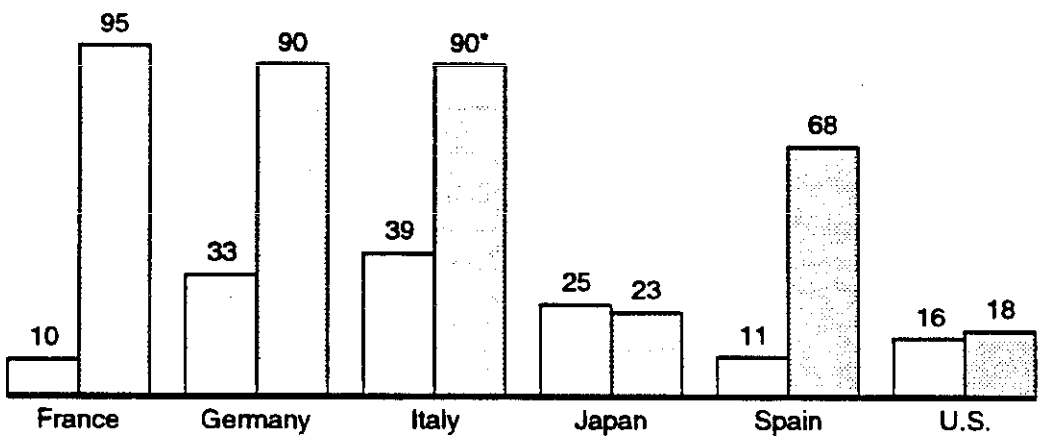
Source: OECD Employment Outlook 1991 and 1994

Exhibit 29

UNIONIZATION AND COLLECTIVE BARGAINING 1990

Percent of all civilian employees (private and public sector)





* Estimate

Source: European Industrial Relations Review; OECD Employment Outlook; McKinsey analysis

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problems than other European countries. Average unemployment in West Germany in the 1980s was well below the U.S. level.

A number of studies also point out that in several countries, benefits have actually become less generous in recent years. A counter argument to this, however, is that the impact of UI has become greater over time (despite reductions in generosity) for two reasons. The responsiveness of behavior has increased over time as collecting benefits has become more acceptable socially, and the economies of Europe no longer provide the stable employment that they used to provide.

Based on this conflicting evidence, it is clear that the literature on unemployment insurance has not reached a firm conclusion as to its role in the rise of European unemployment. The possibilities have been narrowed somewhat. There is a variety of evidence suggesting that there is at least some impact of UI on behavior. By accepting a wider income distribution, the U.S. creates opportunities for jobs at the lower end of the wage/skill scale. On the other side, it is unlikely that UI benefits can explain a major share of the differences in employment performance.

2. Wage bargaining institutions. Another explanation of rising European unemployment is that centralized bargaining systems and national minimum wages lead to upward wage pressure, capital/labor substitution and uncompetitive wages in traded sectors. We judge that this factor certainly had an influence on employment but, again, did not find any evidence as to its relative importance. The recent experience of countries with highly centralized or decentralized wage bargaining institutions (e.g., Sweden, Switzerland) indicates that this institutional difference cannot account for the majority of unemployment increases in the last recession. Lindbeck,[5] for example, attributes much of Sweden's past success to recurrent devaluations and increases in public sector employment, not to its unique bargaining systems.

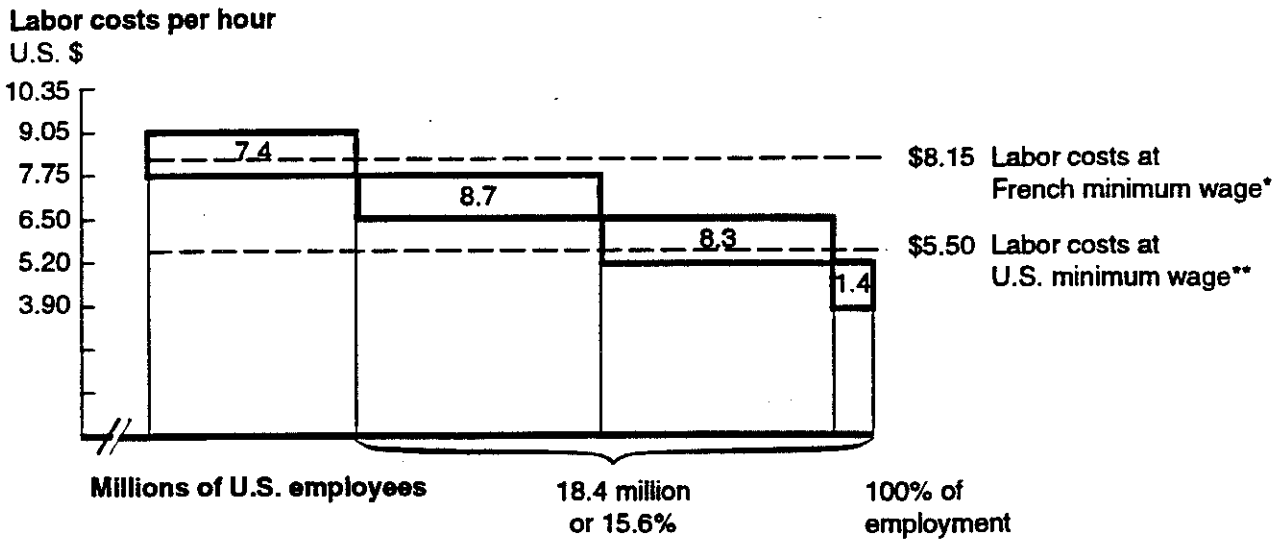
Unionization rates (one indicator of the role of wage bargaining institutions) are fairly low in Europe and have been falling over time (Exhibit 28). National policies, however, have meant that most workers are covered by wages which are collectively bargained (Exhibit 29). The percentages of employees covered by collective bargaining agreements are much higher in Europe than in the U.S. or Japan.

Why have these wage-setting institutions in Europe contributed to high unemployment in the late 1970s and 1980s, but not earlier? The argument is that they led to increasing capital/labor substitution in domestic industries and to unsustainably high wages in internationally traded industries. The former argument is consistent with aggregate data on labor productivity, showing more rapid increases in Europe compared to the U.S., for example. The trade-related

5 "Options for Economic and Political Reform in Sweden," A. Lindbeck et al. (1993).

Exhibit 30

IMPACT OF MINIMUM WAGE ON EMPLOYMENT 1992



* Converted at GDP PPP, including nonwage labor costs for social security, health care, vacations, holidays, etc. (approx. 72%)

** Including nonwage labor costs (approx. 30%), subminimum wages allowed in some instances (teenagers, etc.)

Source: Statistical abstract; BLS; Dossiers Statistiques du Travail et de l' Emploi; McKinsey analysis

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Exhibit 31

REGULATION OF EMPLOYMENT AGENCIES 1992

\+ Permitted

\- Not permitted

Country	Legality of employment agencies				Requirements for notification of vacancies to public employment services
	General	Temporary	Executive	Nonprofit	
France	-	+	+	+	All vacancies for external candidates
Germany	-*	+	+	+	No requirements
Italy	-	-	-	-	Generally required
Japan	+	+	+	+	No requirements
Spain	-	-	-	-	All vacancies
U.S.	+	+	+	+	No requirements**

* Permitted for entertainers

** Except for firms with significant government contracts

Source: OECD; Walwei (1993)

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impact can be illustrated by the example of the impact of unions on U.S. automotive wages. High wages led to dramatic restructurings once U.S. firms faced competition from Japan.

Collective bargaining is not the only reason for increasing wages. High and increasing national minimum wages are often seen to have a similar impact. Combined with high nonwage labor costs, this results in significantly higher labor costs for young or low skilled people. By setting high minimum wages, certain jobs become "unviable." High minimum wages and high benefit levels thus affect employment in a similar way. A comparison of the U.S. and France shows that a large number of U.S. jobs lie below the French minimum wage level (Exhibit 30).

3. **Lack of information and inflexibility.** The workings of the labor market itself may create an additional barrier to employment growth. If the labor market is not able to match workers and jobs effectively, then vacancies can coexist with relatively high levels of unemployment. If the job matching process has become less efficient, or if the demands made on it have become more severe, then this could account for rising unemployment. Based on the available evidence and on our interviews with employers in different sectors, we conclude that differences in inflexibility are surprisingly small and have only minor effects on employers' decisions.

Any difficulties in matching jobs and workers would stem from one of a variety of factors, including a lack of intermediating institutions, low mobility and regulations limiting flexibility.

- **Employment services.** Several European countries discourage or even ban private employment agencies that could improve the flow of information between workers and employers (Exhibit 31). In our interviews, however, we generally found that difficulties in obtaining labor market information were not a binding constraint to employment increases.

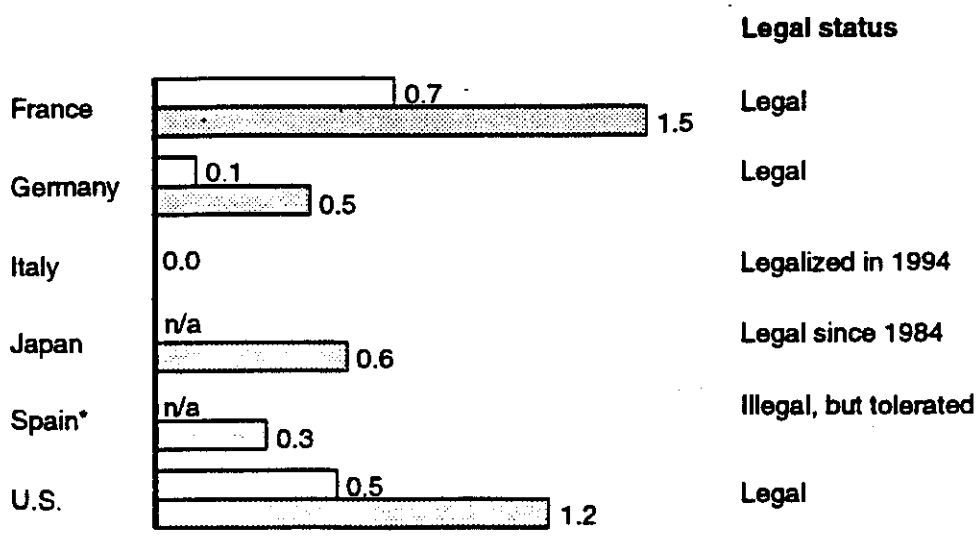
- **Temporary work.** A vacancy may exist for a job that will be available only for a short period of time. Such temporary positions have been used for clerical and secretarial positions for many years but are now increasingly being offered for technical and managerial positions. Europe may lack the institutions that can provide temporary workers, and in some cases there are restrictions on part-time work. Again, we found in interviews that this is not a binding constraint. The use of temporary help agencies in France, for example, is actually higher than in the U.S. (Exhibit 32).

- **Mobility.** Mobility is higher in the U.S. than in Europe and the dispersion of regional unemployment rates is higher in France and

Exhibit 32

TEMPORARY HELP AGENCIES 1983 AND 1991

Percent of total employment

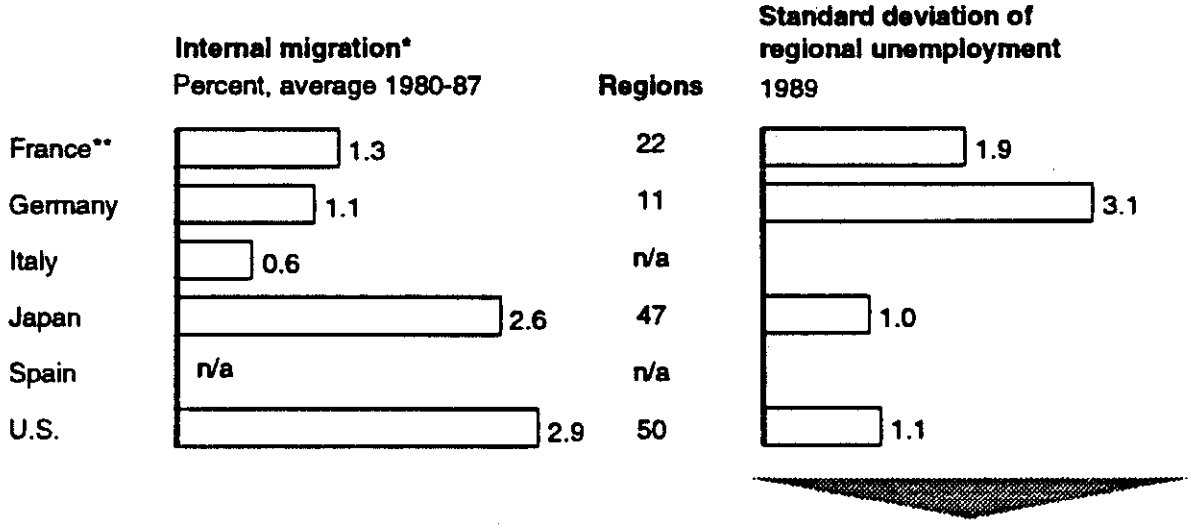


* Estimate by Gessta (Industry Association)

Source: Industry associations; BLS; McKinsey analysis

Exhibit 33

INTERREGIONAL MOBILITY AND REGIONAL UNEMPLOYMENT



Mobility of workers was found to be the key factor in adjusting to regional employment shocks; more important than job creation or relocation of firms***

* Persons who changed region of residence in % of total population

** Average 1984-87

*** Blanchard, Katz 1992

Source: OECD Employment Outlook; McKinsey analysis

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Germany than in the U.S. (Exhibit 33). There is also empirical evidence[6] that migration within the U.S. is an important element in responding to changes in local employment prospects.

- **Job protection regulations.** Many national laws or union agreements protect employees from dismissal by requiring companies to provide severance pay. The required payments are highest in Spain and Italy (Exhibit 34). There is clear evidence that these flexibility restrictions faced by employers in Europe result in a greater perceived inflexibility. On the assumption that the UK labor market is similar to the U.S. market, European labor markets seem to be more rigid. However, while many employers complained about inflexibility in interviews, the evidence showed that when companies were forced to react to dramatic changes in the marketplace, they were able to overcome these barriers. We, therefore, judge that the impact of job protection regulations has not played a major role.

Employers clearly have the perception that inflexibilities in European labor markets hinder job creation. But once again, the real importance of this in practice is not clear. To test this hypothesis, we compared the costs of finding, hiring, training and firing an employee to total labor cost, using the example of a German high-end retailer. This simplified calculation (Exhibit 35) shows that for a going concern, the transaction costs of hiring and firing, play a relatively minor role compared to total labor costs.[7]

4. Skill mismatch. A disproportionate share of the unemployed have relatively low levels of skill and experience. In the U.S., technical changes in the workplace have a significant impact on wages and employment prospects for people with low skills. Educational systems adapt slowly to the changing requirements of employers. In Europe, graduates of apprenticeship systems find themselves with skills that are not needed in today's economy.

In the U.S. in 1990, the unemployment rate for persons ages 25 to 64 was 4.4 percent. For those with less than a high school education, the unemployment rate was 8.5 percent. There are also large differences in unemployment rates by age; of persons ages 16 to 19, 15.5 percent were unemployed. The unemployment problems of the young and unskilled have been cited as a reason for the modest upward trend in unemployment that took place in the U.S. Much of the increase in the 1970s was explained at the time by demographic shifts, notably the increase in the number of teenagers associated with the baby boom. The demographic shifts in the 1980s, however, have become more favorable for lowering unemployment. In Europe too, low skill workers tend to be

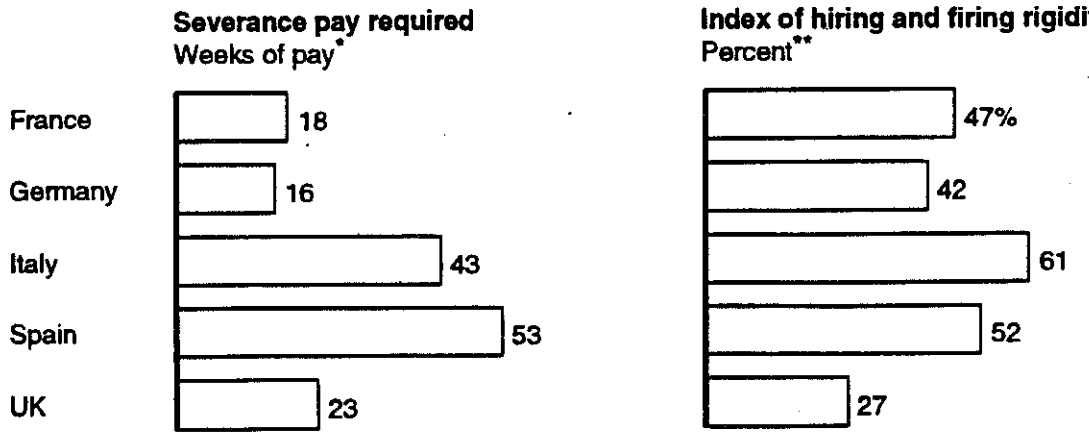
6 "Regional Evolutions," O. Blanchard and L. Katz (1992).

7 Our findings match with the results derived from economic theory by Samuel Bentolila and Guiseppe Bertola , "Firing costs and Labour Demand: How bad is Eurosclerosis," *Review of Economic Studies*, July 1990.

Exhibit 34

BARRIERS TO FIRING 1989

BASED ON A SURVEY OF EMPLOYERS



* Average severance pay required for prime age worker (25-49); does not include supplemental payments made to avoid unfair dismissal claims

** Percent claiming rigidity was a "very important barrier" to employment expansion; plus half of those claiming it was "important"

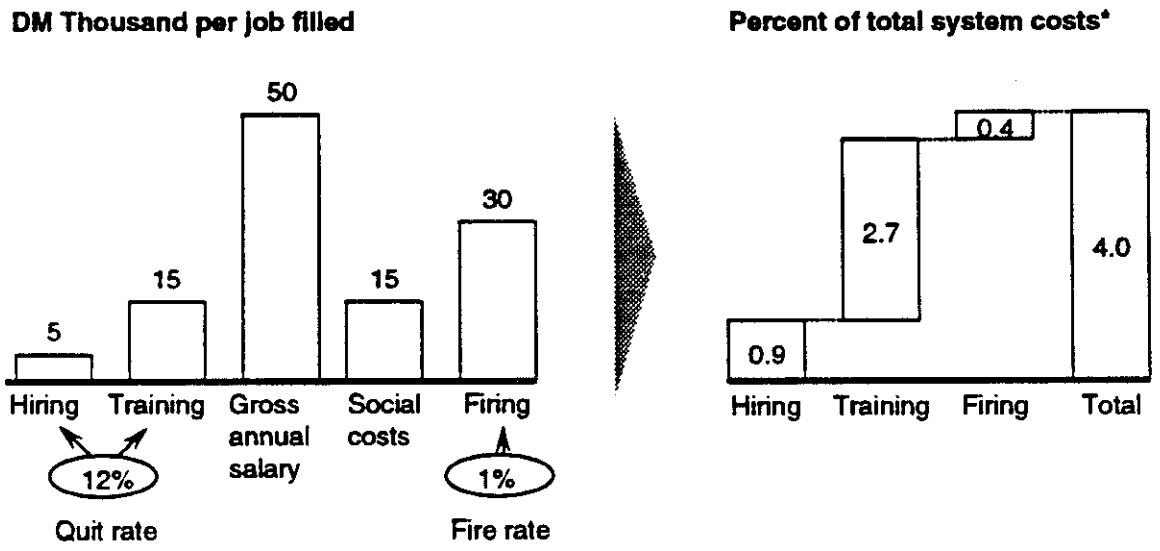
Source: Eurostat, Employment in Europe 1993

Exhibit 35

EMPLOYER HIRING, TRAINING AND FIRING COSTS IN GERMANY 1993

EXAMPLE

Nonsupervisory salespersons – high-end apparel retail



* Wages, nonwage labor costs, costs for hiring, training and firing

Source: Interviews; McKinsey analysis

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overrepresented among the unemployed, but the differences are less pronounced. In Germany, for example, persons with only an intermediate level of education and no apprenticeship qualification made up 36.6 percent of the workforce, but 46.8 percent of the unemployed in 1990. In Italy, nearly 75 percent of the unemployed are first time job seekers, many of them under 25 years of age.

The hypothesis about rising unemployment in Europe is that there is a mismatch between a workforce that has been trained for skilled or semiskilled jobs in traditional manufacturing industries and the current needs of employers in services or high technology. In Germany, 43 percent of the unemployed have an apprenticeship qualification (compared to 57 percent of all employees). The apprenticeship programs that provided jobs in Germany in the 1950s and 1960s are now having more trouble finding places for their graduates.

In both the U.S. and Europe, a phenomenon called "skill-biased technical change" is responsible for the mismatch. Productivity-improving technical change is said to be skill-biased if it reduces the number of low skill production worker hours needed per unit of output relative to the number of high skill and white collar hours. Skill-biased technical change can be represented in the economic framework we introduced in Exhibit 25. It results in a changing slope of the employment line AB, with higher productivity for employees at the top of the skill spectrum and less employees required at the lower end.

The impact of technical change has been visible in manufacturing as well as in services such as banking and fast food. Many of the workers who are laid off as a result of this type of technical change were earning relatively high wages in their previous jobs. They find alternative employment only at lower wages. Such workers may remain unemployed for long periods because they are not willing to work at the jobs that are available to them, hoping that their old jobs will come back. In this respect, it is likely that the skill mismatch is linked to unemployment benefits in Europe. In Germany, for example, pensions are tied to earnings in the final years of employment, discouraging acceptance of lower paying jobs by older workers. One possible explanation of rising unemployment in Europe, therefore, is that the displacement of production workers by technical change has created a pool of long-term unemployed workers unable to find employment comparable to their prior employment and unwilling to accept the low wage jobs that are available. This is a problem in the U.S. also, but such workers have less income support available and may be more willing to relocate or retrain.

We have discussed four important groups of labor market factors potentially affecting employment. In summary, we find a wealth of information and studies on the effects of labor markets on employment. However, the available evidence is often inconclusive or contradictory and does not allow us to draw any firm conclusions on the relative importance of individual causal factors. If anything,

we conclude that the importance of labor market factors is likely to be smaller than the current public debate suggests.

Product market barriers

The links between restrictions in the product market and employment have often been neglected in the existing aggregate literature. Since job creation and unemployment are the obvious problem areas, attention has focused on the labor market instead. In their volume on unemployment, however, Layard, Nickell and Jackman note the potential importance of the product market and point to the lack of evidence on its role. The demand for workers in the economy is derived from the ability of companies to produce and sell their output. Restrictions that inhibit new plants, new products or new services from being developed or from growing, will have important effects on the demand for labor and hence on the rate of job creation. For example, environmental regulations make it difficult for manufacturing companies to build new greenfield plants, despite the supposed wish of policymakers to expand manufacturing employment. Flexible economies allow a country to respond to "shocks," reallocate displaced workers to new jobs, and achieve high productivity and employment levels.

Layard, Nickell and Jackman develop a model to explain persistent and rising unemployment in Europe. Variables reflecting the alternative systems of collective bargaining or the levels of UI available are found to be important in explaining unemployment differences. These variables are important, they argue, because they affect the way economies adjust their wages and prices in response to "exogenous shocks," such as oil price increases. This leads the authors to conclude that increased competitive intensity in the product market might make for greater wage and price flexibility and allow economies to respond more easily to shocks. The result would be less unemployment. They put this point as follows. "Our theory suggests that a high degree of competition in product markets is an important factor in explaining why an economy responds well to exogenous shocks." They then go on to say: "However, we have been unable to provide any evidence on this issue, one way or the other."[8] Clearly, there is a need for more evidence to be assembled to assess the importance of the product market in explaining the pace of job creation.

Product market barriers are specific to particular industries. Thus, we have looked for this evidence in much detail in our case studies. These cases will confirm the suspicion that product market barriers play an important role in determining employment levels.

8 *Unemployment*; R. Layard, S. Nickell, R. Jackman; 1991; pp. 448-449.

Capital market barriers

We have seen that innovation and productivity improvements are important reasons for the evolution of economies. If capital markets are inefficient, this could reduce the amount of innovation or productivity growth. We found little evidence in the aggregate literature that links the structure of capital markets directly to a country's employment performance.

There is widespread evidence that the pressure from shareholders is higher in the U.S. than in European economies. If there is less pressure from shareholders to improve performance, then this may discourage the search for profitable new lines of business. There is also evidence that venture capital is easier to obtain in the U.S., although the globalization of capital markets is bringing greater equality of access (see the McKinsey study "The Global Capital Market: Supply, Demand, Pricing and Allocation," November, 1994). Again, if there is not a fully developed venture capital market, then new companies may be unable to get funding for new business or expansions.

There are suggestions in the aggregate literature that differences in capital markets have resulted in differences in innovativeness, particularly as we have defined innovation here ("the adoption of commercially successful new products or services"). However, we have not found substantial empirical evidence to support the idea that capital market barriers have been a significant barrier to new business creation.

Linkages between product, labor and capital markets

Prices, wages and interest rates are the mechanisms by which the product, labor and capital market equilibrate. These three variables, however, are not entirely independent from each other. The fact that, for example, prices and wages are closely linked in an economy represents an additional barrier to adjusting to structural change; this is a barrier that cuts across the three markets. Many economists judge that these linkages are one of the fundamental factors in explaining differences in employment performance.

Some economists use a concept called the "non-accelerating inflation rate of unemployment" or NAIRU. This is the level of unemployment that can be reached through aggregate demand policies before inflation starts to accelerate.[9] Using this concept, the problems of slow employment growth and rising unemployment in Europe are symptoms of a gradually increasing NAIRU. It seems that increasingly larger volumes of unemployment are required to act as a brake on inflationary wage increases. During a recovery, wage increases are

[9] There is a related concept called the natural rate of unemployment. It is defined on a somewhat different basis, but has similar implications, namely that macroeconomic policies will reach a limit in their efforts to reduce unemployment.

passed on to consumers in the form of price increases. This can trigger a price-wage spiral that leads to a sustained inflationary momentum. For fear of accelerating inflation, European monetary policymakers adopt restrictive macroeconomic policies. Wage-push inflationary pressure thus results in a constant battle to maintain price stability. In order to restrain inflation, monetary policy must continuously add to the pool of unemployed and so cause the unemployment rate to ratchet up over time.

While every country experienced a strong rise in oil and other commodity prices during the 1970s, some countries were able to go back to more moderate unemployment and inflation rates by the mid-1980s once oil prices dropped. The U.S. achieved this by deregulation and increased international competition. For example, there has been rapid growth in U.S. airline employment. Despite strong unions, airline worker wages have been flat or have even decreased in many companies. Fierce competition among airlines and the entry of new airlines has forced cost cutting and exerted downward pressure on wages. The automotive industry provides another example. In 1982, the UAW made significant wage concessions to GM, but it enjoyed profit sharing when times were good.

In Europe, lower competitive intensity in the product market makes it easier to pass higher wage demands on to the consumer through higher prices. Many large companies operate in relatively protected markets despite significant levels of regional trade. Strong unions react to higher prices by taking the rate of inflation as "the starting point" for bargaining. Nominal wages are thus explicitly linked to inflation. The *Scala Mobile* in Italy automatically adjusts wages to match cost-of-living increases, and many wages in France are bargained in relation to the minimum wage, which is inflation adjusted. European workers face little competition from the unemployed or from nonunion workforces in other firms. Because they are able to exclude the "outsiders" from employment in their industry, "insiders" are not forced to accept slower wage increases. The belief that high wages cause unemployment is also less accepted among union leaders. Thus, wage moderation is rarely embraced as a method of saving union jobs. Even in Europe, however, we found examples where high competitive intensity influenced wage outcomes. In Europe, as in the U.S., unions will make concessions when the survival of their employer is threatened.

The NAIRU is a controversial concept, and it was not the objective of this project to analyze the effectiveness of macroeconomic policies. Overall, we have found the literature based on the NAIRU and the inflation constraint to be helpful, especially in understanding the unemployment effects of the upward surges of inflation in the mid 1970s and early 1980s. But it provides a less convincing explanation for the continued high level of unemployment in Europe during the 1980s and early 1990s once oil and other commodity prices fell. One of the limitations of this literature is that much of it is written as if there were only one good produced in the economy and only one type of worker. It does not address the question of the evolution of the economy over time and the potential for

noninflationary job creation in completely new lines of business away from the established wage bargaining units. If the insider-outsider view of the rising NAIRU is correct, it has an interesting implication. It means that there are millions of unemployed workers in Europe that could be employed in jobs in new firms or industries without adding inflationary pressure to the economy because as "outsiders" they were not providing a restraint on inflation while unemployed.

DIFFERENTIAL EMPLOYMENT PERFORMANCE: AGGREGATE CONCLUSIONS AND THE NEED FOR CASE STUDIES

We have observed that there have been very different employment performances across the countries in our study, and we have used aggregate data to identify potential explanations for why some of these countries have experienced slow job growth and rising unemployment. Differential employment performance could be the result of either differences in the strength of the barriers to reallocation, or differences in the pace or nature of the economic evolution taking place in these countries.

Much of the aggregate literature is concerned with the time series dimension of the jobs issue; notably, why unemployment has been so high in Europe in recent years. Our review of this aggregate evidence does not provide a basis for saying that the barriers to labor market transitions have become more rigid. On the contrary, the barriers have probably become less severe. There are some indications that unemployment insurance is an important reason for long-term unemployment. Barriers in the product market that prevent the opening of new establishments may be just as important or more important, but, as yet, there is insufficient evidence at the aggregate level on the product market side to make a judgment.

Most importantly, however, the existing evidence is not at all conclusive in telling us which barriers have been the most important. Understanding the relative importance of different factors is critical for policymakers who are trying to reduce unemployment. The aggregate literature has presented valuable information, but in our judgment it has not resolved the issue of why employment growth has been much faster in some countries than in others, or why the patterns of employment gain and loss have been as they were.

Accordingly, we have chosen in this project to pursue a case study approach in trying to answer the open questions. We hoped that case studies would reveal a better answer, providing "natural experiments" and cross-country comparisons that would allow us to isolate individual causal factors and estimate their impact on employment in a more narrow area.

The case studies were selected in order to provide examples of the evolution described and to allow a deeper understanding of some of the factors identified in this aggregate section (innovation, trade, productivity gains, etc.). In addition, we applied practical criteria for including an industry in our case study analysis (importance of the sector, significant differences in employment performance, data availability, McKinsey knowledge of fundamental industry trends and economics). We also restricted ourselves to market industries since the determinants of employment in the public sector or in health care are different from those in the market part of the economy.

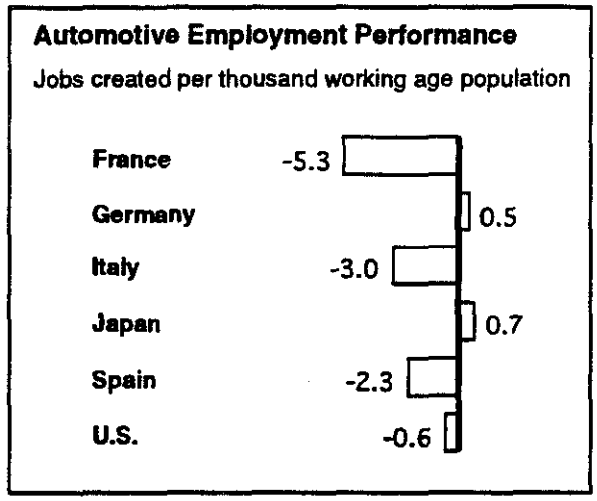
We wanted to cover manufacturing because there are substantial differences in employment in this sector, with Japan increasing employment and France, Italy and Spain suffering sharp declines. We chose the automotive sector in order to illustrate the impact of international trade on employment performance. The computer industry was chosen with the objective of showing how employment is determined in an innovative, high-tech industry. Finally, we chose furniture in order to include a smaller, traditional, low-tech and largely nontraded manufacturing sector characterized by a large number of small firms. Both the automotive and computer industries were already included in the previous productivity study by the McKinsey Global Institute and were extended to include aspects related to employment. All the sectors are characterized by significant differences in job creation across countries, allowing us to clearly differentiate the "benchmark country" in terms of employment performance.

Our analysis of the evolution of economies led us to the view that the potential for increased job creation lies in service sector jobs. We chose three cases in services, and we added some analysis of computer software as part of the computer case. General merchandise retailing is one of the largest service sectors and is characterized by significant employment differences. It also represents trends in many low wage sectors of the economy. We judged that the evolution of retailing formats would help explain differences in employment performance. Like retailing, banking was part of our service sector productivity study but we added securities to our employment study. There are large employment performance differences, with the U.S. and Germany increasing employment and France experiencing a strong decline. In contrast to retailing, we hoped that banking would provide insight into job creation in a high wage sector. Film/TV/video is a small but diverse industry, which we included in part because it is seen by many as a high-tech area that may generate many new jobs in the future.

Finally, construction was studied since it is a very large sector, highly labor intensive, and with significant employment differences across countries.

These seven case studies exhibit large employment performance differences by country. In each case, we analyzed whether the barriers that were identified in this aggregate section had indeed led to a lower overall employment performance. We also studied the economics of the industry in order to gain an understanding of the relative importance of each barrier.

AUTOMOTIVE INDUSTRY CASE SUMMARY



Intense competition in the 1980s increased cost pressure triggering restructuring in automotive industries worldwide. Employment fared best in Japan where demand growth in the local market was combined with cost-driven improvements in trade performance.

Employment performance in the automotive industry varied widely in the 1980s. Japan, Germany and the U.S. were all able to keep a fairly stable number of jobs, while France, Italy and Spain suffered heavy losses in employment. These differences reflected the varying ability of each country's industry to match annual productivity increases with at least equal growth in output. High output growth resulted from increased domestic consumption or improved trade performance – both of which were related to the cost position and innovativeness of the firms in the industry.

Local consumption and trade both had a significant impact on job creation. Output differences between the best and worst performing countries were large. The difference between countries stemming from consumption was 64 percent while the same gap for trade was 61 percent. Each translated into an extra 4 percent a year in employment growth for the better performing country.

Wage levels relative to productivity were the critical determinant of trade performance. Countries with high productivity and low wage levels, like Japan at the beginning of the 1980s, were best positioned in the global market. Japanese companies were able to exploit their superior cost position to rapidly build market share, mostly at the expense of U.S. manufacturers. Germany was able to postpone productivity increases because of a high initial productivity level, but it has recently suffered large employment losses.

Concerns about inevitable market saturation in mature industries like automotive are valid, but often overstated. Although real consumption of autos increased more than 2 percent a year in all countries analyzed, sustaining consumption increases will become more difficult in the future. High levels of penetration in traditional markets will constrain increases in the number of cars sold. Significant innovation must therefore continue to occur in order to increase value added per car. Emerging markets hold potential for traditional manufacturers, but may not stimulate many jobs in developed countries since import restrictions and low cost labor are increasingly forcing foreign direct investment by traditional manufacturers.

Exhibit 1

INDUSTRY CODES USED TO DEFINE AUTOMOTIVE INDUSTRY

	France	Germany	Italy	Japan	Spain	U.S.
Manufacturing and assembly of motor vehicles and motor vehicle engines	NACE 351	NACE 351	NACE 351	JSIC 3111	Car Assembler Association (ANFAC)	SIC 3711
Manufacturing of bodies for motor vehicles and of motor drawn trailers and caravans	NACE 352	NACE 352	NACE 352	JSIC 3112		SIC 3713 3715 3716
Manufacturing of parts and accessories for motor vehicles	NACE 353	NACE 353	NACE 353	JSIC 3113	Parts Manufacturer Association (SernAuto)	SIC 3714
• Carburetors, pistons, piston rings and valves						3592
• Electrical equipment for internal combustion equipment						3694

Source: National statistics

Employment in the automotive industry

This case covers the entire automotive industry including parts production and the assembly process for passenger cars and commercial vehicles. There were several reasons to choose this industry as one of our case studies:

- The automotive industry is a high profile and historically important employer in all the countries examined, covering significant shares of GDP, exports, and manufacturing sector employment.
- The automotive industry shows trends in employment over the 1980s that are similar to the manufacturing sector as a whole, and thus did shed light on broader employment trends, particularly in Europe where France and Italy have distinctly different patterns from Germany.
- The high levels of trade and increasing amount of global competition in the auto industry make it a likely candidate to illustrate the role that wage levels can play in determining a country's employment.
- McKinsey's work with clients in this industry, and the productivity work that was done by the McKinsey Global Institute, provide a significant knowledge base for further analyses.

As in all our case studies in this project, we want to learn why employment developed in the way it did, what the implications are for changing employment performance towards best practice, and what the outlook is for the industry investigated.

THE AUTOMOTIVE INDUSTRY

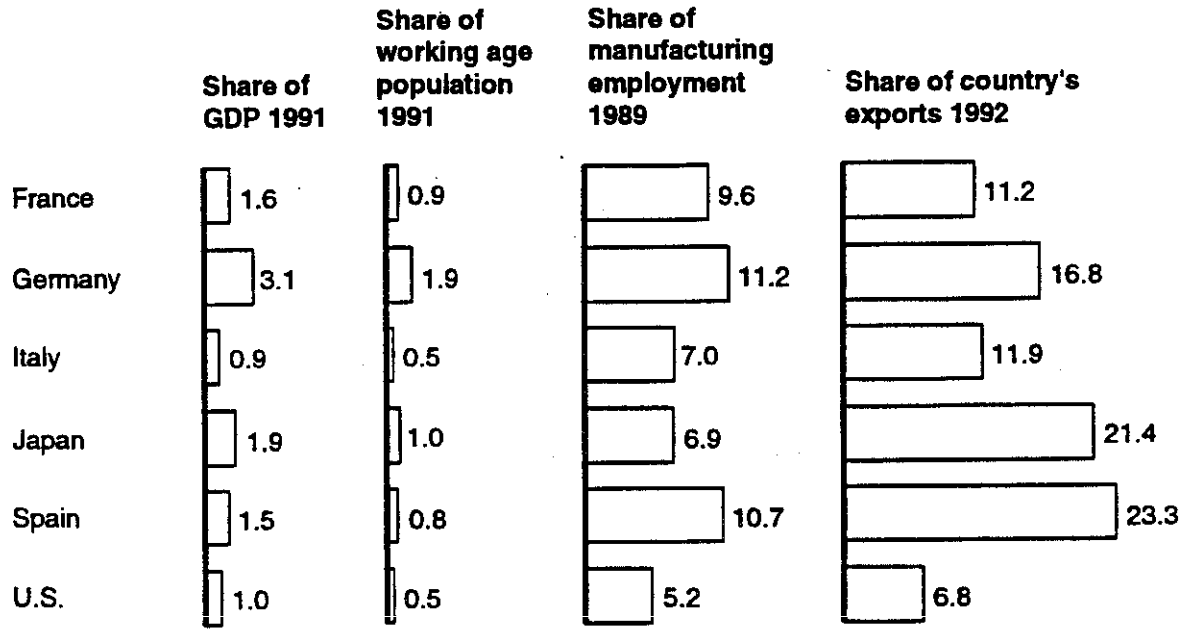
We have defined the automotive industry to include car and truck OEMs, captive parts makers, and independent parts companies (Exhibit 1). Each nation's "industry" represents automotive operations in the country including both domestically headquartered companies and transplants. This broad approach has the advantage of comparing as large a manufacturing sector as possible. It is also a pragmatic solution, as the countries define subsectors differently, and thus have comparable data only at an aggregate level.

The primary data sources for Japan and the U.S. are the national surveys of manufacturers. For France, Germany and Italy most of the data is based on EUROSTAT's compilation of local surveys of manufacturers. The numbers for German production and employment cover West Germany only. Consumption and trade data are for Germany as a whole. Parts and assembly associations

Exhibit 2

ECONOMIC SIGNIFICANCE OF AUTOMOTIVE MANUFACTURING

Percent

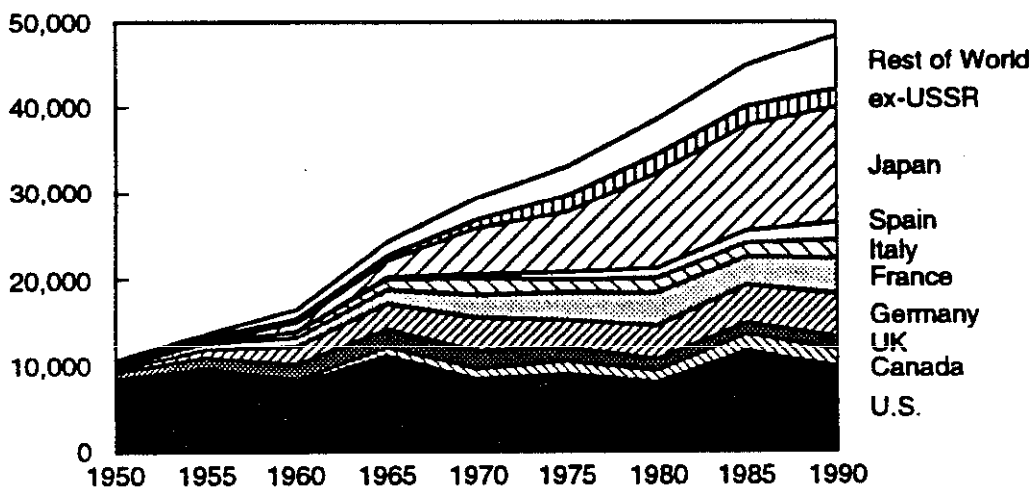


Source: Statisitcal yearbooks; McKinsey analysis

Exhibit 3

WORLD MOTOR VEHICLE MARKET SHARE BY COUNTRY OF PRODUCTION 1950-90

Thousands of vehicles



Source: World Motor Vehicle Data

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were the primary sources of employment figures in Spain, as there were major doubts about the reliability of the household and manufacturing surveys.

Significant industry in each country examined

Automotive manufacturing, as defined in this case, directly accounts for 1 to 3 percent of GDP, and employs between 1 and 2 percent of the working age population in all countries examined. It also provides 7 to 23 percent of each country's total exports (Exhibit 2). The economic significance of the automotive industry would be even greater if the entire value chain were included (i.e., steel and dealers).

The German automotive industry has the highest share of GDP (3.1 percent) of working age population (1.9 percent), and of manufacturing employment (11.2 percent). It is also a major exporter, though the German auto industry's share of total country exports lags that of the Spanish and Japanese automotive industries.

The automotive industry plays a smaller role in Italy and the U.S. In these countries it employs only 0.5 percent of the working age population. U.S. auto exports represent less than 7 percent of all U.S. sales abroad. France, Japan and Spain are all between the German and U.S. positions.

Continued growth in output and trade

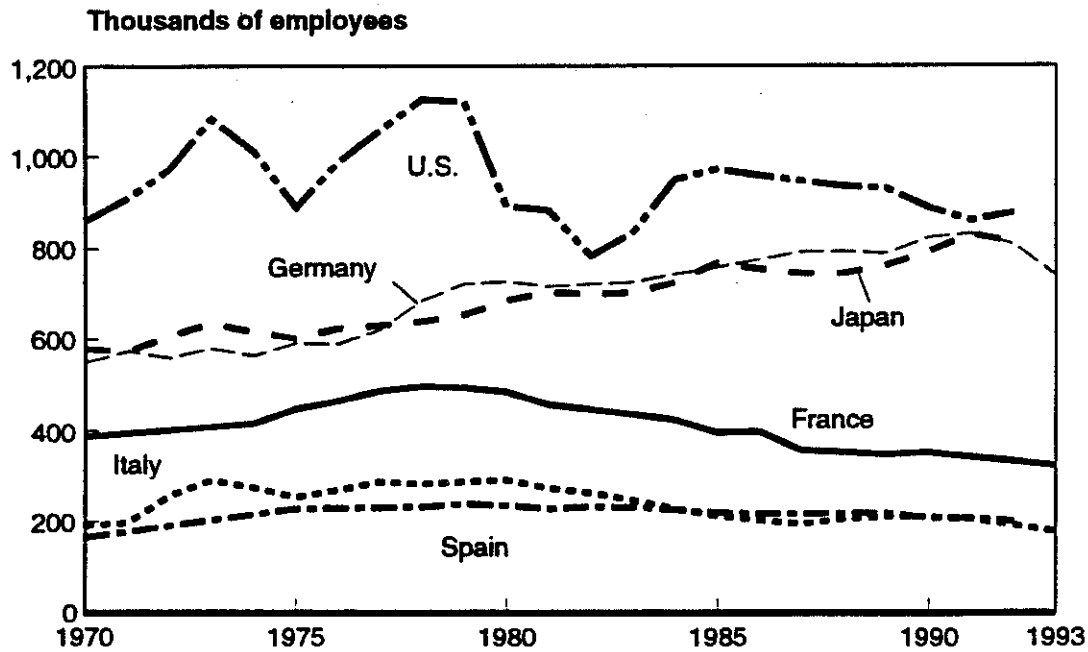
The automotive industry experienced continuous worldwide growth in output during the second half of the twentieth century. Production grew from roughly 10 million motor vehicles in 1950 to more than 49 million units in 1989. The early 1990s saw a slight decrease in total output, but there are forecasts of more than 5 percent annual growth in the number of passenger cars over the next few years. On top of this growth in the number of motor vehicles, there has also been a significant increase in the value per vehicle as new features such as safety equipment and emissions control were added to cars, and as consumers shifted from less to more expensive car categories.

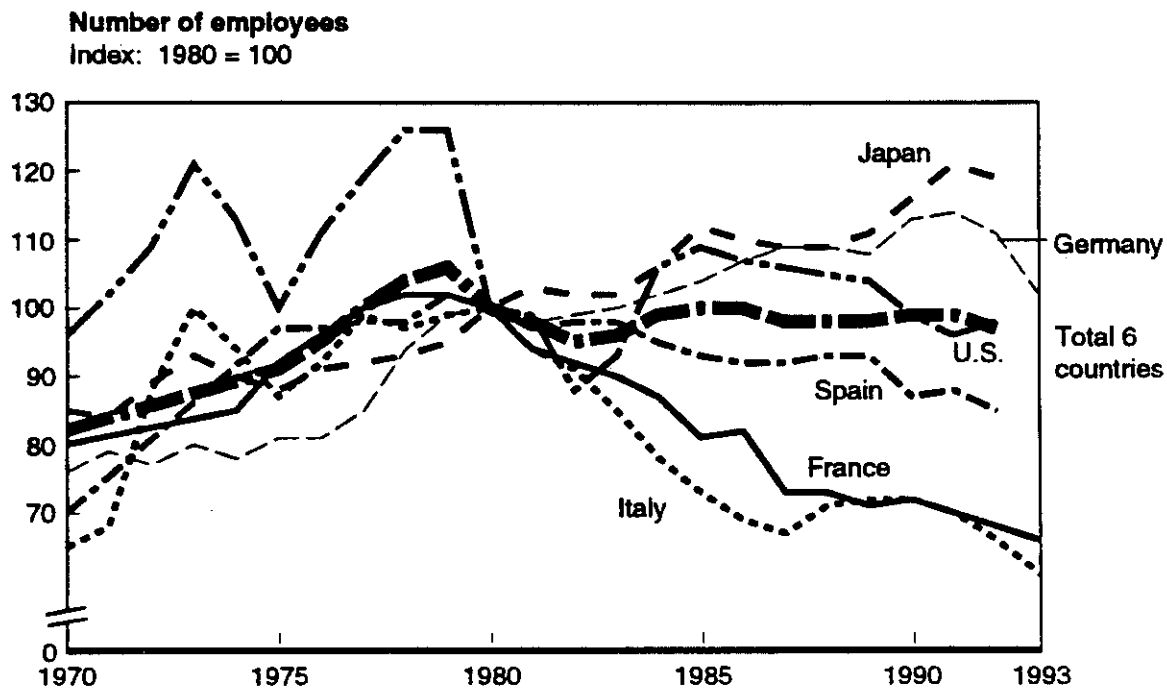
The U.S. was by far the dominant car market and vehicle producer at the beginning of the 1950s. U.S. factories held a world market share of more than 80 percent (Exhibit 3). This share dropped to approximately 50 percent by the end of the 1950s as European countries started to catch up. Japan's rapid ascent began with domestic growth in the 1960s, and its exports took off during the 1970s. By 1991, world market shares in terms of number of motor vehicles produced was much more balanced. North America produced 25 percent of all cars, Europe 38 percent, and Asia 34 percent.

The industry also became much more global during the second half of the century. Approximately 10 percent of vehicles produced in 1950 were shipped

Exhibit 4

EVOLUTION OF AUTOMOTIVE INDUSTRY EMPLOYMENT*





* A country's automotive industry includes cars, parts, and transplants

Source: Das Auto international in Zahlen; BLS Employment Hours and Earnings; Census of Manufactures Japan; Eurostat; McKinsey analysis

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across national borders, while the comparable figure for 1990 was over 35 percent.

EMPLOYMENT PERFORMANCE

The worldwide automotive industry experienced universal growth in employment until the late 1970s. The six countries investigated had a combined 25 percent increase in workers for the period from 1970 to 1979. This common upward trend did not continue during the period from 1980 to 1992. The combined employment of our six countries was flat over the 1980s (Exhibit 4). Furthermore, this trend was achieved by a clear set of employment winners and losers. Japan and Germany continued to grow, while the U.S. stagnated, and France, Italy and Spain declined.

This differential performance is easily illustrated using the change in jobs per thousand working age population adjusted for working age population growth.[1] Japan and Germany fared relatively well with 0.7 and 0.5 jobs added per thousand working age population. The U.S. figure was slightly negative (-0.6), while Spain, Italy and France's losses in employment were substantially heavier (-2.3, -3.0 and -5.3) (Exhibit 5).

A further disaggregation of this basic measure into growth of employment and level of employment shows a slightly different picture for some countries. Italy had the fastest decrease in automotive employment at -3.4 percent per year followed by France at -3.2 percent. However, France had a much worse performance than Italy using our basic measure because its initial level of employment was higher. France's automotive industry employed 1.4 percent of the national work force while Italy's represented only 0.8 percent. Therefore, similar percentage losses in the two countries' automotive employment would have a much more negative impact on the French economy.

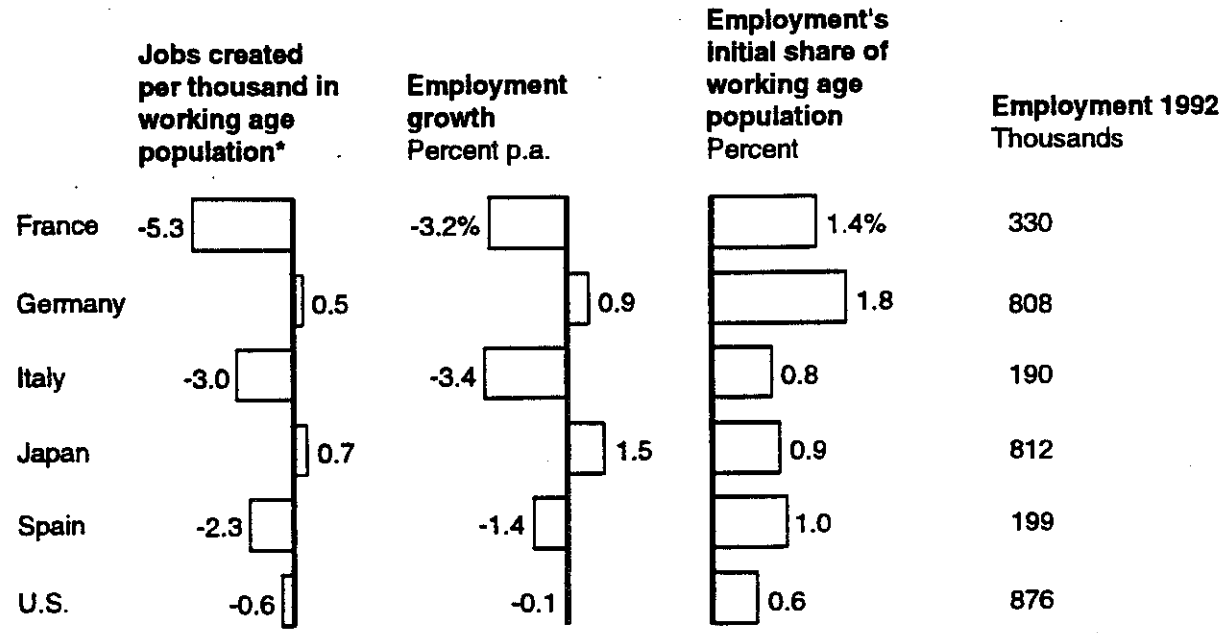
A similar observation can be made in a comparison of Germany and Japan. The high share of automotive employment in Germany helped to achieve an employment performance of our primary measure that was similar to Japan, despite annual growth rates in employment that were significant lower (0.9 percent in Germany and 1.5 percent in Japan). Thus, Japan serves as our benchmark country in this case primarily because of its particularly rapid growth rate in employment. Furthermore, Japan seems to have a much more sustainable employment position than the German automotive industry since it created jobs while increasing its worldwide productivity lead.

The employment pattern changes slightly if growth is measured in terms of total hours worked rather than number of employees (Exhibit 6). All the countries

[1] For the definition of the employment performance measure see page 2 in the Objectives and Approach chapter.

Exhibit 5

AUTOMOTIVE INDUSTRY EMPLOYMENT PERFORMANCE 1980-92



* Adjusted for change in working age population

Source: Establishment surveys; industry associations; statistical yearbooks; McKinsey analysis

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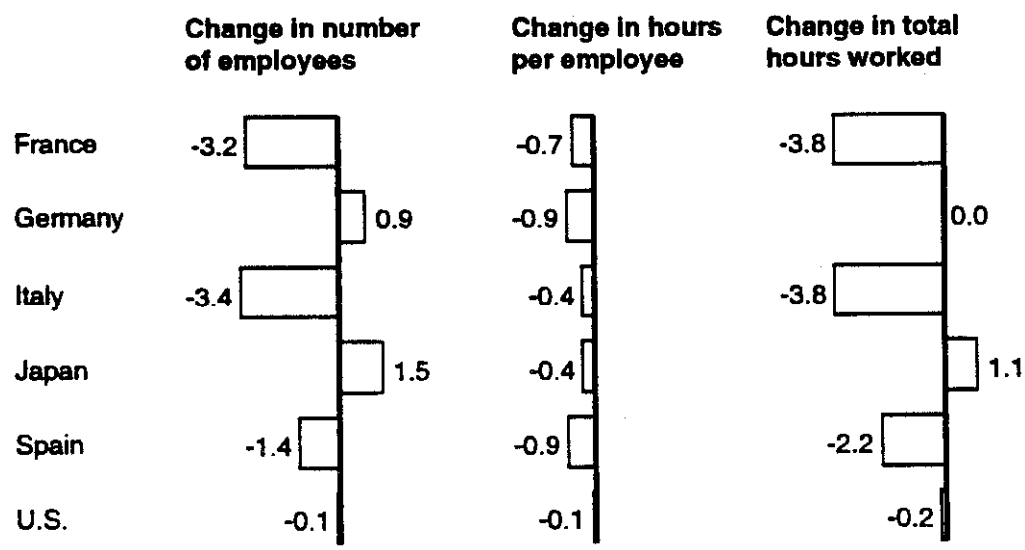
Exhibit 6

CHANGE IN TOTAL HOURS WORKED 1980-92

Percent p.a.

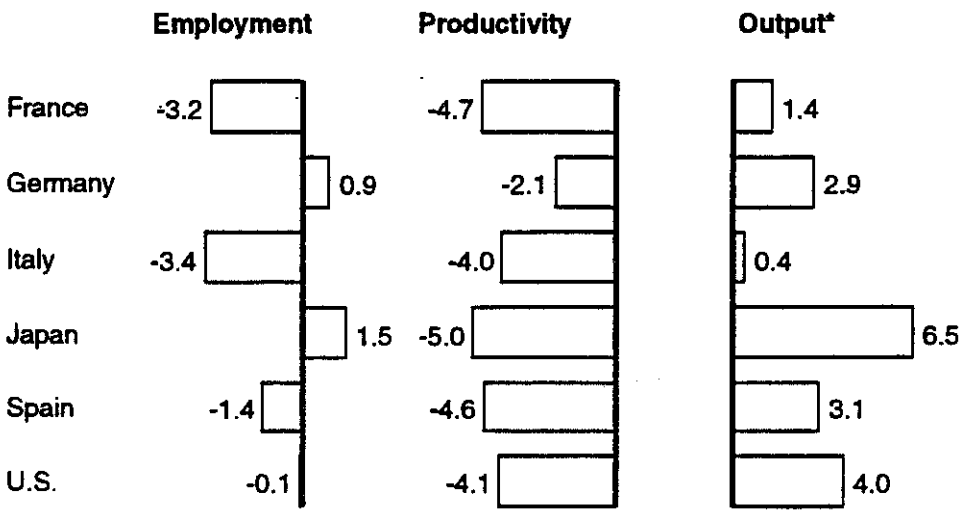


Source: Das Auto international in Zahlen; statistical yearbooks; AAMA Facts & Figures; McKinsey analysis

Exhibit 7

CHANGE IN EMPLOYMENT AND INFLUENCING FACTORS 1980-92

Percent p.a.



* Output measured in value added

Source: Establishment surveys; industry associations; McKinsey analysis

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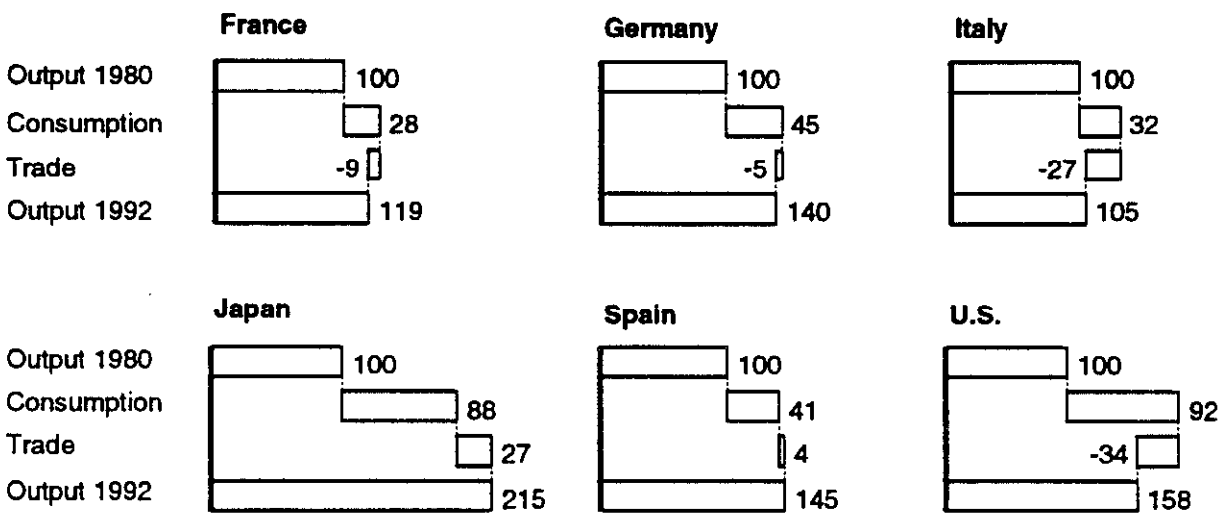
Exhibit 8

IMPACT OF CONSUMPTION AND TRADE ON OUTPUT* 1980-92

ESTIMATE

Index: Output 1980 = 100



* Calculated as change in value added of consumption divided by 1980 production value added, and change in net trade divided by 1980 production value added, assuming that the value added to value ratio in consumption and trade is the same as in production

Source: Das Auto international in Zahlen; McKinsey analysis

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reduced hours worked per employee over the period from 1980 to 1992, though this was most dramatic in Spain, Germany and France. The overall ordering of the countries is unchanged after adjusting for these work sharing programs, however; so it is not misleading to focus primarily on the number of jobs in subsequent analysis.

CAUSES FOR EMPLOYMENT DIFFERENCES

Employment in an industry is a function of its total output in value added divided by its productivity measured as value added per employee. Globalization and the transfer of best practice kept annual productivity increases in the automotive industry above 4 percent in all countries except Germany. Thus, each country's industry needed to match this with at least equal growth in value added in order to maintain employment.

Japan was able to increase its automotive employment despite the highest growth rate in productivity because of a 6.5 percent annual growth rate in output. This was more than twice the rate achieved in all other countries except the U.S. (Exhibit 7). At the same time, the Italian and French automotive industries suffered severe employment losses because they could only muster output growth of 0.4 and 1.4 percent per year. Germany's output growth of 2.9 percent was not particularly rapid, but it was sufficient to exceed its relatively slow productivity growth.

High levels of output growth can result from domestic consumption or trade performance. Both are related to the cost position and innovativeness of the firms in the industry as well as a number of other factors. Exhibit 8 shows that differences in consumption growth rate and trade performance were equally important in explaining cross-country differences in employment performance. The difference between the best and worst performer in consumption was 64 percentage points while the same gap in trade was 61 points. These translate into employment differences of 4.2 percent and 4.0 percent per year.

In the next three sections we will: describe the reasons for differences in consumption; explore the causes of trade performance over the 1980s; and finally review the pressures leading all manufacturers to increase productivity.

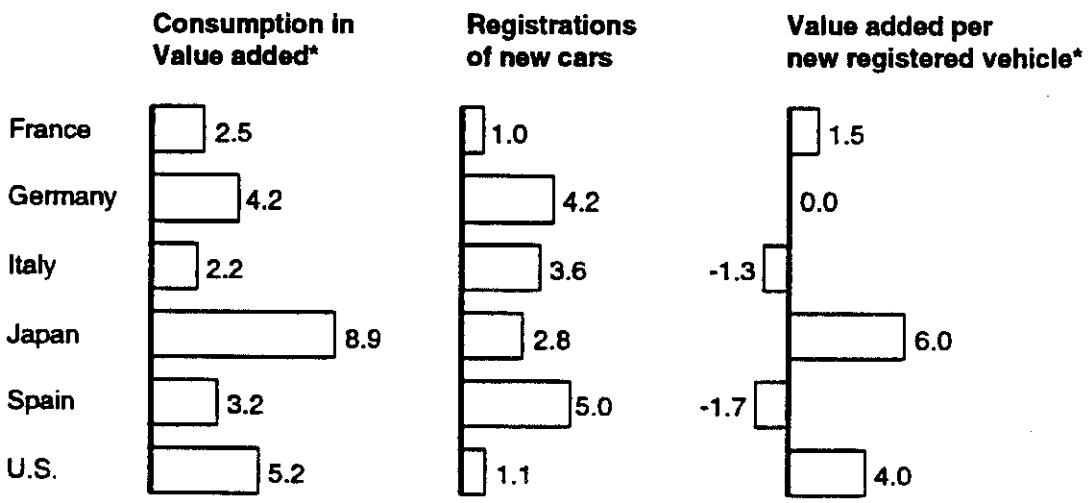
Consumption increases vary widely

Concerns about inevitable market saturation in mature industries like automotive are valid, but often overstated. Real consumption of autos increased more than 2 percent a year in all countries analyzed (Exhibit 9). Furthermore, the increase was most pronounced in some of the more developed markets. Japan expanded most rapidly, but Germany and the U.S. also had substantial growth. Spain, France and Italy also had positive growth. One of the primary reasons

Exhibit 9

CHANGE IN VEHICLE CONSUMPTION 1980-92

Percent p.a.

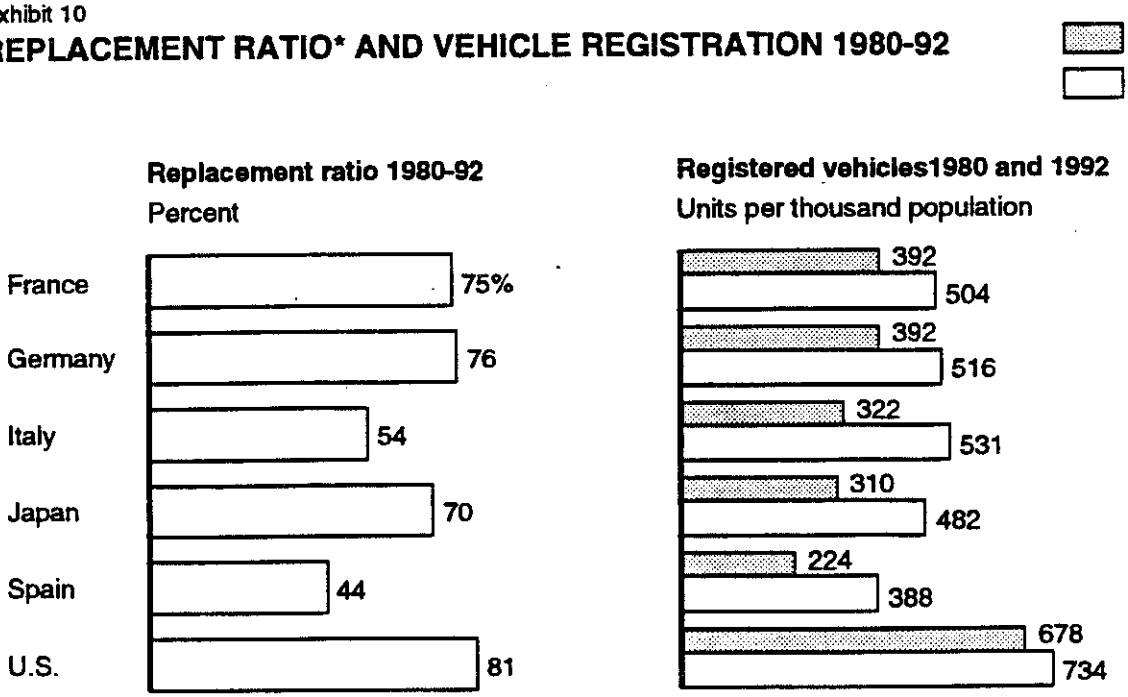


* Deflator based on for the U.S. PPI and automotive PPPs for the other countries

Source: Establishment surveys; trade statistics; Das Auto international in Zahlen; McKinsey analysis

Exhibit 10

REPLACEMENT RATIO* AND VEHICLE REGISTRATION 1980-92



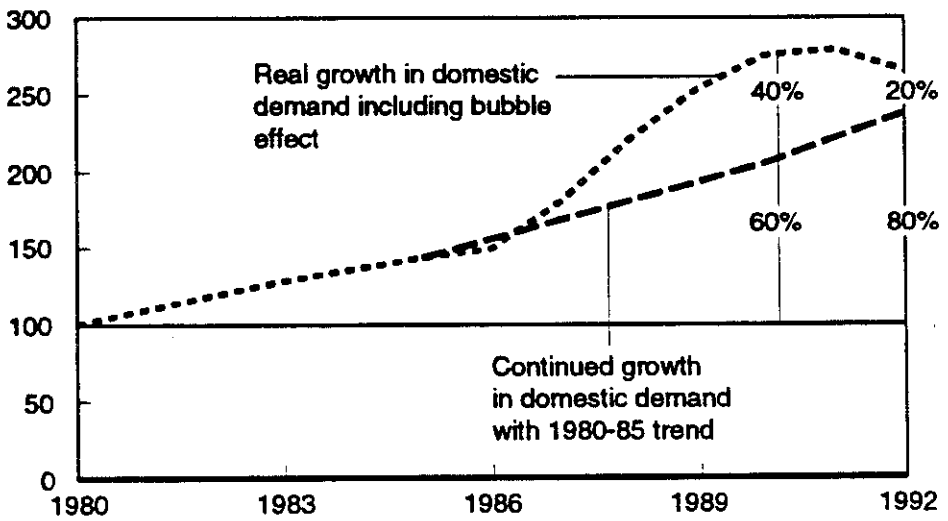
* Replacement ratio defined as vehicles retired plus exports of used vehicles divided by new registrations

Source: Das Auto international in Zahlen; McKinsey analysis

Exhibit 11

DOMESTIC DEMAND GROWTH* FOR MOTOR VEHICLES IN JAPAN 1980-92

Index: 1980 = 100



* Domestic demand calculated with production value added of motor vehicles minus export value added; assuming that export value to value-added ratio is the same as for the domestic production; deflated with PPI

Source: Japan statistical yearbooks; Das Auto international in Zahlen; McKinsey analysis

consumption did not level off is that value per vehicle increased rapidly in the countries with low new car registration rates.

- Japan had the fastest overall growth in consumption, but it achieved this with only a 2.8 percent annual increase in the number of new registrations. The number of vehicles per person increased rapidly in Japan during the 1980s, but it had been doing this since the 1970s; so there was little need to change annual production to fuel growth. By the 1980 to 1992 period, 70 percent of the cars registered were used to replace existing vehicles (Exhibit 10). The factor that was more important to Japan's employment increase during the 1980s was a 6 percent annual growth in the value added per car (Exhibit 9). Small, lightly equipped vehicles were replaced by more luxurious models as GDP per capita rose. Comparing Japan's consumption growth in the first and second half of the 1980 to 1992 period suggests that roughly 20 percent of the fast increase came from the bubble economy in the late 1980s. Using the same 1980 to 1990 period as in the aggregate analysis of the manufacturing sector, the effect of the bubble economy in the second half of the period is roughly 40 percent (Exhibit 11).

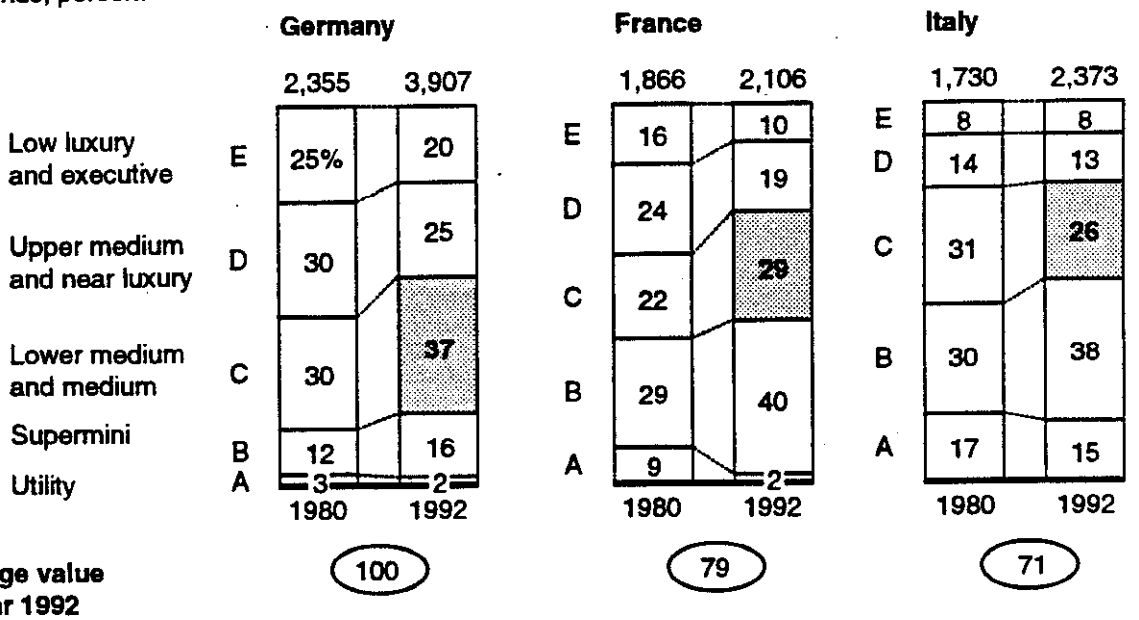
- U.S. consumption also increased rapidly during the 1980s despite some signs of a slowing down in the number of cars demanded. The number of vehicles consumed increased only 1 percent per year during our period. This performance illustrates that growth can continue even in a country with very high penetration rates, as long as sufficient innovation takes place. The introduction of minivans and sports utility vehicles helped fuel growth in the number of vehicles demanded since these products provided sufficiently unique functionality to induce families to add second cars. The U.S. experience suggests, however, that innovation will have to drive consumption if it is to exceed productivity increases. In the U.S. this stimulus came from rapid diffusion of electronics, safety equipment, and emissions control products. The emerging segments, especially minivans and SUVs, also helped to increase value added per vehicle since they tend to be relatively high margin.

- German consumption also expanded significantly during the 1980s and early 1990s. What is surprising is that this was due entirely to a rapid expansion in the registration of new motor vehicles rather than to an increase in value added per car. German reunification played a major role as citizens in the former East Germany added vehicles at a rate indicative of an emerging, rather than a mature, market. They did so by buying used cars from West German owners who in turn bought new cars. German value per vehicle did not increase as it did in Japan or the U.S. partly because manufacturers were not as innovative in introducing new vehicles in the high margin sports utility vehicle or minivan segments.

Exhibit 12

CAR SALES BY SEGMENT* 1980 AND 1992

Thousands, percent



Average value per car 1992
Index: Germany = 100

* Segments used are DRI's standard categories

Source: DRI; World Automotive Forecast Reports; McKinsey analysis

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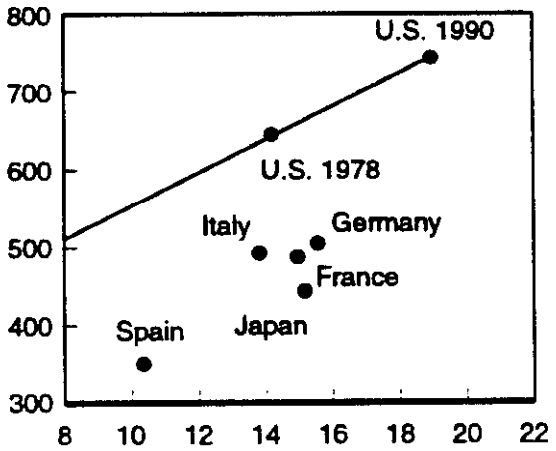
Exhibit 13

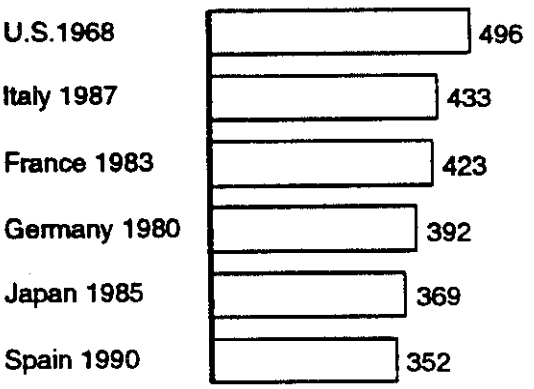
INFLUENCE OF DISPOSABLE INCOME AND FINAL EXPENDITURE LEVEL ON CAR PENETRATION

Number of cars per thousand population in 1990



Disposable income 1990 in U.S. $ thousands GDP PPPs

Number of cars per thousand population at final expenditure level of $9,000
1990 GDP PPP



Source: OECD national accounts; Das Auto international in Zahlen; McKinsey analysis

- Spain experienced the most rapid increase in registrations of new cars. This increase can be explained by the country's need to catch up to its European peers in terms of cars per person. Fifty-six percent of the new cars sold in Spain were to new buyers or families obtaining a second car (Exhibit 10). Thus, over half of the 5 percent annual increase in new car registrations went into expanding the size of the active Spanish vehicle fleet. Expansion at this rate appears sustainable in the near term since penetration is still 25 percent below levels in the rest of Europe. Unfortunately, this rapid increase in vehicle registration did not translate into large gains in value added because the market remained weighted toward small cars. The increase in number of vehicles and slow movement in value per vehicle both may be tied to Spain's low, but rapidly increasing GDP per capita. More and more customers could afford vehicles, but their first purchases tended to be inexpensive cars that drag the overall value per vehicle average down.

- Italy's experience was somewhat like Spain's, only more magnified. The increase in new registrations (3.6 percent) was the second highest of any country. This growth was partially offset by a decreasing value added per car (1.3 percent). The latter figure should not be surprising given the heavy taxation of larger vehicles. These policies, put in place to protect Fiat, may have actually stunted the growth of the Italian auto industry since they effectively reduced the size of the Italian market and made it less necessary for Fiat to develop the skills required to compete in other rapidly evolving markets. Exhibit 12 shows that the Italian market consumes vehicles with an average value 30 percent less than that in Germany and 10 percent less than in France.

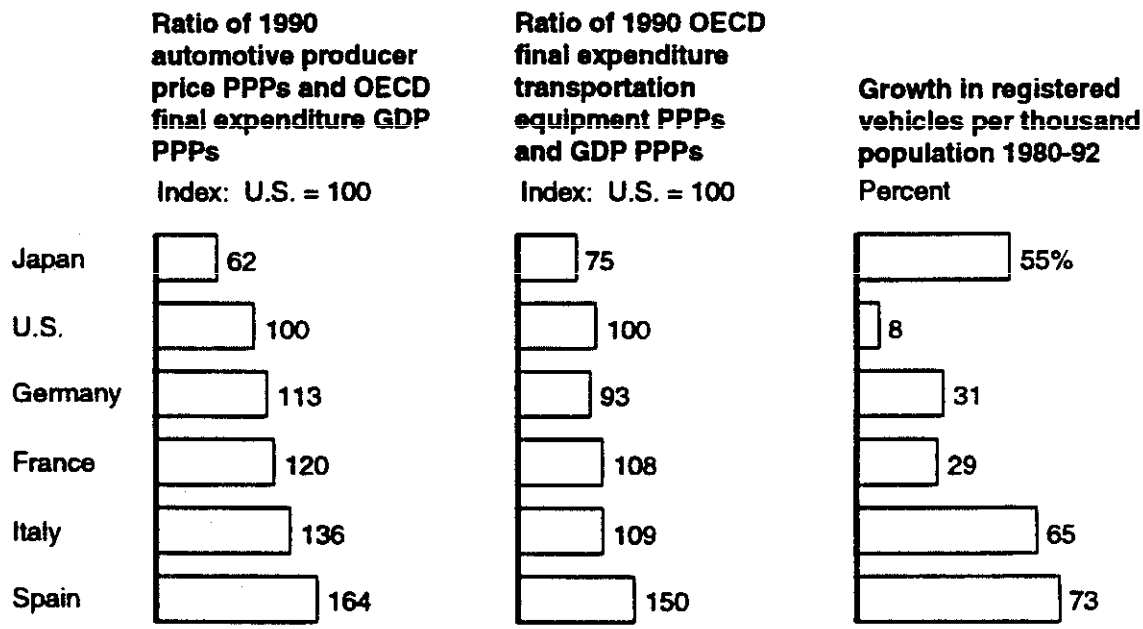
- In France, consumption grew slowly because the number of vehicles demanded did not expand much and the market showed few signs of shifting to significantly higher value vehicles.

Exhibit 13 suggests that most of Europe still has opportunities to increase the number of cars consumed. France, Germany, Italy and Japan had roughly the same level of disposable income in 1990 as the U.S. had in 1978; yet all had much lower vehicle penetration rates. Furthermore, the U.S. grew rapidly from 1978 to 1990 despite its high starting point position.

One possible explanation for this could be the relative price levels of cars (Exhibit 14). The data does not appear to fully support this theory, however; autos are relatively inexpensive in Japan, yet the number of vehicles registered per person is low and increasing slower than elsewhere. Italy provides a counter example. Cars are somewhat more expensive there than in France or Germany, yet vehicle penetration rates are higher. If anything, high prices may prevent consumers from purchasing higher value vehicles. It appears that other important factors such as lower ongoing costs of car ownership, availability of parking spaces, or the quality and quantity of public transportation influence the penetration of cars, while price affects the type of cars purchased.

Exhibit 14

AUTOMOTIVE PRICE INDICES AND GROWTH IN REGISTERED VEHICLES 1980-92



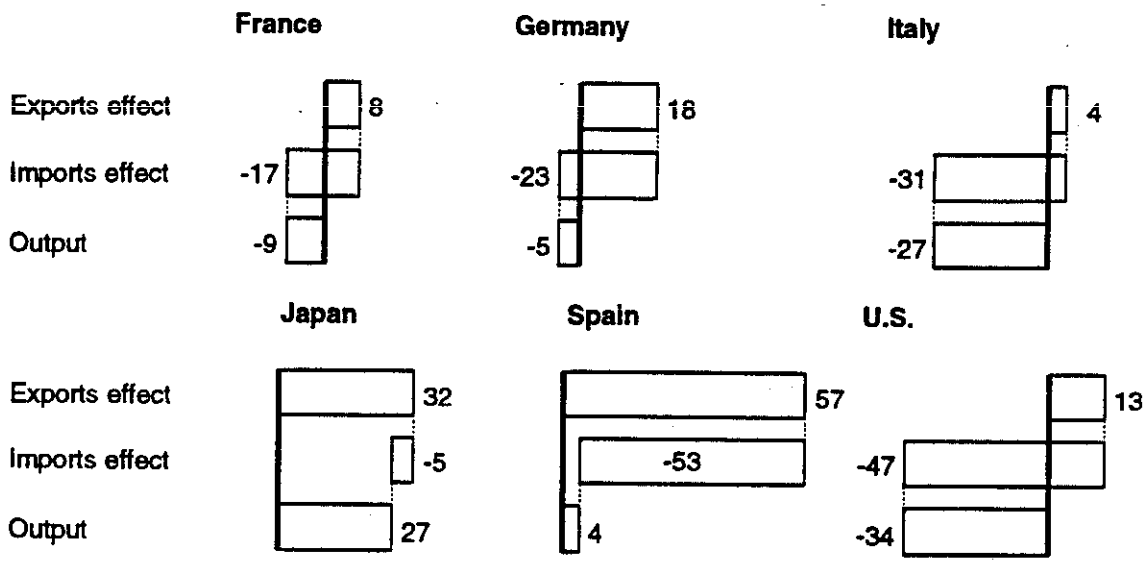
Source: OECD; McKinsey analysis

Exhibit 15

IMPACT OF EXPORTS AND IMPORTS ON OUTPUT* 1980-92

ESTIMATE

Percent



* Change in imports/exports divided by 1980 output, it is assumed that imports have the same value added to value ratio as the domestic production

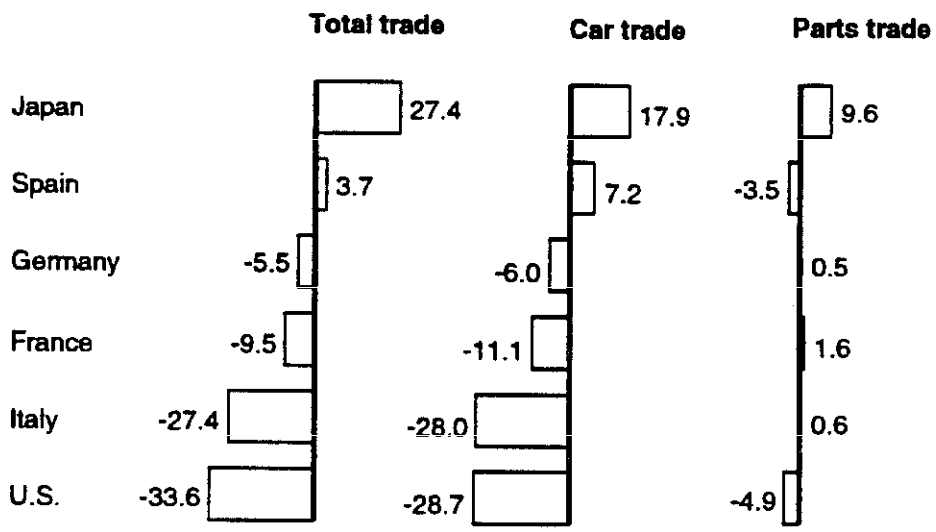
Source: Das Auto international in Zahlen; McKinsey analysis

Exhibit 16

TRADE EFFECT ON OUTPUT* 1980-92

ESTIMATE

Index: Output 1980 = 100



* It is assumed that imports have the same value added to value ratio as the domestic production

Source: Trade statistics; McKinsey analysis

DC 111894 ZXE441.3

Government efforts to directly increase consumption, such as the French government's FF 5,000 rebate to those buying new cars, or the similar program in Spain, will certainly have a positive short-term effect on output and employment. Over time, however, they may only result in accelerating purchases and, thus, smoothing employment rather than altering the basic long-term trend. Rigorous Japanese inspection laws may provide a better long-term stimulus for the industry, as they keep vehicle replacement rates high. The flaw in this system is that it would be very costly to consumers if there was not a well developed export market for used cars that helped keep vehicle terminal values high. Governments have also provided a stimulus to the industry through indirect steps that drive up value per vehicle by requiring additional safety and emissions control content. Interventions of the latter sort appear to have been largely successful in attaining safety and environmental goals, but their impact on employment is unclear. If the elasticity of demand is such that the extra cost involved in equipping cars with the mandated parts causes fewer units to be sold, it can have a neutral or even negative effect on employment.

Improving trade balance helped employment in Japan and Spain

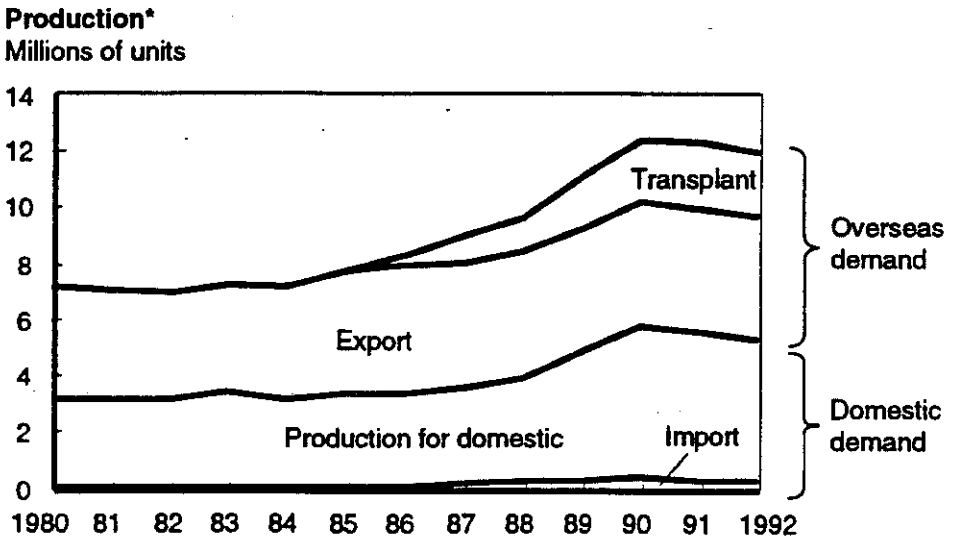
Changes in net trade had a negative effect on output and employment in all countries except Japan and Spain (Exhibit 15). This pattern stems from the rapid globalization of the industry and the relatively uncompetitive position of manufacturers in many of the countries that we examined. Real exports increased in all countries, but imports went up more rapidly in the four countries that suffered employment losses.

- Trade movements had a significant effect on output in the Japanese automotive industry, but were not as important as the growth of local consumption (Exhibit 8). Trade increased in both cars and parts during the 1980s despite an already sizable initial trade surplus (Exhibit 16). The increase in car trade came from an increased value added per car shipped rather than an increase in the number of cars exported (Exhibit 17). The increase in the export of parts, and the flat trend in the number of vehicles shipped, is not surprising since the establishment of transplant facilities in other countries reduced car exports but stimulated demand for parts.

  Japanese companies were able to achieve a sustained trade surplus because they had a large cost position advantage during the period. The Japanese industry was already the global leader in productivity in 1980, yet its wages at international exchange rates at that time were only slightly above those in Italy and Spain (Exhibit 18). This gap narrowed as the yen appreciated, but Japanese producers remained competitive due to their high productivity.

Exhibit 17

DOMESTIC AND OVERSEAS PRODUCTION OF JAPANESE CAR MANUFACTURERS



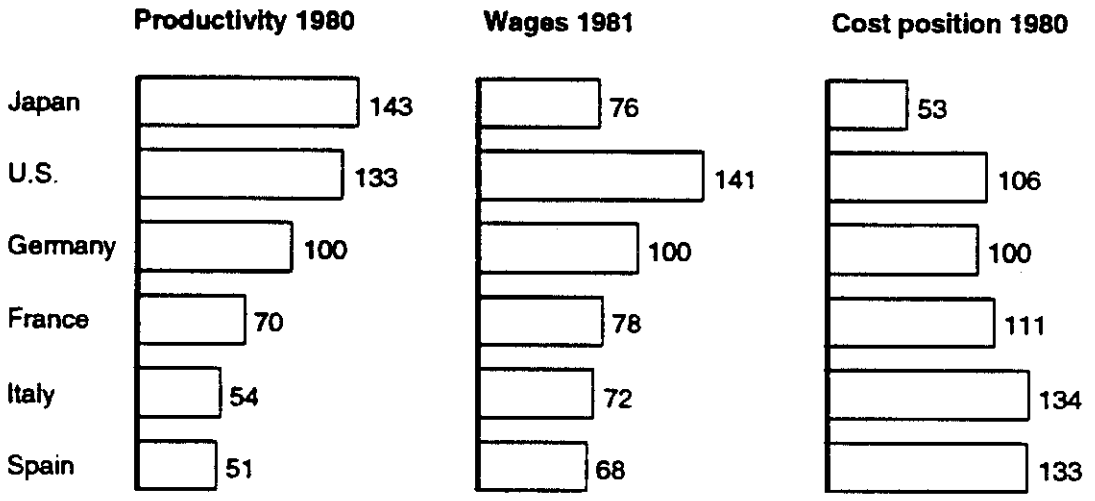
* Excludes bus and truck

Source: MOF; establishment survey; McKinsey analysis

Exhibit 18

RELATIVE PRODUCTIVITIES*, WAGES** AND COST POSITIONS*** 1980

Index: Germany = 100



* Productivity calculated as value added per employee converted with automotive specific 1980 PPPs

** Total cost per employee converted with foreign exchange rates 1981

*** Cost position is calculated as wages divided by productivity

Source: AAMA Facts & Figures; BLS; McKinsey analysis

DC 111894 ZXE441.3

- Spanish producers were dramatically affected by trade during our period. Prior to 1978 the Spanish market was essentially closed to cars produced in other countries. Exports were also very low as most Spanish manufacturers lacked the productivity necessary to compete in international markets. The situation changed radically once Spain attracted transplants from Ford and GM and reduced its import barriers. The combined change in imports and exports over the 1980s exceeded the country's entire 1980 production volume. The net effect of car trade on output was positive as the newly established transplants combined Spain's low wages with international best practice productivity to capture large shares of both the Spanish market and other European markets. Parts trade moved in the other direction as the new OEMs chose to buy from affiliated companies (e.g., transmissions for Ford from Bordeaux) or competitive suppliers abroad, rather than use uncompetitive local producers.

- Germany saw its long standing trade surplus fall during the 1980s. While exports still increased, imports began to rise significantly. Reunification helps explain this latter figure as East Germans were less nationalistic in their buying preferences than their West German counterparts. In 1992 more than half of the 780,000 new vehicles registered in the former East Germany were imports from France, Italy, Spain, Japan and Eastern European countries compared to less than a third in West Germany. Parts trade fared somewhat better in part because German companies were particularly effective in commercializing new equipment.

- France also saw its trade surplus fall over the 1980s. Imports went up relatively slowly, but so did exports. The net performance over the 1980s masks a more rapid decline in the early 1980s and subsequent recovery.

- Italy and the U.S. had the worst trade performance. Imports increased rapidly in both countries as local manufacturers were exposed to more cost competitive producers from Japan (in the case of the U.S.) and Germany (in the case of Italy).

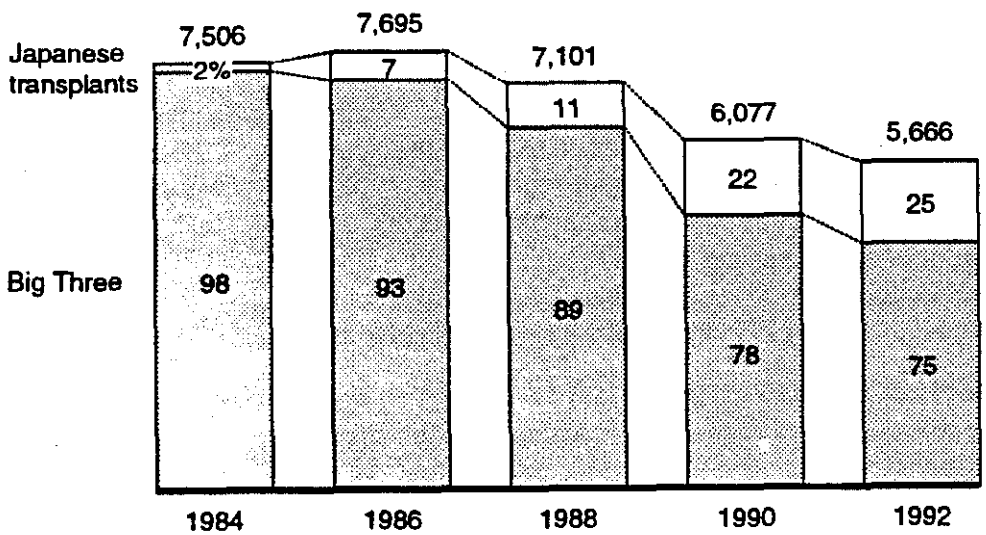
Two interesting observations can be made by looking at the trade patterns across countries. First, the countries with more explicit trade barriers, France, Italy and Spain, fared no better on average than those without such stringent regulations. Second, the unique advantages of Japan and Spain proved to be somewhat unsustainable over the long run. Japanese companies found they could replicate their productivity in transplants abroad and their wage advantage began to disappear as the yen appreciated. Spain also lost its favorable wage position as its real wages increased much more rapidly than those in France or in the UK.

During the 1980s global competition led to more than just imports from best practice companies and countries. Global manufacturers showed an increasing willingness to assemble vehicles in regions of the world outside their home

Exhibit 19

U.S. PRODUCTION OF MOTOR VEHICLES

Thousands



Source: Ward's Automotive Yearbook 1993; McKinsey analysis

market. Accordingly, Japanese automotive manufacturers opened transplants in North America and Europe, and manufacturers based in the U.S. increased their operations in Europe. These transplants often substituted for imports and thus brought additional employment and output with them. They also greatly increased the competition in many national markets and spurred rapid increases in productivity.

The decision to establish a transplant is a two-step process. First, a company must determine that it would like to move some production to another region of the world. Market access, hedging of exchange rate risks, and local production as a marketing tool tend to be the primary factors motivating such a move. Parts manufacturers often have fewer degrees of freedom. They are forced to move if they want to maintain volume, since customers abroad are more and more unwilling to accept the inflexibility and uncertainty of overseas supply. Labor market factors such as wage levels, worker flexibility or availability of specific qualifications play a minor role in this step of the decision making process for both OEM and parts manufacturers.

After the decision is made to move production to a specific region of the world, the second step involves a decision of where to locate the plant. In this step, labor market factors play a much more important role. The training of the local work force, their flexibility and degree of unionization, and their likely wage demands are important factors to be considered. Other important factors like an established supplier base, language, access to roads and seaports, or simply the subsidies the local government is willing to pay, also influence the decision.

Spain and the U.S. were the primary recipients of transplants during this period. By 1992, 25 percent of U.S. passenger car production (Exhibit 19) and 50 percent of Spanish production came from transplants. Both had large, rapidly growing markets, and Spain provided an entry into the entire EC. In the U.S., plants were located in southern states that offered low wages, low degrees of unionization and supportive local governments. In Europe, the decision was also about regions with lower wages, lower degrees of unionization, less fierce competition and, of course, local government subsidies. The only difference is that in Europe, the decision was between countries rather than states. Higher wage countries like Germany or countries with strong unions and inflexible labor markets like France, Germany and Italy were less able to attract the jobs.

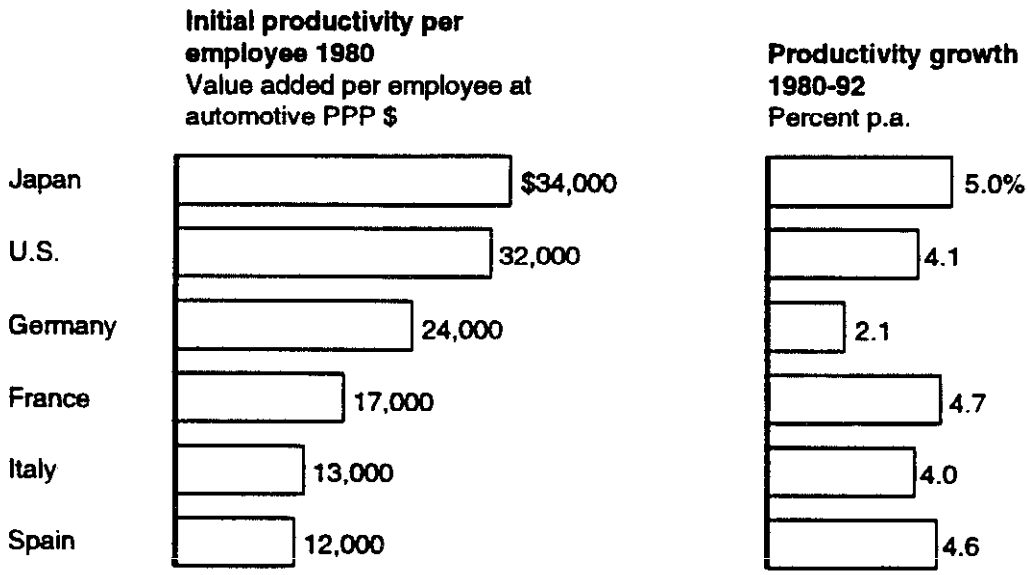
The gains of the transplant receiving countries were the losses of the manufacturers' home countries. Employment in Japan could have been much higher if the Japanese car manufacturers had not decided to move some of their production abroad (Exhibit 17).

Uniform pressure to increase productivity in all countries except Germany

The increase in productivity (value added divided by number of employees) and its effect on employment were similar for all countries except Germany

Exhibit 20

INITIAL PRODUCTIVITY LEVELS 1980 AND GROWTH OF PRODUCTIVITY 1980-92



Source: Establishment surveys; McKinsey analysis

(Exhibit 20). The Japanese automotive industry had the fastest increase in productivity with a rise of 5.0 percent per year. Its competitors in France and Spain increased productivity slightly less over the same 12-year period. Annual productivity increases were in the U.S. and Italy 4.1 and 4.0 percent, respectively. In Germany, productivity increased by only 2.1 percent per year. This helped Germany maintain a significantly higher level of employment than it could have had with productivity increases similar to that of other countries.

What caused the different development in Germany and the five other countries? We find that differential pressure for productivity improvements existed in the countries. Each country had its own peculiar set of influences that triggered restructuring, though the common theme was more competition and increasing cost pressure.

- **Fierce national competition in Japan.** The Japanese industry was more protected from trade than its competitors elsewhere. Despite this position, Japan had the fastest productivity growth of all the countries examined. The explanation for this behavior is fierce national competition. From our manufacturing productivity study we know that productivity levels in the Japanese car industry are quite varied. The clear leader is Toyota and all other manufacturers have had to increase their productivity rapidly in order to remain competitive at home and in export markets.

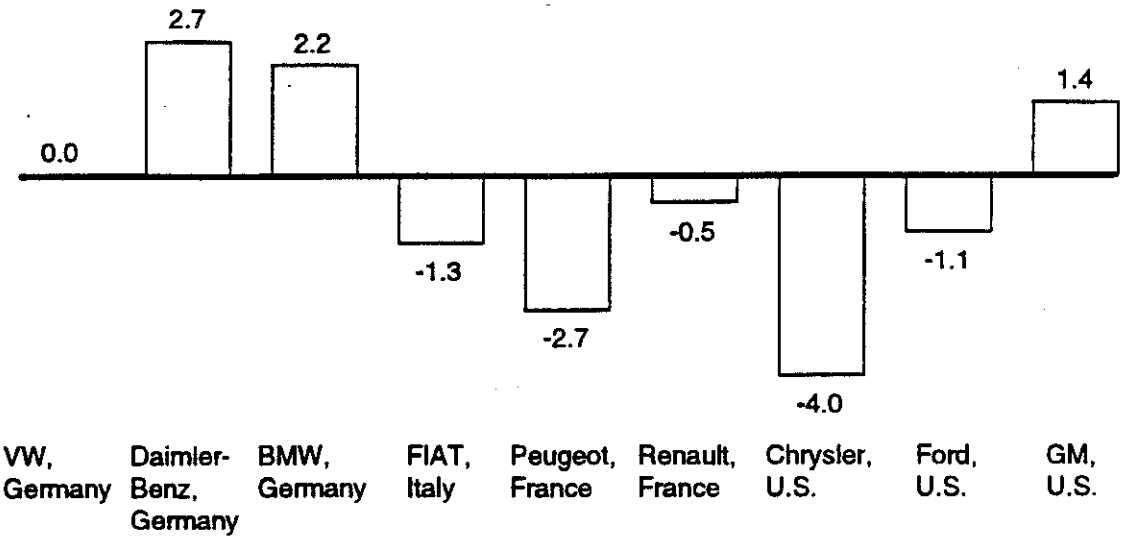
- **Uncompetitive initial position for Spain.** The Spanish automotive industry was highly insulated and unproductive until the latter part of the 1970s. At that point, the country simultaneously opened its market to transplants and began phasing out trade restrictions. Low initial wages provided little shelter to SEAT, Renault, Peugeot, and other traditional players as they were not low enough to make up for low levels of productivity. The transplants from Ford and Opel/GM benefited from similar costs, while achieving near best practice productivity. Aggregate productivity increased dramatically from 1978 to 1982 as the newcomers expanded and the traditional players shed large numbers of people while increasing their output.

- **U.S. car manufacturers faced intense competition from the Japanese.** U.S. car manufacturers became fully exposed to Japanese competition during the latter part of the 1970s. At that time, Japanese manufacturers already held a 7 percent productivity advantage over American producers. This slight productivity gap was minor compared to the 2:1 ratio in relative wages (Exhibit 18). Accordingly, U.S. manufacturers had a big cost disadvantage relative to Japanese competition. Japanese companies exploited this gap and rapidly gained market share. The loss of share, coupled with the economic downturn in the late 1970s and early 1980s, caused Ford and Chrysler to experience periods of heavy losses and low cash flows (Exhibits 21 and 22). The losses and cash flow problems as well as Chrysler's near bankruptcy shocked the OEMs into action. Ford cut its hourly work force in half between 1978 and 1982

Exhibit 21

RETURN ON SALES OF CAR MANUFACTURERS 1980-83

Unweighted average, percent

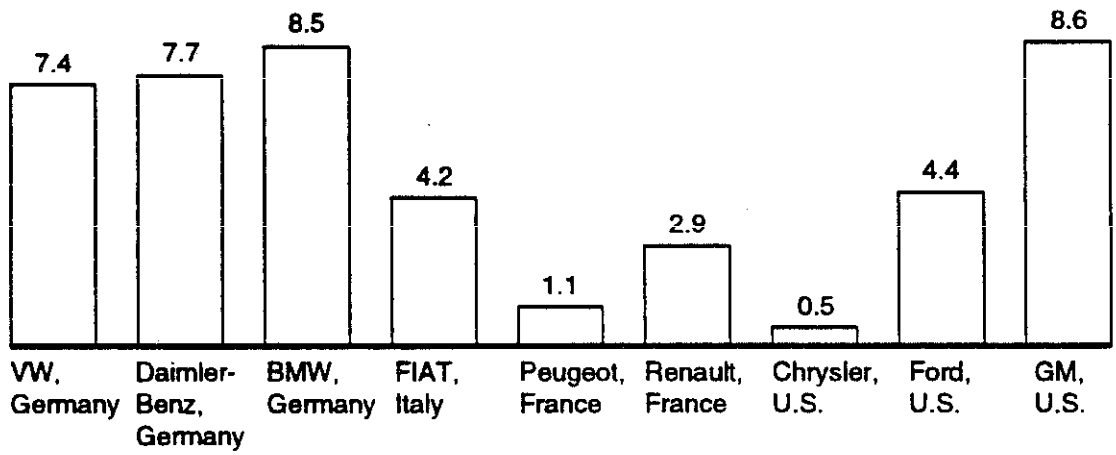


Source: Annual reports; McKinsey analysis

Exhibit 22

CASH FLOW AS A PERCENTAGE OF SALES 1980-83

Unweighted average, percent

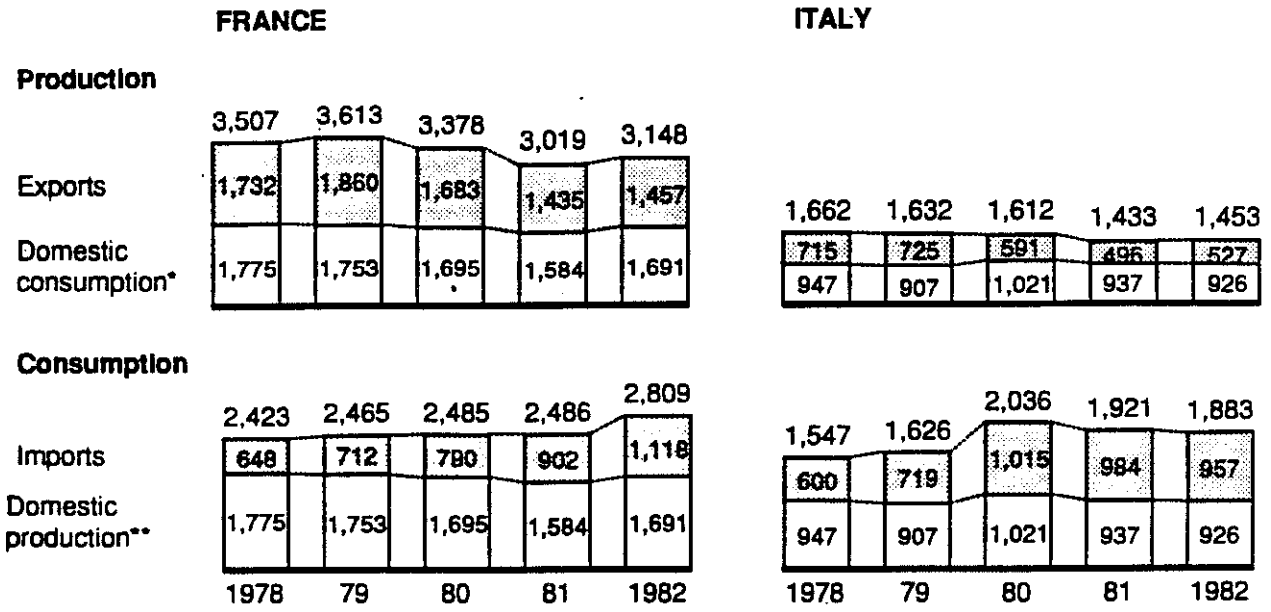


Source: Annual reports; McKinsey analysis

Exhibit 23

PRODUCTION AND CONSUMPTION IN FRANCE AND ITALY 1978-82

Thousands of vehicles



* Domestic consumption = consumption of locally manufactured vehicles

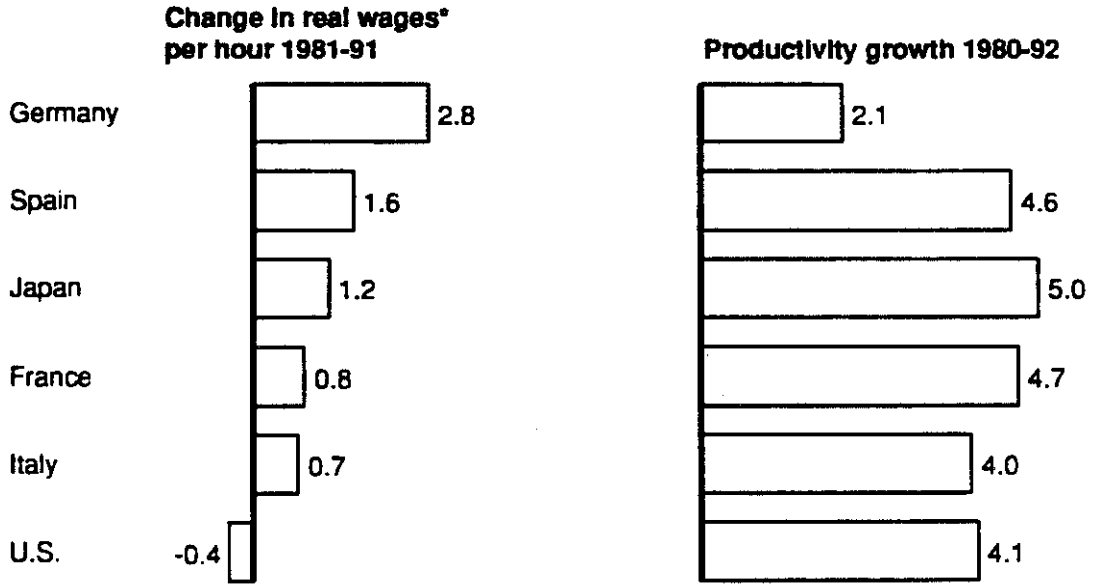
** Domestic production = production sold in the domestic market

Source: World Motor Vehicle Data 1993; McKinsey analysis

Exhibit 24

REAL WAGE INCREASES AND PRODUCTIVITY GROWTH

Percent p.a



* Deflated with Consumer price index

Source: AAMA Facts & Figures; Statistisches Jahrbuch für das Ausland; McKinsey analysis

and Chrysler took similar steps. As the big three vehicle manufacturers fought to regain their competitive position, they exerted strong pressure back through the entire supplier chain.

¶ **France and Italy faced pressure from German imports.** The French and Italian automotive industries faced pressure similar to that in the U.S. during the 1980s, but in this case it came from German manufacturers rather than Japanese. Both countries' industry trailed Germany significantly in terms of productivity per employee at the beginning of the period (70 percent for France and 54 percent for Italy). Wages were lower than in Germany, but not sufficiently lower to make up for the disadvantage in productivity. As a result, both France and Italy had a large cost gap relative to Germany. These cost differences resulted in heavy losses and low cash flows at the beginning of the 1980's for the big three car manufacturers based in France and Italy and strong performances for two of the three players headquartered in Germany.

A significant part of the productivity differences came from widely variant product line attractiveness. Manufacturers in both France and Italy had old, unattractive product lines in terms of styling, models and parts content. The result was poor trade performance in the early part of the 1980s for France and Italy (Exhibit 23). Manufacturers lost market share at home to increasing imports and experienced market share losses abroad because of declining exports into growing markets.

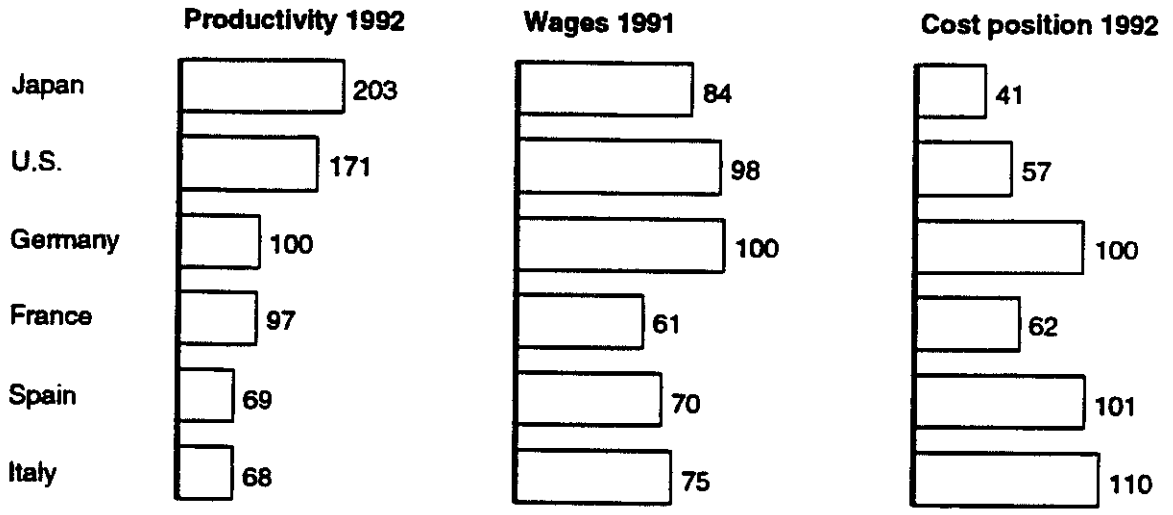
Reductions in the number of vehicles sold, combined with very high break-even points, explain the periods of heavy losses. For example, Peugeot's break-even point in 1980 was 2.2 million vehicles and they sold only 1.85 million cars. Over the next 5 years Peugeot increased its productivity quickly and lowered its break-even point to 1.4 million cars by 1986. As in the U.S., it is likely that the fast productivity increases in the large car manufacturers triggered similar productivity increases in the supplier base.

¶ **German employment performance not sustainable.** At the beginning of the 1980s, the German automotive industry enjoyed a high productivity level and therefore less pressure to increase productivity. The favorable cost position to start with, coupled with reunification in the beginning of the 1990s, fueled growth in output and allowed the industry to have employment performance on par with Japan. Stagnant productivity would not have been as serious a problem for Germany if wages were growing at the same slow pace. But real wages grew faster than anywhere else (Exhibit 24). Consequently, Germany's cost position deteriorated rapidly. By the beginning of the recession in 1992, Germany had fallen to near parity with Italy and Spain (Exhibit 25). German auto manufacturers began to lose money and finally felt the need to restructure. In 1993, employment in the automotive industry

Exhibit 25

RELATIVE PRODUCTIVITIES*, WAGES** AND COST POSITIONS*** 1992

Index: Germany = 100



* Productivity calculated as value added per employee converted with automotive specific 1990 PPPs adjusted to 1992

** Total cost per employee converted with foreign exchange rates 1991

*** Cost position is calculated as wages divided by productivity

Source: AAMA Facts & Figures; BLS; McKinsey analysis

Exhibit 26

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Automotive

Benchmark: Japan

● Important
○ Secondary
X Undifferentiating

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X	X		X	X
• Less government ownership/support	X	○	X	X		X	X
• Readily available capital	X	X	X	X		X	X
Labor market							
• Low labor cost	○	X	●	X		○	●
• High availability/low benefits	X	X	X	X		X	X
• More flexibility	X	X	X	X		X	X
Product market							
• Fewer restrictions on output and competition	X	X	X	X		X	X
• More new business facilitation	X	X	X	X		X	X
• Rapid demand growth	●	●	●	●		●	X
Industry dynamics/ competitive intensity							
• Better trade/FDI performance	●	●	●	●		○	●
• More price competition/restructuring	X	X	X*	X		X	X
• More innovation/new products	○	○	X	○		○	X
Higher output growth	●	●	●	●		●	●
Higher productivity growth	X	X	X*	X		X	○
Lower productivity growth	X	X	X	X		X	X

* Opposite is true with strong influence

Source: McKinsey analysis

was reduced by more than 70,000 jobs or roughly 10 percent of total employment in this sector. This trend is predicted to continue in 1994.

SUMMARY AND IMPLICATIONS

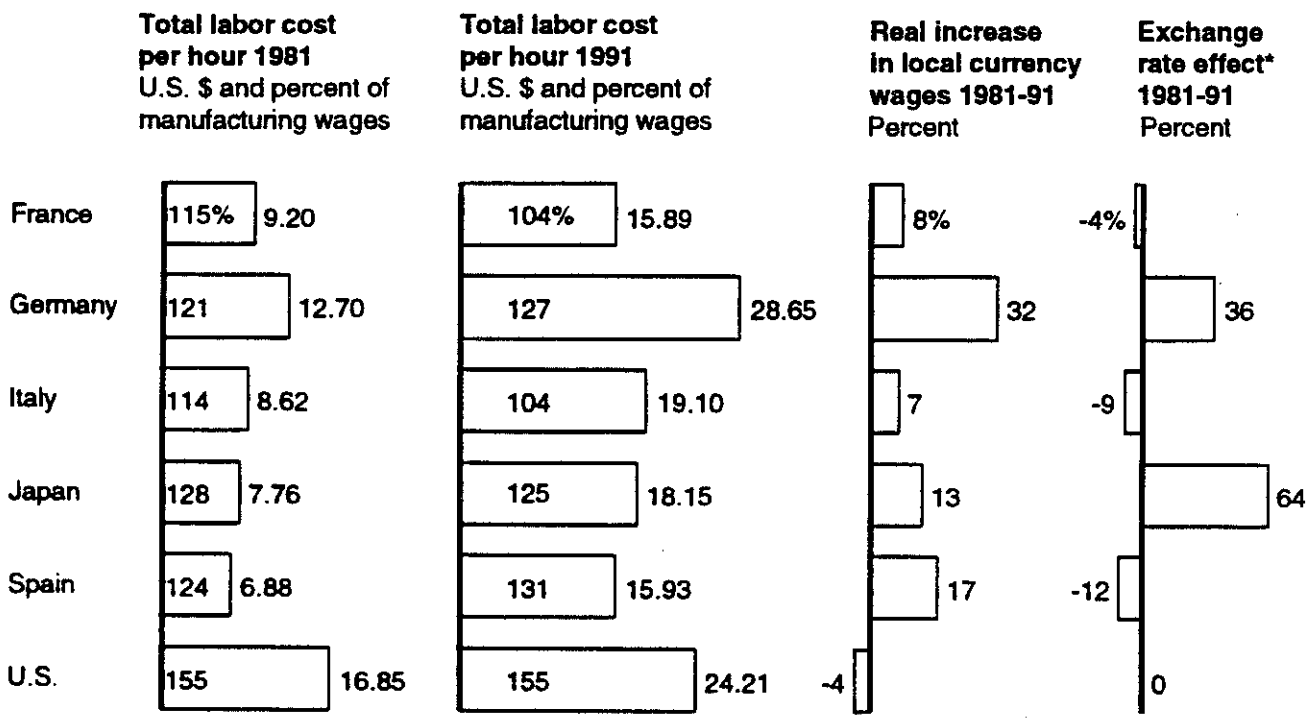
Exhibit 26 summarizes our findings from the automotive case. It illustrates the main point we have made so far, that each country's automotive employment was primarily a function of trade performance and growth in domestic consumption. The framework gives us an opportunity to summarize the role that factors in the product, labor and capital markets have had in explaining Japan's superior output performance.

Restrictions in the **product market** (the market in which firms buy and sell goods and services) played an inconclusive, but apparently minor role in explaining differentiating employment performance. Japan fostered vehicle demand through rigorous inspection laws. The result was fairly rapid replacement of existing vehicles, but not a particularly large number of new vehicles demanded. Italy increased the number of vehicles purchased even more rapidly although it had the same initial penetration and no similar stimulus. Facilitating regulations were even less important since the government did little to redefine the rules of competition or foster changes in the business system in all these countries during the period of analysis. Initial penetration levels, national commuting patterns, and GDP per capita levels are all better explaining differences in demand growth. The employment effects of regulations for other purposes such as safety or emissions are inconclusive.

Wages were an important determinant of a country's international competitive position, but other **labor market** factors appear nondifferentiating. Wage increases were particularly troublesome in Germany (Exhibit 27). Real wages increased more than two times as quickly as in any other country except Spain. This increased the gap between the pay of German auto workers and the average manufacturing wage. Only German and Spanish workers became more costly compared to other manufacturing workers during our period. Worker availability did not surface as a major problem in our interviews. The relatively high wages in the industry make it easy to find people willing to apply for any openings which occur. With the exception of a few engineering jobs, finding people with the desired skill was also not a problem. Finally, flexibility was not found to be an important factor in determining employment. Strict firing rules in Europe slowed downsizing, but labor agreements and company practices in the large U.S. companies and in Japan played a similar role. Also transplant locating decisions during the 1980s were more tied to wages than flexibility. Few companies seriously considered the cost of downsizing at the time they expanded. This approach has changed recently and worker flexibility has gained in importance. Flexibility to redeploy workers across operations was probably more important, but it was certainly not a major factor. The productivity

Exhibit 27

TOTAL LABOR COST, REAL WAGE GROWTH AND EXCHANGE RATE EFFECT



* Appreciation/depreciation relative to U.S. $

Source: AAMA Facts & Figures; Statistisches Jahrbuch für das Ausland; McKinsey analysis

increases which could be expected to result from higher flexibility were very similar for all countries except Germany.

Capital markets also played a minor role. There were some differences in the pressure from owners, but the severity of financial losses was much more important in explaining corporate behavior than differential reaction to equivalent losses. Our analysis of cash flows and return on sales has shown that it was not the structure of capital markets but an extended period of heavy losses that triggered ongoing restructuring in all countries. Government ownership of Renault might have been a disadvantage for France, as this allowed the company to delay restructuring until the 1980s when heavy losses made it necessary to increase productivity. Capital availability was not found to play a role since large global players all had access to sufficient forms of funding.

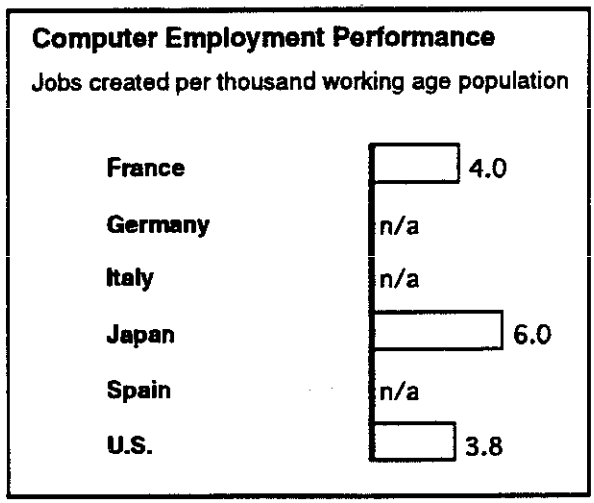
* * *

Demand growth is critical. As global competition increases, there will be further pressure for productivity improvements. Therefore, demand will have to increase in order to avoid a decrease in employment. But sustaining consumption increases will become more difficult in the future. The increase in penetration is likely to slow down given higher current levels of vehicles per person than existed in 1980. The same can be expected for the value added per car unless significant innovating continues to occur. Consequently, all manufacturers will see their primary opportunities in emerging markets.

Growth in new markets difficult. New markets, such as the ones in developing countries in Asia, are typically closed markets for imports. Governments tend to request that foreign car manufacturers establish joint ventures with local companies in their country rather than produce and export themselves. This provides interesting market opportunities for companies, but little hope for employment in the manufacturers' home countries. Developed world parts makers are unlikely to benefit from these new facilities either. Joint venture OEMs will mainly use parts that come from other low cost countries, since the supply of major components from a country with high wage levels such as Germany cannot satisfy cost targets.

Wages and productivity must become more closely tied. Another general implication that can be drawn from the case is that wages and productivity must be linked appropriately. Countries with high productivity and low wage levels, like Japan, at the beginning of the 1980s were far better positioned in the global market than others. Wage increases like those in Germany are clearly damaging to companies' cost positions. Almost as harmful, however, are results like those that occurred in Spain where rapid increases in wages kept productivity improvements from helping companies' competitiveness.

COMPUTER INDUSTRY CASE SUMMARY



If the U.S. has the world's most innovative computer industry, then why did Japan create more jobs? The answer can be found in cross-country differences in competitive intensity.

The computer industry highlights the impact of fast technological change on the creation of jobs in an innovative industry. The paradox is that the U.S., generally perceived to be the technological leader in this segment, achieved a lower employment performance than Japan. This apparent paradox can be explained by the fact that a structural change in the industry occurred earlier in the U.S. than in Japan.

In the U.S., and to a lesser extent in Europe, technological breakthroughs linked to the emergence of PCs changed the industry structure and led to vertical disintegration. Specialized companies at each stage of the value chain translated economies of scale into sizable productivity gains, while large integrated suppliers such as IBM and DEC suffered through dramatic restructurings. Vertical disintegration also forced U.S.-based companies to increasingly source components on a worldwide basis. At the same time, these technological breakthroughs led to a shift in value creation – and job growth – from hardware to semiconductors and software/services. These effects led to a lower employment performance in the U.S.

While Japan was not insulated from these technological breakthroughs, structural change in the Japanese computer industry was slowed by its low competitive intensity. This in turn was driven by a closed distribution structure (hardware vendors largely controlled retail prices), language barriers (the interpretation of kanji characters was difficult with early PC hardware and software), and a lack of venture capital (which helped speed vertical disintegration and led to the emergence of specialized players in the U.S.). The result for Japan was more employment growth and less growth in productivity in the 1980s.

The computer industry stands out among the cases presented in this study in that "natural" barriers to economic evolution played a more important role than "artificial" (i.e., regulatory) barriers. As these barriers are overcome by the forces of globalization, we expect Japan to experience the restructuring that the U.S. and European hardware sector experienced earlier.

Employment in the computer industry

The computer industry is a medium-sized sector, employing around 0.9 percent of the total working age population in the U.S. We defined the computer industry in a broad sense, including semiconductors, hardware, software and services, as well as distribution, in order to understand the employment impact of changes and dynamics affecting the industry as a whole. The computer industry is a very important industry for all advanced economies, not only in terms of its significant employment growth opportunity. It also provides an infrastructure for potential future growth sectors, such as multimedia. We have included France, Japan and the U.S. in all four subsectors of the industry. For Germany, employment, output and productivity data were available only for some of the subsectors. Nevertheless, we felt the data provided a clear enough picture to include Germany in our causal framework.

We believe this case study contributes to the discussion on job creation in four ways:

- The computer industry provides a good example of an industry evolution within one industry. This evolution reflects the shift from manufacturing to services, from traditional to new businesses, which is occurring across all sectors. We will use the computer case to illustrate barriers to this natural evolution
- The case highlights the impact of fast technological developments in an innovative industry on the creation of jobs. The paradox is that the U.S., generally perceived to be the most innovative country in this segment, has achieved a lower employment performance than Japan and France
- The computer case allows us to evaluate how globalization affects domestic employment through trade and foreign direct investment. Both the semiconductor and hardware subsectors are among the most heavily traded manufacturing sectors
- All the countries analyzed created jobs overall, and all are likely to have increased productivity substantially. This case, thus, provides evidence of the link between productivity and employment and shows how productivity growth will lead to employment growth by creating demand through lower prices.

The report is divided into four sections, the first of which describes the computer industry and focuses on describing the industry dynamics. This section is followed by a description of the employment performance across countries. The

Exhibit 1

DEFINITION OF THE COMPUTER INDUSTRY

	PRODUCT/CATEGORY		INDUSTRY CODE U.S.	Japan	Germany	France	Italy	Spain
Semi-conductor		• Discrete • IC	3674	3082 3083		2916		
Hardware	Computer (systems)	• Large scale • Midrange • Workstation • PC	3571					
	Peripheral equipment	• Storage devices	3572					
		• Terminals	3575					
		• Other peripheral	3577					
				3051	(5080)* 2435	2701	33	CNAE 330
Distribu-tion	Wholesale		5045	5041		5804		
	Retail		5734	5741		6424		
Software and Services	Programming					7703		
	Data processing		737	841		7704		
	Other services					7707		

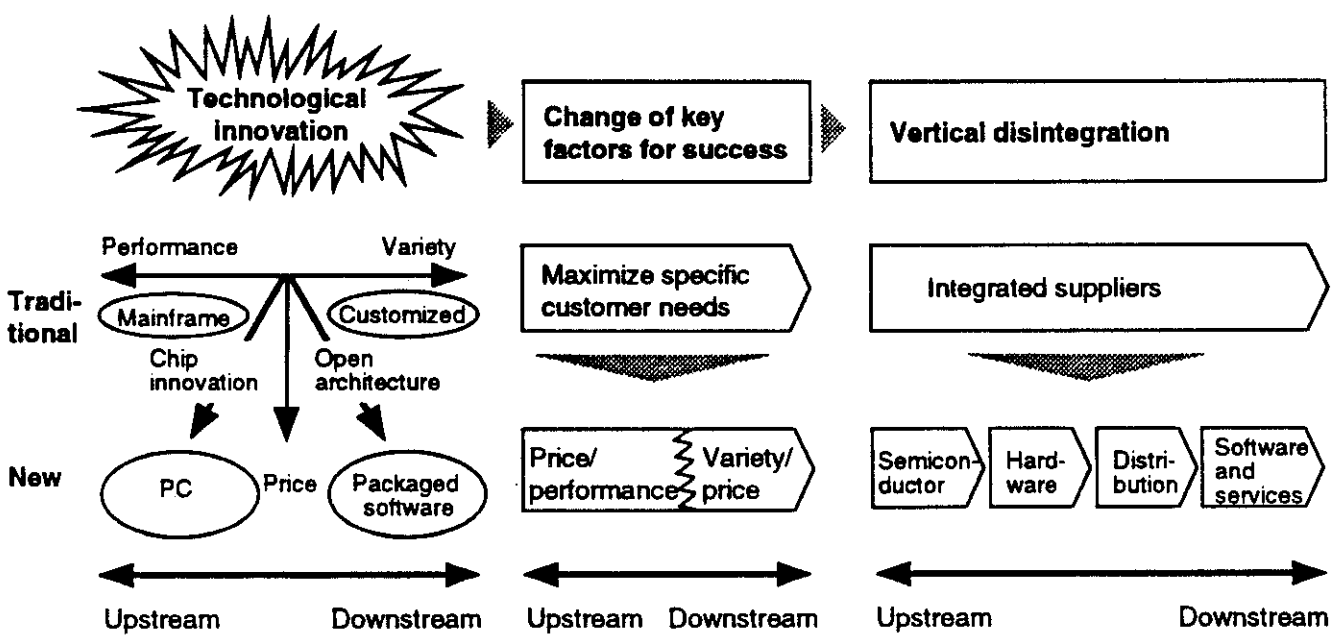
* Code for manufacturing census

Source: County Business Pattern; Census of Manufactures; MITI; INSEE; Eurostat; establishment surveys

Exhibit 2

VERTICAL DISINTEGRATION

CONCEPTUAL



Source: McKinsey analysis

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third section explores causes for different employment performances. Finally, a short summary and important implications are discussed in the last section.

THE COMPUTER INDUSTRY

Definition

The computer industry is defined to include the total value chain in this case. It can be split into four subsectors: semiconductors, hardware, distribution, and software and services (Exhibit 1). The semiconductor sector includes discrete semiconductors and integrated circuits such as microprocessors and memory chips for data processing applications only. We have excluded semiconductor employment and output for other applications, e.g., consumer electronics. The hardware sector includes not only computer systems such as mainframes, midrange systems, workstations and PCs, but also peripheral equipment such as storage devices, keyboards, screens and printers. Peripheral equipment plays an important role in this subsector, accounting for a large portion of output (around 40 percent in the U.S., 60 percent in Japan). The distribution subsector includes both wholesale and retail outlets for computer hardware and software. Again, we have excluded employment and output related to the distribution of other products such as consumer electronics. Finally, the software and services subsector includes companies producing packaged software and providing professional services such as customized software, systems integration, and data processing services for their customers.

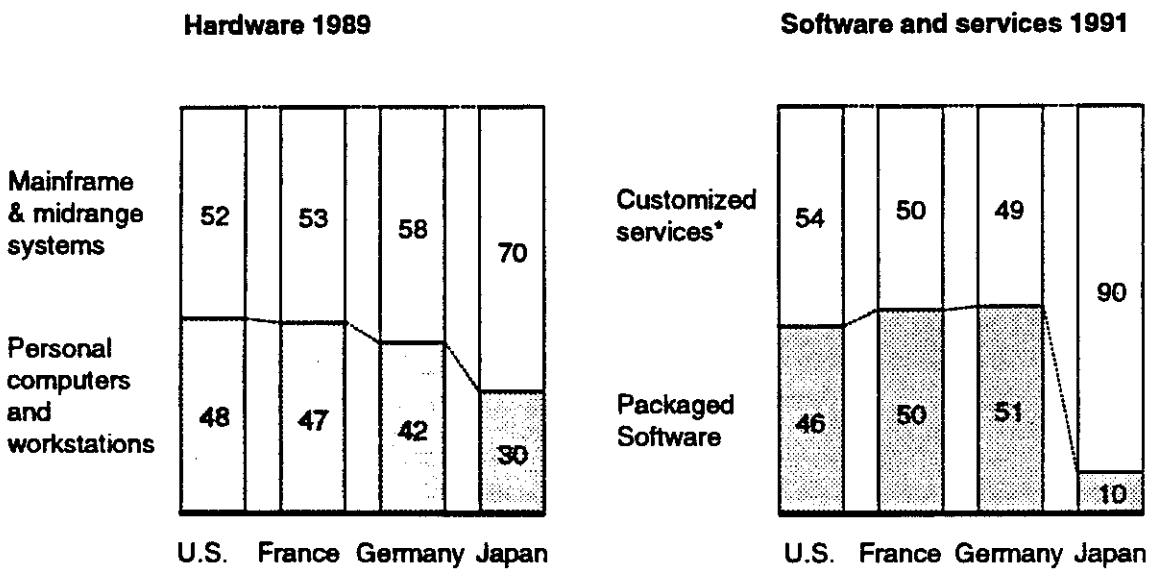
Industry dynamics

Technological innovations have caused fundamental structural changes in the computer industry, leading to vertical disintegration and a shift in value creation. The computer industry has experienced two major technological breakthroughs in the last decade, both of which are linked to the emergence of PCs (Exhibit 2). The first innovation, advances in microprocessor technology, led to drastic price/performance improvements in hardware. It allowed the product shift from mainframes and midrange systems to personal computers. An improved price/performance ratio led users to demand less centralized processing and more decentralized "client server" systems linked by networks. The second breakthrough is the increasing use of open architectures. This relates to de facto standards in hardware interfaces as well as to the worldwide use of packaged software. Open architectures increased the availability and compatibility of computer software, allowing more users to cover a wider variety of needs with cheaper programs. These technological innovations changed the key success factors at different levels of the value-added chain. Price/performance ratios became increasingly important in semiconductors and hardware, leading to increasing industry consolidation. In distribution, software and services,

Exhibit 3

CONSUMPTION BY TYPE OF PRODUCT

Percent, based on value



* Including customized software

Source: IDC; OECD; MITI; CBEMA; McKinsey analysis

providing a broad product variety to more price-sensitive customers became the major requirement, resulting in increased fragmentation.

Different key factors for success in each step of the value chain led to **vertical disintegration**, drastically changing the industry structure. Prior to 1980, vertically integrated mainframe computer manufacturers such as IBM, controlled all of the value-added steps from key components and operating systems to application software and services. Today, many of these individual functions have been separated. Compaq PCs use Intel's microprocessor, Microsoft's operating system and HP's laser printers. Lotus provides the application software, and system integrators/service firms such as EDS are responsible for networking operations and maintenance.

Technological innovations also had a second effect, causing a **value shift** in the total industry chain. Much of the value added used to be provided by hardware assemblers. But in the PC era, the manufacturing process has become much simpler. Much of the increased computing power being designed into the microprocessors, and correspondingly, the creation of value has shifted from hardware manufacturing to semiconductor production. Furthermore, hardware is no longer the constraint on solutions to a variety customer problems – particularly those of unskilled computer users. Software and services have taken over that role. A large variety of cheap, packaged software is now available, and new types of services (especially for networking) have been created to provide an even greater variety of solutions to the growing number of unskilled customers. Therefore, the differentiation of computer products through software and services has likewise led to a value shift away from hardware manufacturers, in this case to software and services providers.

There are significant time lags in this structural change across countries. The structural change in the computer industry happened first in the U.S. and was followed by Europe relatively quickly. But in Japan, the same phenomenon can only be observed in recent years. This time lag is reflected in the product mix in both hardware, and software and services. Japanese firms derive a smaller share of their revenues from PCs, workstations and packaged software (Exhibit 3). France and Germany, however, look very similar to the U.S. This time lag is surprising given that innovations in the computer industry spread very quickly and are generally available within months across all countries. There seem to be significant barriers to adopting these innovations, especially in Japan.

EMPLOYMENT PERFORMANCE

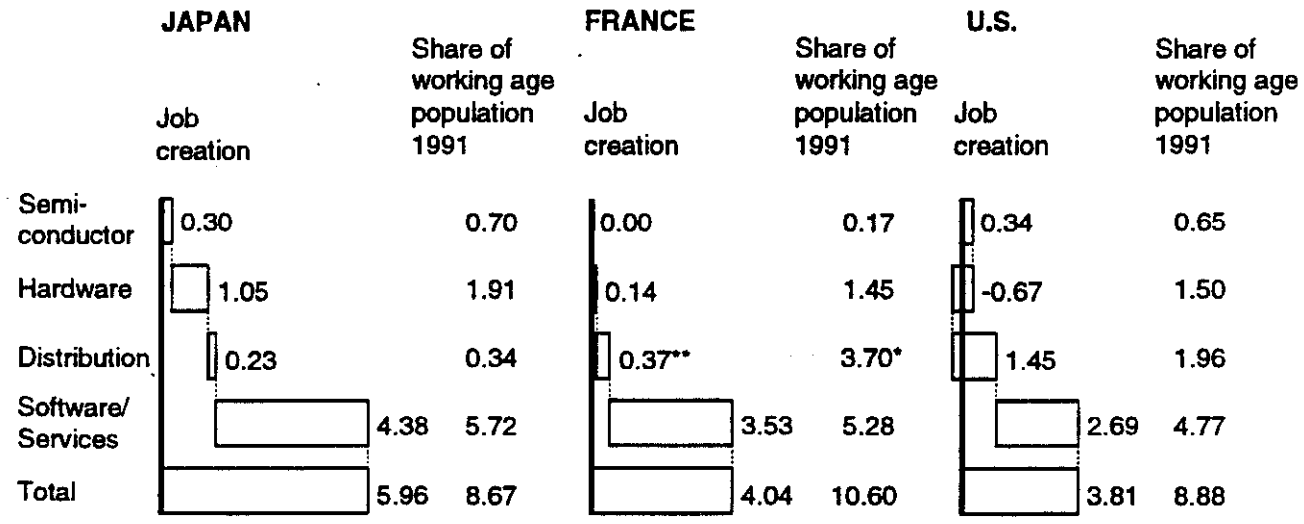
Japan achieved the highest employment performance, followed by European countries. The U.S. created the lowest number of jobs. An analysis of employment figures over time seems to indicate that the U.S. went through a restructuring which other countries are only now starting to experience.

Exhibit 4

EMPLOYMENT PERFORMANCE IN THE TOTAL INDUSTRY CHAIN 1981-91

ESTIMATE

Per thousand working age population*



* Adjusted for the growth in the working age population

** Including consumer electronics

Source: County Business Pattern; Census of Manufactures; MITI; INSEE; Census of Commerce; McKinsey analysis

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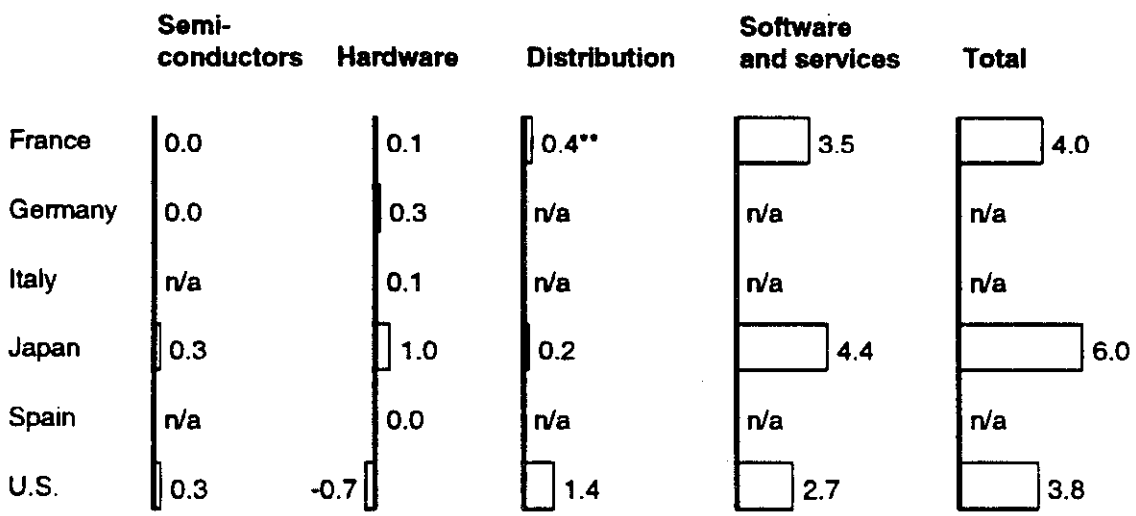
Exhibit 5

JOB CREATION IN SIX COUNTRIES 1981-91

ESTIMATE

Per thousand working age population*



* Adjusted for the growth in the working age population

** Including consumer electronics

Source: National data; Eurostat; McKinsey analysis

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All three countries created a significant number of jobs in the total value chain (Exhibit 4). Japan, however, is the benchmark country for the computer case, creating 6.0 jobs per thousand working age population. Japan is followed by France (4.0 jobs) and the U.S. (3.8 jobs). Differences in employment performance mostly come from hardware, and software and services. In both of these subsectors, Japan created 1.7 jobs more than the U.S. In fact, the U.S. *destroyed* jobs in hardware manufacturing, a sector which is often given as an example of a high-tech growth sector. And another piece of conventional wisdom turned out to be wrong: even in software and services, Japan created more jobs than the U.S. The U.S., however, did significantly better in distribution. France created 0.9 jobs less than Japan in both hardware, and software and services. Germany, Italy and Spain achieved a performance similar to that of France in semiconductors and hardware (Exhibit 5). No data was available for other sectors.

The employment evolution in hardware seems to indicate a time lag between the U.S. and other countries (Exhibit 6). The U.S. started a significant employment increase in 1976, but began to decline in 1985. This decline is largely due to a fall in employment at large, integrated manufacturers and makers of peripheral equipment. In 1992, the U.S. employed 215,000 people in computer manufacturing, 160,000 less than in 1984. Japan had relatively stable employment growth in hardware during the 1970s. It started to increase later, only in 1982, and continued to grow throughout the decade. However, in 1990, 6 years after the U.S., employment also peaked. France and Germany maintained relatively stable employment growth throughout the 1980s but have now also started to decline.

The employment evolution in software and services does not show a peak for the U.S. It indicates, however, that Japan has been catching up to the U.S. and French levels of employment (Exhibit 7). Japan started with a low initial level but its extremely high annual growth after 1987 allowed it to surpass the U.S. and France by 1991. However, Japan began to decline in 1992.

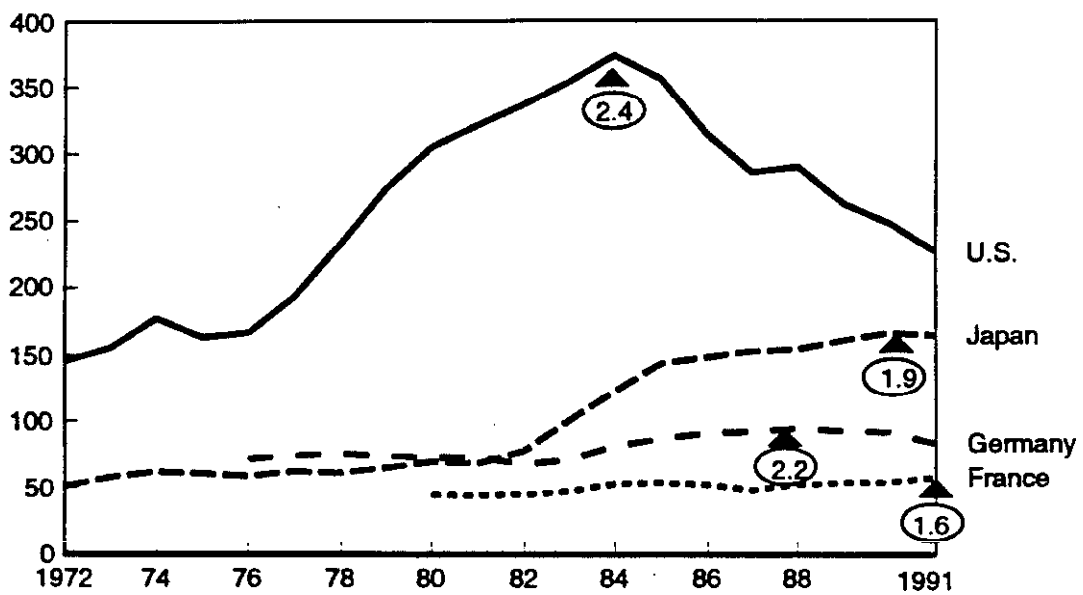
These figures are based on industry data in all countries and only include employment in establishments classified as "software and service providers." The same services are, however, also provided by a large number of employees in other industries, such as banking. Occupational data allows us to cover those in-house employees and gives us an idea of how the computer industry affected employment in the overall economy in a more indirect way. It shows lower growth rates than industry-based data in all three countries. This indicates that employment in specialized software and services firms has grown partially at the expense of in-house employment in other industries. In addition, the evolution based on occupational data in the U.S. shows that overall employment peaked in 1991 (Exhibit 8), while industry-based data continues to show an employment increase. France started to slow down in 1989 and Japan peaked in 1991 even in the industry-based data (Exhibit 7).

These employment figures are surprising. The U.S, which is the technological leader in this industry, achieved the lowest employment performance. This

Exhibit 6

EVOLUTION OF EMPLOYMENT IN HARDWARE

Thousands



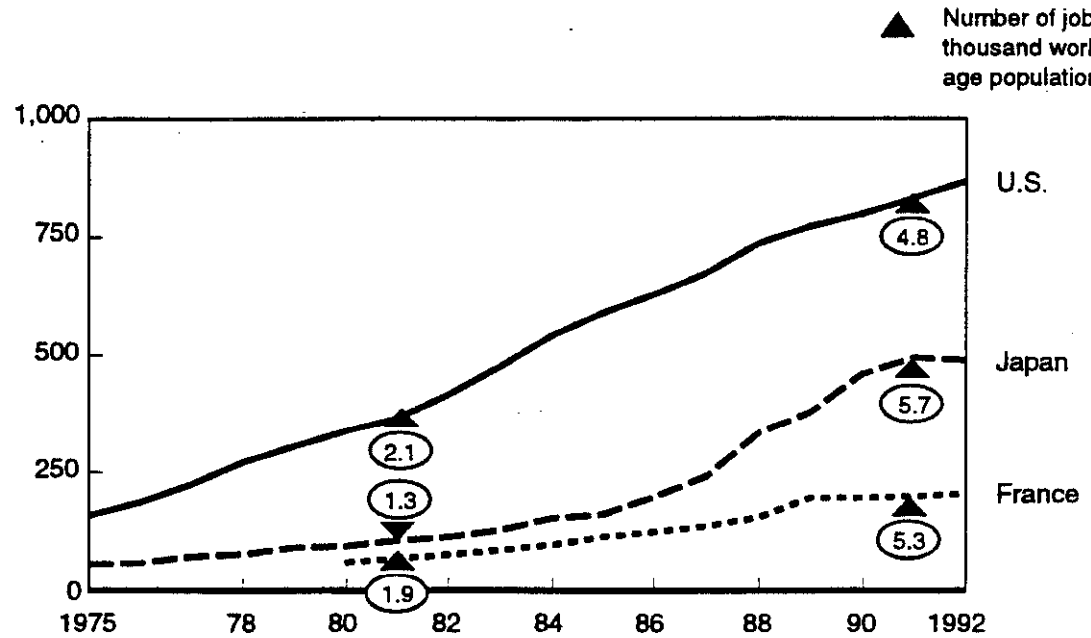
Source: Census of Manufactures; Eurostat; INSEE; McKinsey analysis

Exhibit 7

EVOLUTION OF EMPLOYMENT IN SOFTWARE AND SERVICES

Industry based

Thousands



Source: MITI; County Business Patterns; INSEE; McKinsey analysis

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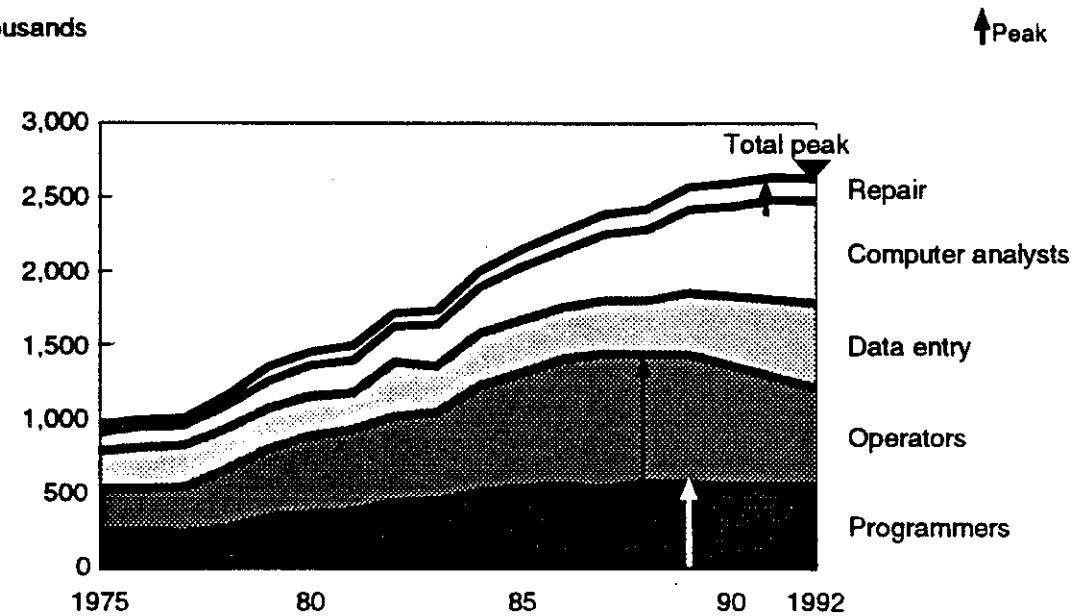
Exhibit 8

EVOLUTION OF EMPLOYMENT IN SOFTWARE AND SERVICES – U.S.

Occupation based

Thousands



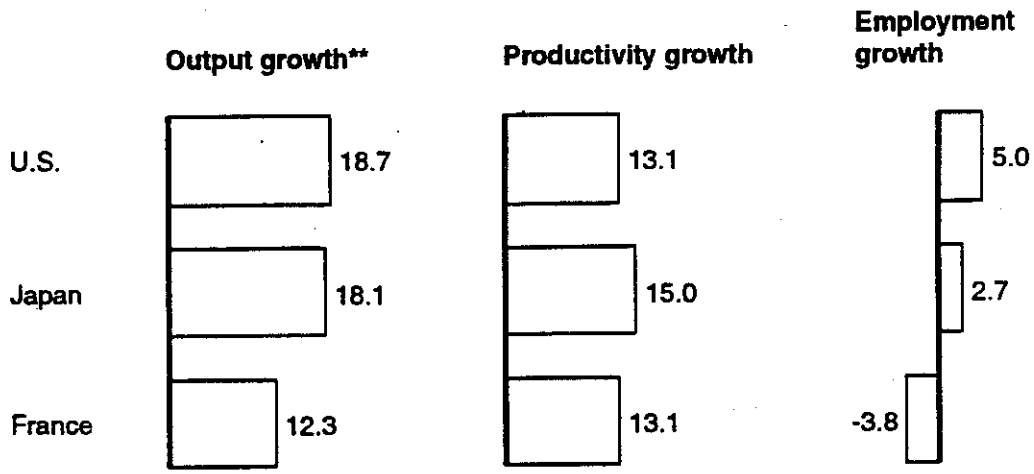
Source: Statistical yearbooks; CBEMA

Exhibit 9

FACTORS AFFECTING EMPLOYMENT GROWTH IN SEMICONDUCTORS* 1985-91

ESTIMATE

Percent p.a.



* Using domestic deflators

** Measured by value added

Source: Census of Manufactures; Dataquest; ICE; MOF; McKinsey analysis

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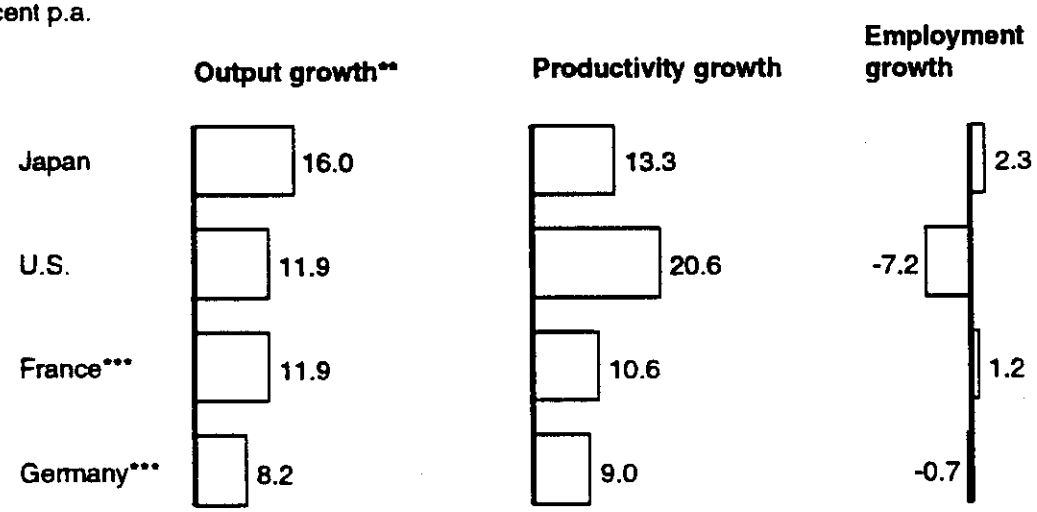
Exhibit 10

FACTORS AFFECTING EMPLOYMENT GROWTH IN HARDWARE* 1985-91

ESTIMATE

Percent p.a.



* Using domestic deflators

** Measured by factory sales

*** Deflated by the average of the U.S. and Japan

Source: Elsevier Advanced Technology; MOF; BEA; McKinsey analysis

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reflects the large job destruction in hardware. The figures clearly show that computer hardware cannot be considered an employment growth sector anymore in all countries. But even in software and services, employment data show signs of leveling off. All of this has important implications for countries trying to create jobs in "high-tech" sectors. It begs for a better understanding of how technological innovation affects employment and why Japan has been able to achieve a better performance than any other country in both hardware, and software and services.

CAUSES FOR EMPLOYMENT DIFFERENCES

Employment levels and growth stand in direct relationship with output and productivity. Given our broad definition of the computer industry, we discuss for each subsector separately how productivity and output evolved over time in different countries. We then explain the causal factors leading to differences, and show the impact of industry dynamics across the board.

Output and productivity

Japan's high employment performance can be primarily explained by its high output growth, especially in hardware, and software and services. Lower productivity growth in Japan also led to differences in employment performance compared to the U.S., but productivity growth differences are less pronounced, especially in software and services.

- **Semiconductors.** Higher output growth in the U.S. and Japan led to a better employment performance in those two countries compared to France, since there are no significant differences in productivity growth (Exhibit 9). There are large and increasing differences in the product mix between the U.S. and Japan. The U.S. has focused on computer applications, especially microprocessors, throughout the last decade. On the other hand, Japan focused on its core technology of DRAM. Overall, however, real output growth of semiconductors for computers is about the same between in these two countries. France did not have differentiating core technologies in this industry and lost market share. Therefore, its output growth lagged behind the U.S. and Japan.

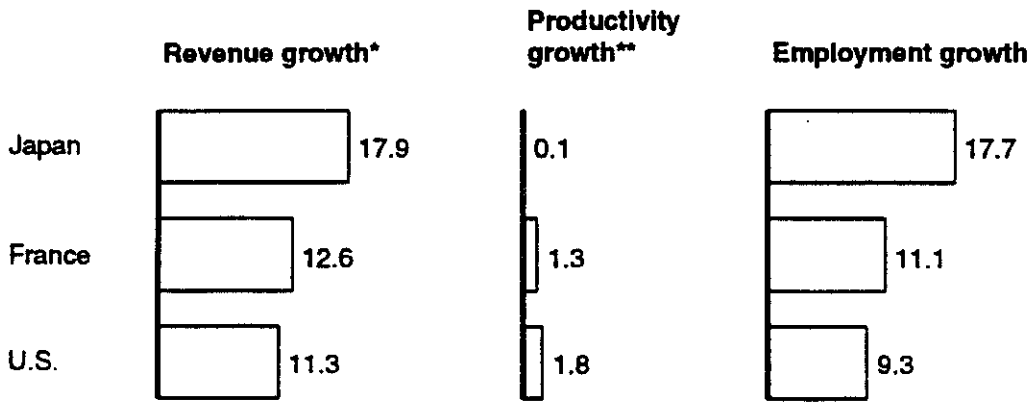
- **Hardware.** Output of computer hardware products has grown very rapidly in all countries (Exhibit 10). However, this growth varies strongly from country to country. Higher output growth in Japan compared to France and Germany can explain their differences in employment performance, since there are only small differences in productivity growth between these countries. Comparing Japan and the U.S. shows that higher output growth and lower productivity growth were equally important in explaining Japan's better performance in this subsector.

Exhibit 11

FACTORS AFFECTING EMPLOYMENT GROWTH IN SOFTWARE AND SERVICES 1982-91

ESTIMATE

Percent p.a.



* Assuming productivity changed only due to product mix effects

** Only due to product mix changes

Source: MITI, County Business Pattern; INSEE; McKinsey analysis

- **Distribution.** Output of computer distribution is highest in the U.S., followed by France and Japan. Independent retailers of PCs and packaged software are the drivers of this high growth. No productivity figures are available for this sector. But many U.S. retailers are large, efficient stores, comparable to specialized, sophisticated retailing formats for other goods. This leads us to believe that they are significantly more productive than distribution outlets in other countries.

- **Software and services.** Output of software and services is highest in Japan, followed by France and the U.S. (Exhibit 11). Again, all three countries experienced significant growth. Productivity growth (measured by revenue per employee) is lower in Japan, but the differences are relatively small. We, therefore, judge that higher output growth was significantly more important than slower productivity growth in explaining Japan's performance in software and services. It is impossible to calculate reliable output and productivity growth figures in software and services given the lack of deflators. As a proxy, we estimated the impact of product shifts, from customized software and services to packaged software, on average productivity assuming that all other productivity-enhancing measures (new software tools, etc.) have been adopted in a similar way across countries. Real output growth was then calculated based on employment and productivity figures. Despite the small differences, these figures show that Japan benefited from a slower shift to highly productive software.

While it is difficult to aggregate output and productivity growth across all four subsectors, we believe that differences in hardware, and software and services sectors are more important than those in other subsectors, since differences in employment performance come mostly from these two subsectors. Japan achieved significantly higher output growth than other countries both in hardware software and services. In terms of productivity growth, Japan had a significantly lower productivity growth than the U.S. in hardware, but only a slightly lower growth in software and services. Therefore, we judge that higher output growth is somewhat more important than lower productivity growth in explaining Japan's employment performance compared to the U.S. France achieved a somewhat lower productivity growth in hardware and a somewhat higher productivity growth in software and services than Japan. Therefore, overall productivity growth does not seem to be a differentiation factor between these two countries. For the subsectors where data was available, Germany experienced output and productivity growth similar to France.

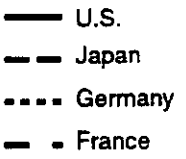
Industry dynamics affect output and productivity

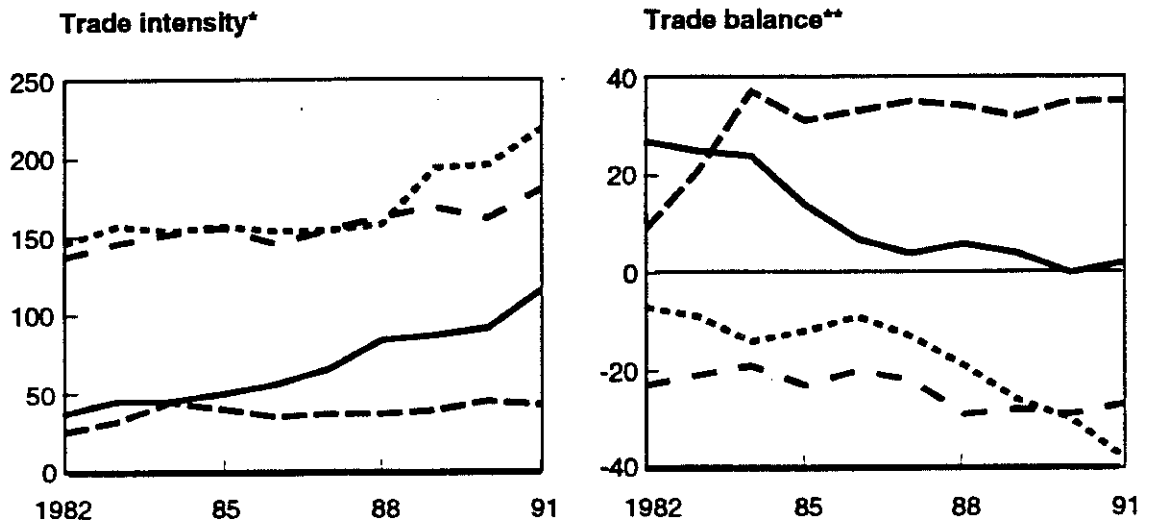
We found that output and productivity growth differences are both strongly linked to vertical disintegration and can thus be explained by the same causal

Exhibit 12

GLOBALIZATION IN HARDWARE

Percent





* (Export + Import)/production

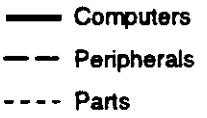
** (Export - Import)/market consumption

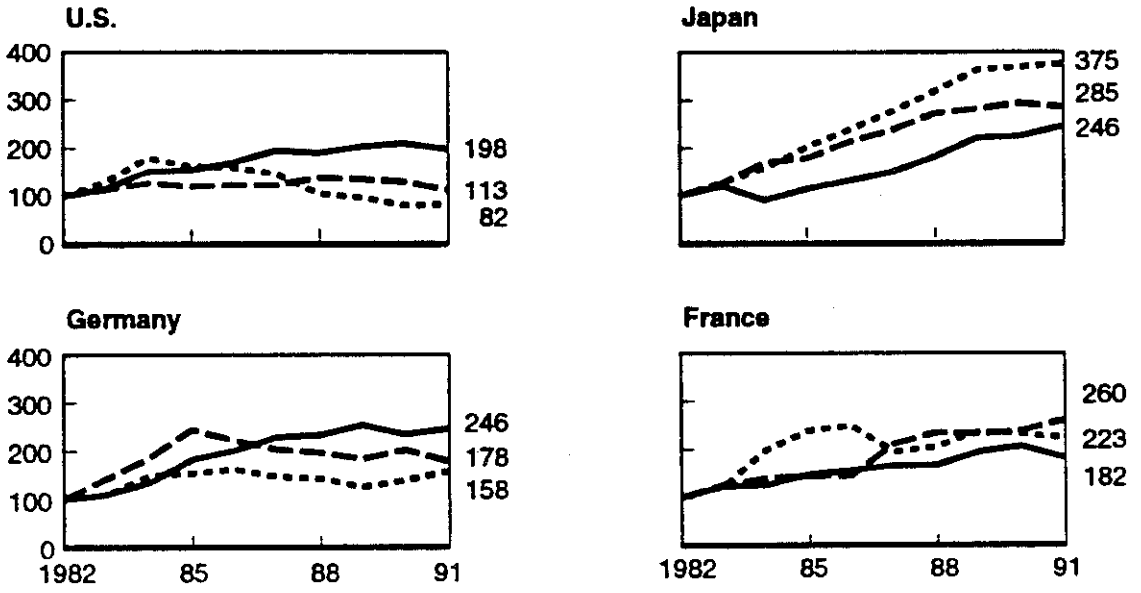
Source: Elsevier Advanced Technology; McKinsey analysis

Exhibit 13

PRODUCTION TREND BY PRODUCT IN HARDWARE*

Index: 1982 = 100





* Nominal base

Source: Elsevier Advanced Technology; McKinsey analysis

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factors. Vertical disintegration led to large productivity gains on one side. It also affected output, both through globalization and through stimulating domestic demand (productivity gains leading to significant price declines). We discuss next these three causal links, starting with the single most important causal factor – trade. We end this section by analyzing Japan's time lag in vertical disintegration and conclude that it is caused mainly by its low competitive intensity.

1. Vertical disintegration negatively affected output through global sourcing of components and peripherals in the U.S. and Europe. In the mainframe era, integrated companies sourced key components and peripherals from in-house suppliers. Today, many of these individual functions have been separated. Specialized key players are located anywhere in the world. U.S. companies dominate microprocessors, Japanese companies produce DRAM, printers and several peripherals, and some Asian countries specialize in low-end products such as keyboards and monitors. This led to increased global sourcing.

Global sourcing in the U.S. and Europe is reflected in their deteriorating trade performance (Exhibit 12). Trade intensity increased in the U.S. and Europe throughout the 1980s. This negatively affected their trade balance. The trend of trade balances shows a high correlation between its performance and employment, especially in the U.S. and Japan. The U.S. trade balance started to deteriorate in 1985 when hardware employment began to decline, while the high growth of Japan's trade surplus between 1982 and 1984 seems closely connected to its rapid employment increase. The differences in trade performances can be explained largely by trade in peripheral equipment and computer related parts (Exhibit 13). The production of peripheral and parts in the U.S. and Germany started to decline in 1985. In Japan, however, the production of peripherals and parts actually grew faster than that of computer systems.

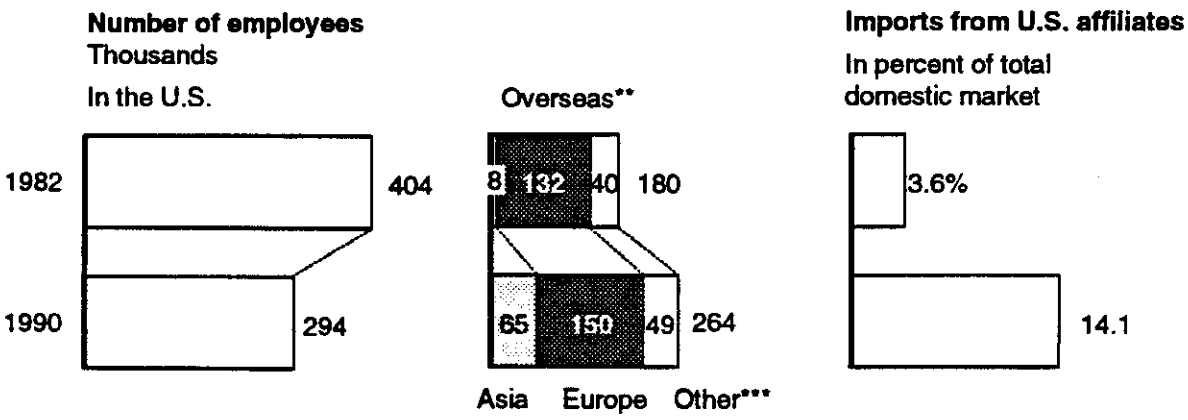
What explains these strong differences in trade? Strong price/performance requirements forced U.S. and European vendors to look for the best possible source and to produce at the best location in the world. Low-end peripheral equipment and computer-related parts are relatively labor intensive. This equipment, as well as low-end PCs, are thus often sourced from Southeast Asian countries and partially from Japan. As a result, the U.S. and Europe increased their imports from Asian countries (excluding Japan) from 7 percent of the total market in 1984 to more than 15 percent in 1990 in the U.S. and from 4 percent to more than 10 percent in Europe. Japan, however, continued to produce a large part of these products domestically. Not all of this increased sourcing took the form of trade, however. U.S. companies often increased employment in Southeast Asia through subsidiaries (Exhibit 14).

Germany's and France's trade performance is strongly dependent on how U.S.-based manufacturers with significant production share (about 60 percent) behave in European markets. The product shift to PCs significantly affected Germany's and France's trade performance. In the 1960s and 1970s, major U.S.-based mainframe manufacturers established their European plants in each country to gain market access. In the PC era, reduced profit margins, standardization and

Exhibit 14

GLOBAL DISTRIBUTION OF EMPLOYMENT IN HARDWARE*

Companies headquartered in the U.S.



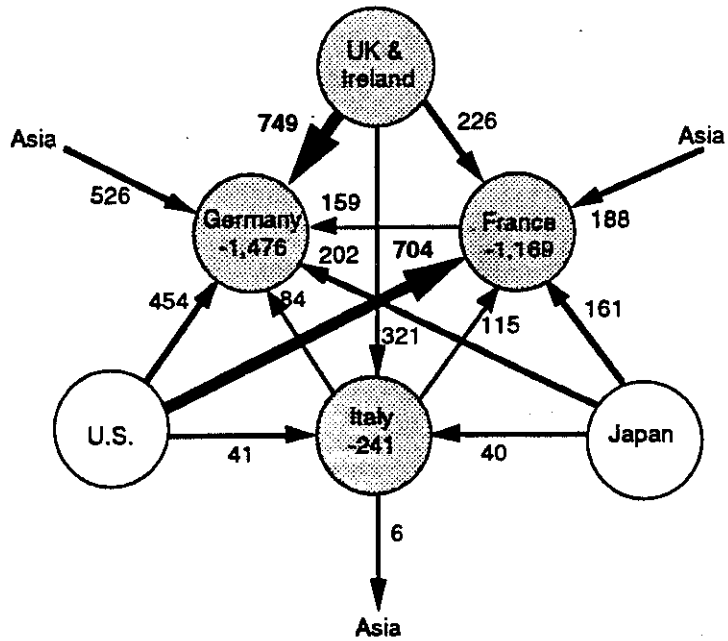
* Including office equipment
** Employment of U.S. affiliates overseas
*** Including Japan
Source: U.S. Direct Investment Abroad; OECD; McKinsey estimates

Exhibit 15

NET TRADE FLOWS IN EUROPE 1990

Computer systems*

$ Millions



* Excluding peripheral equipment and parts

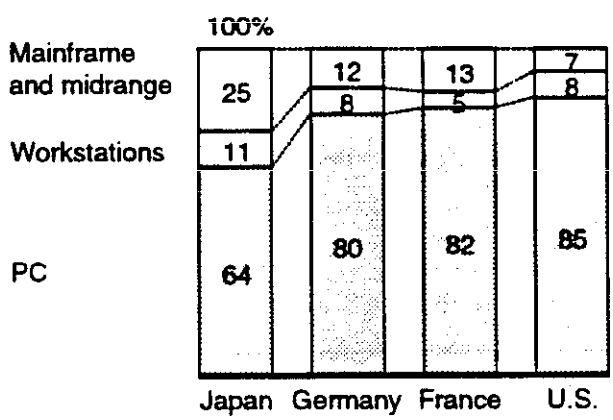
Source: TRADSTAT

Exhibit 16

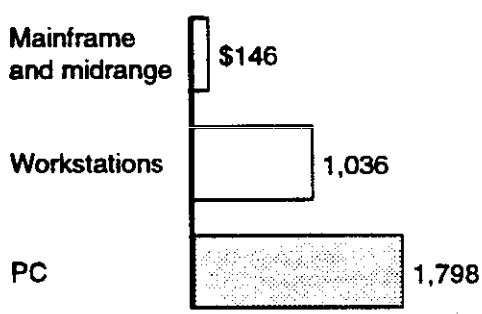
PRODUCT MIX AND PERFORMANCE IN HARDWARE 1991

ESTIMATE

MIPS* consumption by product
Percent



Performance per price
MIPS/$



* Millions of instructions per second

Source: Dataquest; McKinsey analysis

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automation led U.S. PC manufacturers in Europe to focus on one European plant. The UK (Scotland) and Ireland were more attractive in terms of total costs because of cheaper labor costs and government subsidies available for high-tech industries. More than half of Germany's trade deficit in computer products comes from the UK and Ireland (Exhibit 15). European-based manufacturers, such as Bull and Siemens-Nixdorf, are strongly focused on domestic markets, sometimes receive government support and face strong unions at home. For these reasons, they did not significantly shift production abroad.

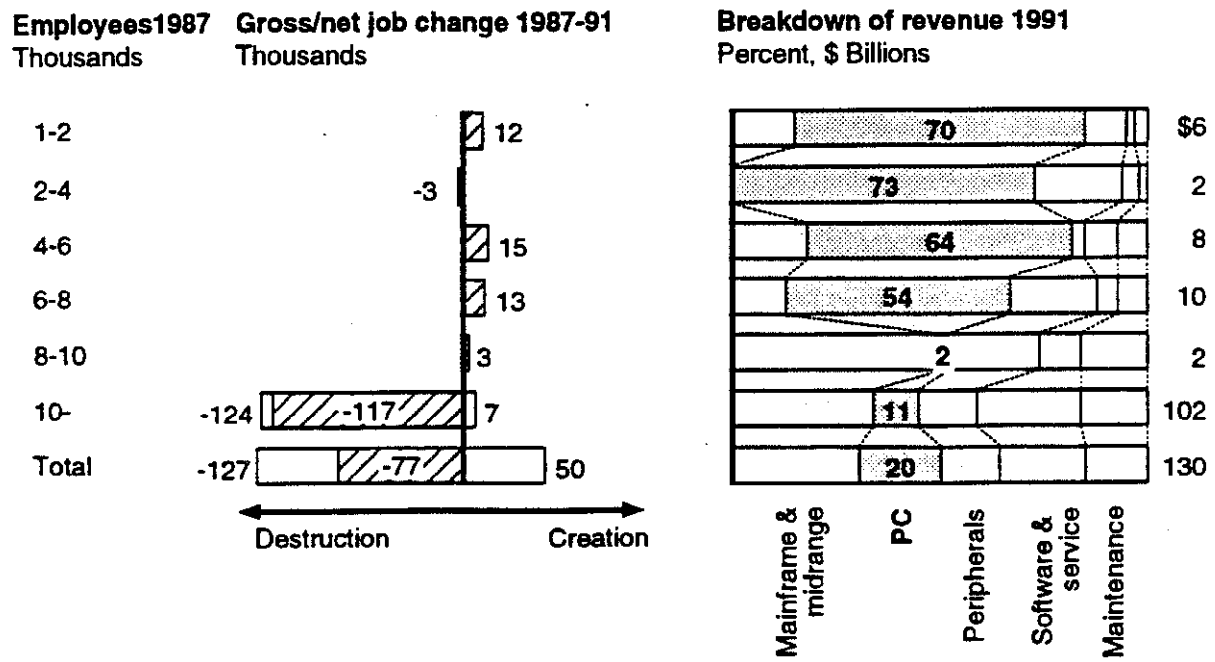
Only Japan experienced an improvement in its trade position. Several factors help explain this. With limited competitive pressure from foreign manufacturers before 1991, Japan-based producers had little pressure to source less expensive components and products abroad. Relatively low wages were available at small firms which were often closely linked to larger firms as subcontractors. Also, companies based in Japan were very reluctant to relocate plants overseas because in order to keep employees domestically. In addition, innovation in key components and peripherals also led to a better trade performance, especially compared to Europe. Laser printers and LCDs are good examples of this innovativeness.

2. Vertical disintegration led to scale economies for specialized players which resulted in strong productivity gains in the U.S. and Europe. The analysis of productivity in different subsectors of the computer industry illustrates how vertical disintegration leads to productivity increases across different steps of the value-added chain. The success of Intel, Compaq, Microsoft and EDS is, to a large extent, due to the fact that their focus on individual steps in the business system allowed them to achieve scale economy and best practice more easily than integrated suppliers. Together, they can provide better value to the customer than one integrated supplier could in the 1970s. Vertical disintegration in the U.S. is thus at the source of its overall faster productivity growth driven by scale economies for specialized players. This productivity improvement by the transition from manual based to mass production process can be achieved only by product shifts from mainframes to PCs in hardware, and from customized to packaged software. Specialized players produce these standardized products in both hardware and software more efficiently.

- **Hardware**. Two product shifts led to strong productivity gains in the U.S. First, the assembly of PCs is more productive than that of mainframes and midrange systems. PCs and workstations are usually manufactured by highly automated processes whereas mainframes still rely on manual assembly. For example, one NEC plant with around one quarter of the whole Japanese PC production uses less than 50 assembly employees. Therefore, PCs can achieve significantly higher performance per price than other computers. The U.S. shifted to this more productive segment earlier (Exhibit 16). This directly explains its employment performance. Employment increases in PCs could not compensate for employment reductions in mainframes (Exhibit 17), not even in the U.S. where PC sales increased most rapidly over the decade.

Exhibit 17

U.S. NET JOB CREATION AND PRODUCT MIX IN HARDWARE*

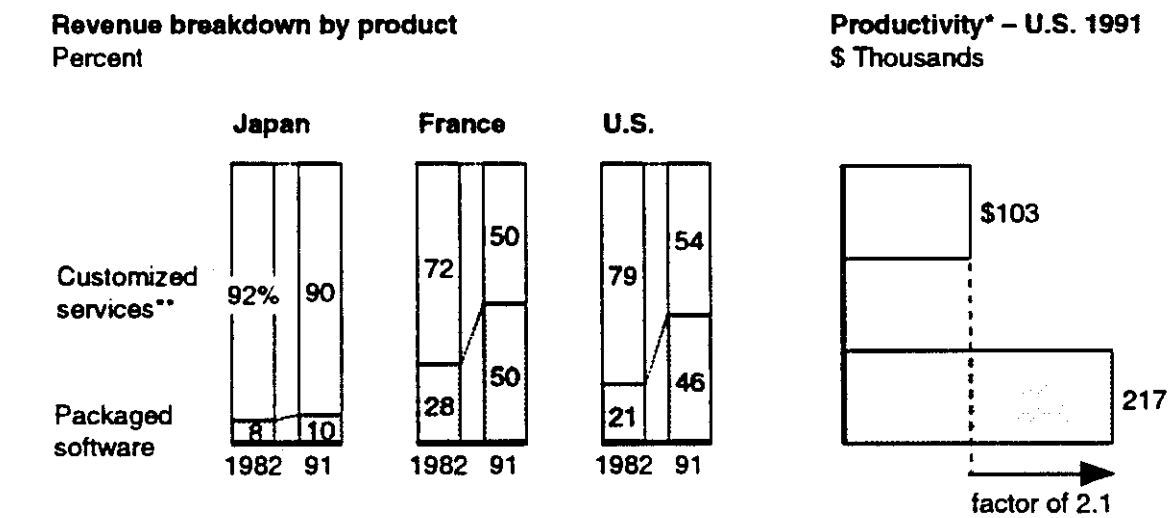


* Worldwide employment of companies headquartered in the U.S.

Source: Gartner Group; McKinsey analysis

Exhibit 18

PRODUCT MIX AND PRODUCTIVITY IN SOFTWARE AND SERVICES



* Revenue per employment

** Including customized software, data processing, other services

Source: County Business Pattern; Census of Services; CBEMA; MITI; INSEE; McKinsey analysis

Therefore, the product shift from mainframes to PCs negatively affected U.S. manufacturing employment. In a second product shift, the U.S. today produces less peripherals and more computers. Much of the labor intensive assembly of keyboards, disk drives and printers has been transferred abroad. This again resulted in an increase of average productivity. Japan's continued growth in mainframes and midrange computers, as well as its maintenance of peripherals production in Japan, resulted in a slower productivity growth. Germany and France, however, underwent product shifts similar to those of the U.S., since the U.S.-based companies control a large part of their production. Differences in productivity growth between the U.S. and Europe can be explained by the performance of national players in Europe, which is affected by government intervention.

Product shifts do not fully explain productivity improvements. Productivity has also increased due to continued production process improvement. However, these process improvements seem to be similar across countries. Therefore, we believe that they are not a significant factor in explaining productivity growth differences across countries.

¶ **Software and services.** Product shifts also happened in software and services. The mass production of packaged software and the outsourcing of services to specialized and highly skilled suppliers resulted in significant productivity improvements. New, small and independent software firms were able to compete with the established customized software units of integrated manufacturers. Packaged software is more productive than customized software.

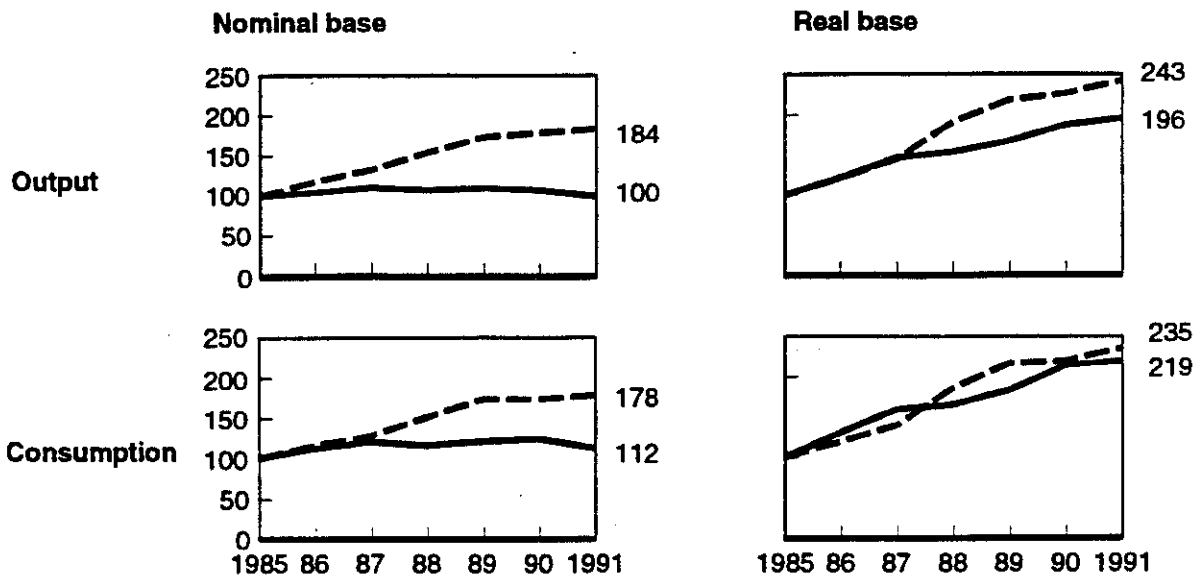
The U.S. and Europe experienced a drastic product shift to much more productive segments, i.e., packaged software (Exhibit 18). The effect of this product shift on employment can also be observed in occupational data as we discussed before (Exhibit 8). In the U.S., employment of programmers and operators (linked largely to customized software for mainframe systems) peaked around 1988. The decrease is especially dramatic in operators. The number of computer analysts continued to grow. This category includes systems integrators, which are to some extent linked to the new, network-based computer environments. The increase in computer analysts and data entry employment was not enough to maintain overall employment growth. The fact that occupational data show a slower growth than industry data in every country analyzed also indicates productivity gains. Specialized firms are likely to have higher skills and scale economies.

In Japan, a large number of software and services firms are subcontractors, or even subsidiaries, of large scale computer hardware manufacturers. Software firms tend to associate themselves with the different hardware providers and mostly focus on customized programming for mainframe computers, which grew throughout the

Exhibit 19

OUTPUT AND CONSUMPTION GROWTH RATE IN HARDWARE 1985-91

Measured by domestic price deflators in each country, Index: 1985 = 100



Source: Elsevier Advanced Technology; BEA; Ministry of Finance; McKinsey analysis

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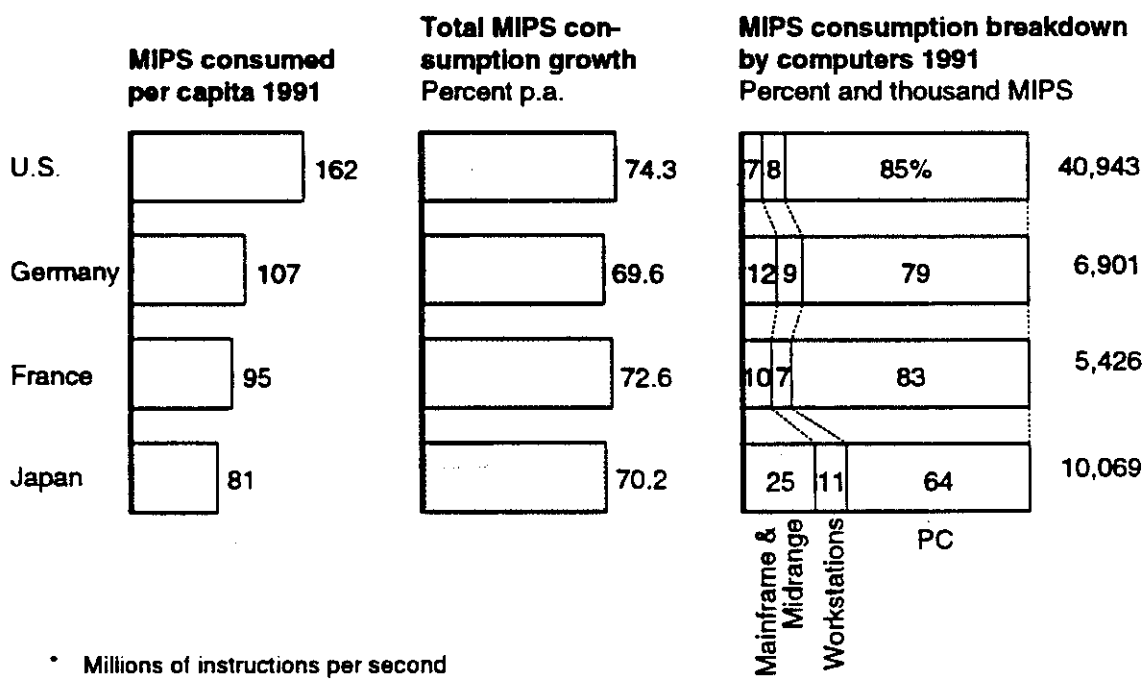
Exhibit 20

CONSUMPTION GROWTH RATE IN HARDWARE 1985-91

ESTIMATE

Measured by MIPS*



* Millions of instructions per second

Source: Dataquest; IDC; JEIDA; McKinsey analysis

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last decade. As a result, contrary to the U.S., packaged software accounts for only about 10 percent of revenues in Japan. The continued importance of customized software hindered the productivity growth and, as a result, helped employment. In France, productivity in software and services grew as fast as the U.S. between 1982 and 1991. In the last few years of this time period, however, producers in France were unable to keep up with those in the U.S.

3. Innovative new products and services (PCs, packaged software) were adopted much faster in the U.S. and Europe since large productivity gains stimulated domestic demand through drastic price reductions. This effect was especially important in the U.S., which was able to maintain fast growth in domestic consumption despite its significantly higher computer penetration. Overall, differences in domestic consumption growth (in real terms) are small across all countries analyzed. But in Japan, much of this growth is due to catching up from a low penetration, while the U.S. and Europe benefited from a "positive productivity loop."

Conventional wisdom indicates that lower consumption growth in the U.S. is an important causal factor for lower output growth. It is true that nominal revenue growth shows a significantly slower growth rate in the U.S. However, nominal revenue growth masks important differences in the evolution of prices. Price changes vary significantly across countries. The price deflators show that prices of computer hardware declined much faster in the U.S. than in any other country. The reliability and comparability of price deflators provided by each country is often questioned. Despite their deficiency, we used the deflators to calculate indicators of real growth. We did, however, compare these results to physical measurements (i.e., growth in MIPS consumption per year) in order to confirm our findings.

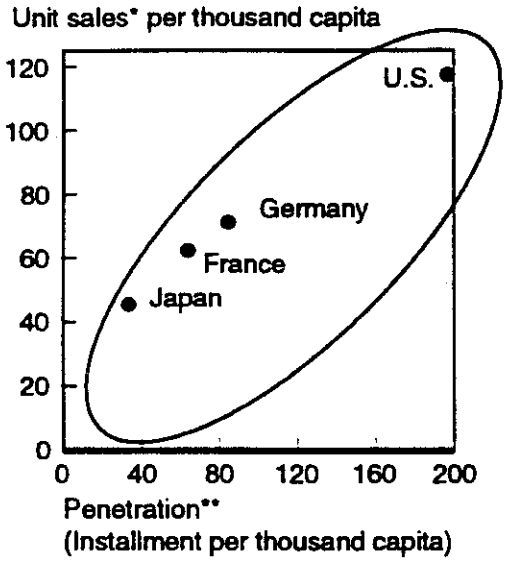
Both measures show similar results. U.S. real growth of consumption continues to grow even after 1985 when hardware employment started to decline (Exhibit 19). These figures indicate that there is virtually no difference in consumption growth between the U.S. and Japan. Estimated growth in MIPS consumption also indicates that the growth rates are similar in all four countries (Exhibit 20). The high growth in the U.S. is mostly driven by PCs, whereas Japan increased its installed computing power mainly through high growth of mainframe and midrange computers. Based on these two proxy measures, we judge that the differences in real consumption growth in the U.S., Europe and Japan are not an important explanatory factor for employment performance.

However, these real consumption growth figures mask two underlying factors. It seems certain that part of the continued strong growth of the U.S. is due to its drastic decline in prices. Its purely exogenous demand may be growing slower than other countries who are catching up. But by reducing its prices, the U.S. computer industry achieved the highest PC unit sales per capita despite its high penetration. (Exhibit 21). This is what we refer to as a "positive productivity loop." There is no way to separate the exogenous part of real demand growth from the one induced by lower prices. Nevertheless, we believe that it is

Exhibit 21

PC PENETRATION AND SALES

Correlation between penetration (stock) and sales (flow)



* Accumulated for 1989-91

** In 1989

Source: Dataquest; McKinsey analysis

Source of PC stock change

Unit per thousand capita

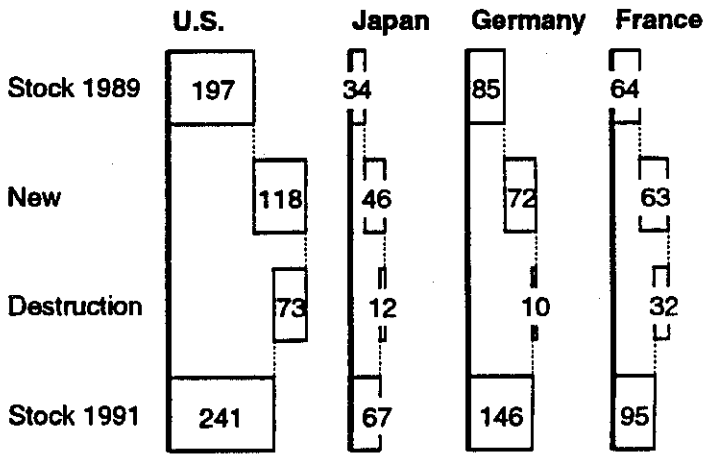
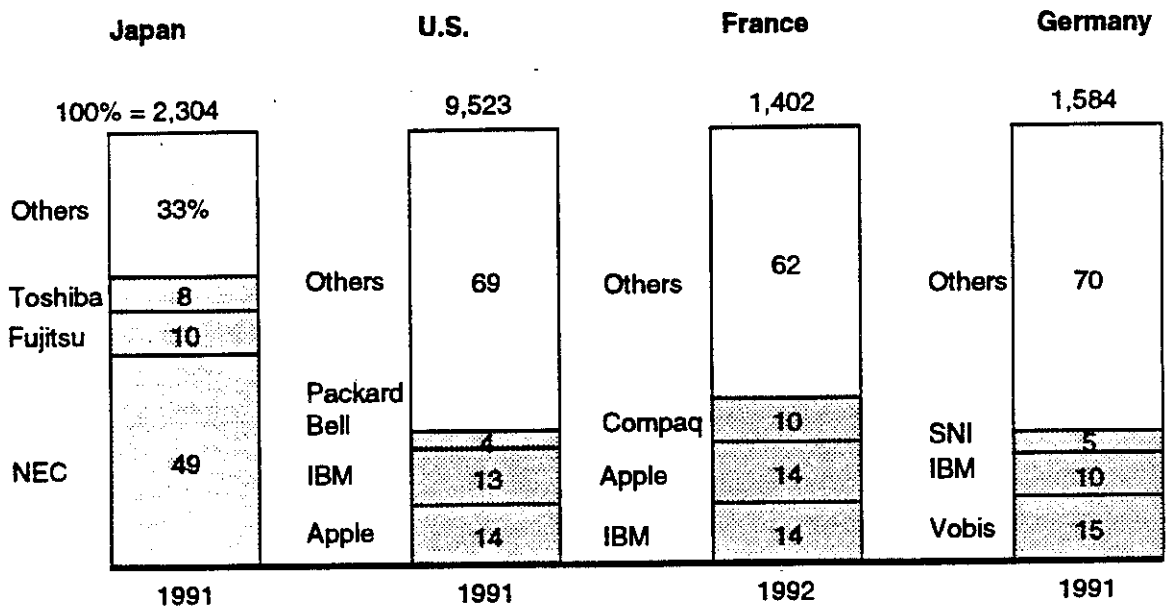


Exhibit 22

COMPETITIVE INTENSITY

PC shipments by vendor

Percent, thousands of units



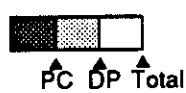
Source: IDC; Nikkei Computers

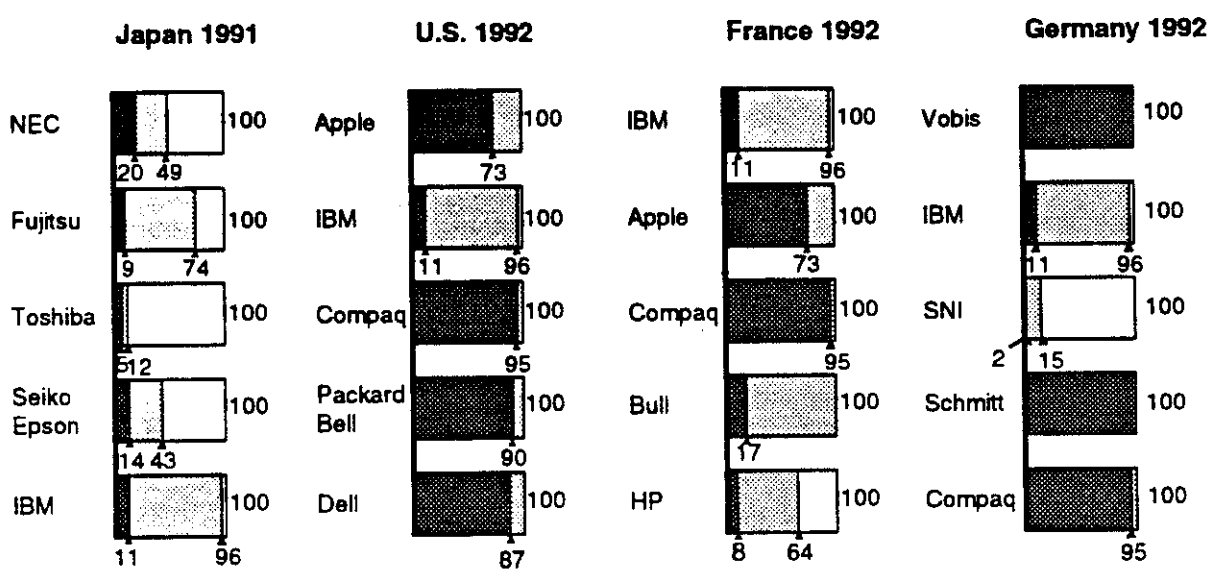
Exhibit 23

BUSINESS FOCUS

PC and data processing (DP) revenues of top 5 PC companies

Percent of total companies' revenue





Source: IDC; Gartner Group; McKinsey analysis

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significant in the U.S., somewhat important in Germany and France, and much less important in Japan.

The discussion above and the analyses on real growth are largely related to hardware consumption. In software and services, we estimate real output growth to be highest in Japan, followed by France and the U.S. Output growth is closely linked to domestic consumption since trade plays a minor role in this subsector. Since there are no comparable price deflators available in this subsector, it is hard to argue that a "positive productivity loop" similar to the one in hardware played an important role. We, therefore, attributed much of Japan's higher output growth in software and services to faster exogenous demand growth.

4. High competitive intensity is the key driver of vertical disintegration. We have shown that vertical disintegration affects productivity through scale economies of standardized products, and that it affects output through both trade and price-induced domestic consumption growth. The question then becomes: what determines vertical disintegration and why is Japan lagging in this structural change compared to other countries despite the rapid dispersion of new technology? We find differences in competitive intensity to be the critical differentiating factor, with competitive intensity in Japan being significantly lower than any other country.

Differences in competitive intensity can be illustrated by several indicators. One proxy is market fragmentation. The PC segment is highly fragmented in the U.S. and Europe, while Japan's sector is highly concentrated (Exhibit 22). Also, top Japanese PC manufacturers are strongly diversified, while the U.S. and European PC manufacturers focus more on PCs (Exhibit 23). This indicates that Japanese manufacturers had less of an incentive to push new products such as PCs, since they only cannibalize their existing product lines.

Product, capital and labor markets

Based on our discussion of industry dynamics, we need to explain what causal factors led to lower competitive intensity, and thus to a lower degree of vertical disintegration, in Japan compared to other countries. In our highest level of causality, we find that product market factors (distribution channels, language barriers, etc.), capital market factors (ownership pressure, venture capital, etc.) explain much of the differences in competitive intensity. In some instances, we find that factors in the product, capital and labor markets also influence trade or productivity in a direct way. We start by discussing the relative importance of the product market.

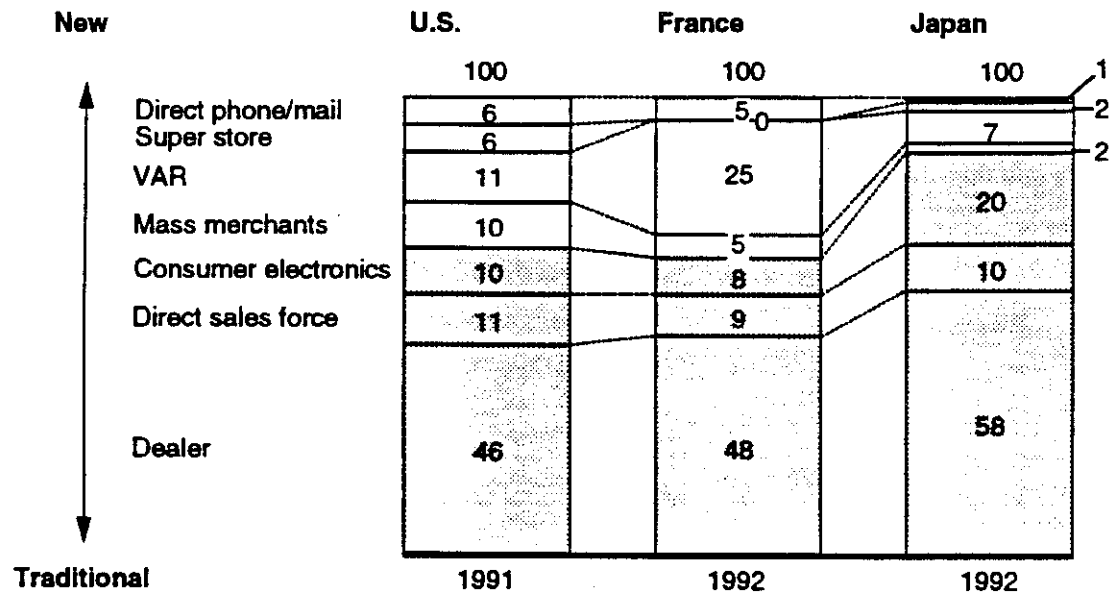
1. Product market factors. A number of factors led to a lower degree of competitive intensity in Japan.

- **Structure of distribution channels.** Price pressure from distribution channels is lower in Japan than other countries. Japan's closed

Exhibit 24

PC DISTRIBUTION CHANNEL STRUCTURE

Unit sales share by channel



* Value-added resaler

Source: Dataquest

distribution structure retarded its industry evolution. Japan's channel structure is characterized by a large share of traditional channels and less variety compared to the U.S. and France (Exhibit 24). Its channels are dominated by traditional outlets, which are usually controlled by hardware vendors (sometimes through the *keiretsu* system). Therefore, they exclusively tended to deal with one brand. Hardware vendors largely control the retail price, and have avoided distribution through mass merchants in order to maintain price. In the U.S. and France, emerging, independent and new channels deal with several brands of computers at the same location. This is true even for traditional dealers. Germany has a high degree of "advanced" retail channels including direct mail. These channels exert significant price pressure on vendors.

- **Language barriers.** Japanese language barriers also retarded the structural change of the computer industry in Japan through less competitive pressure from foreign suppliers. The Japanese market had been naturally protected from foreign competition due to language barriers. The interpretation of *kanji* characters was difficult with early PC hardware and software. It was only in 1992 that this natural barrier was broken up by the introduction of DOS/V by IBM. Since then, price pressure from foreign manufacturers increased significantly.

- **Skill levels.** Highly skilled PC users exerted strong pressure on vendors in the U.S. Customer skill levels seem to be different between the U.S. and Japan. Early penetration of PCs in the U.S. home market led to higher sophistication levels of customers, which consequently put pressure on vendors. At the same time, U.S. students are well educated in terms of computer usage. Japan has less than half of the PC penetration per student compared to the U.S. In elementary schools, the difference is even more pronounced. Also, PCs are often only used for word processing in Japan. This low sophistication level of Japanese users is one of the causes of slower PC penetration, affecting competitive intensity.

Trade regulation also had somewhat of an impact, directly affecting trade. High tariffs on semiconductors in Europe led to higher prices of domestic goods and thus to more imports in hardware. In Europe, a 14 percent tariff, which has been eliminated or reduced significantly by the U.S. and Japan, is imposed on imports of semiconductors. European computer firms believe that this regulation negatively affects their cost position in hardware assembly by increasing component costs from local sources. In final goods, however, almost all computers and peripheral equipment are subject to a 4.9 percent tariff throughout the Triad.

We have already discussed domestic demand growth when we analyzed the impact of productivity gains on the adoption of innovative new products. Our finding was that Japan did have a higher "exogenous demand growth" due to a catching-up effect. This was partly compensated in the U.S. and Europe by faster price-induced consumption growth.

2. **Capital market factors.** Less pressure from owners and a lack of venture capital both helped Japan maintain low competitive intensity.

- **Ownership pressure**. Strong owner pressure increased competitive intensity in the U.S., which accelerated the restructuring. U.S. firms are exposed to a higher degree of pressure from their shareholders to improve performance. It is difficult to evaluate, however, how important this factor is in explaining increased competitive intensity. Until 1991, Japanese firms had no financial problems that would have warranted a decisive action by shareholders. And in the last few years, they have started to react to the changes in their competitive environment despite the lack of strong and vocal investors.

- **Venture capital.** The availability of venture capital in the U.S. led to the emergence of the new players, which accelerated the vertical disintegration and increasing competitive intensity. The U.S. has had a much higher venture capital funding for the computer industry compared to Europe and Japan. The initial growth of Lotus, one of the most successful application software companies, depended on $3 million funding from venture capital in 1981. In 1993, $300 million of venture capital was invested in U.S. software and services firms, compared to $50 million to $55 million in Japan. Venture capital had a paradoxical impact on employment in the U.S., since it actually helped launch an industry revolution that resulted in overall slower employment growth compared to other countries.

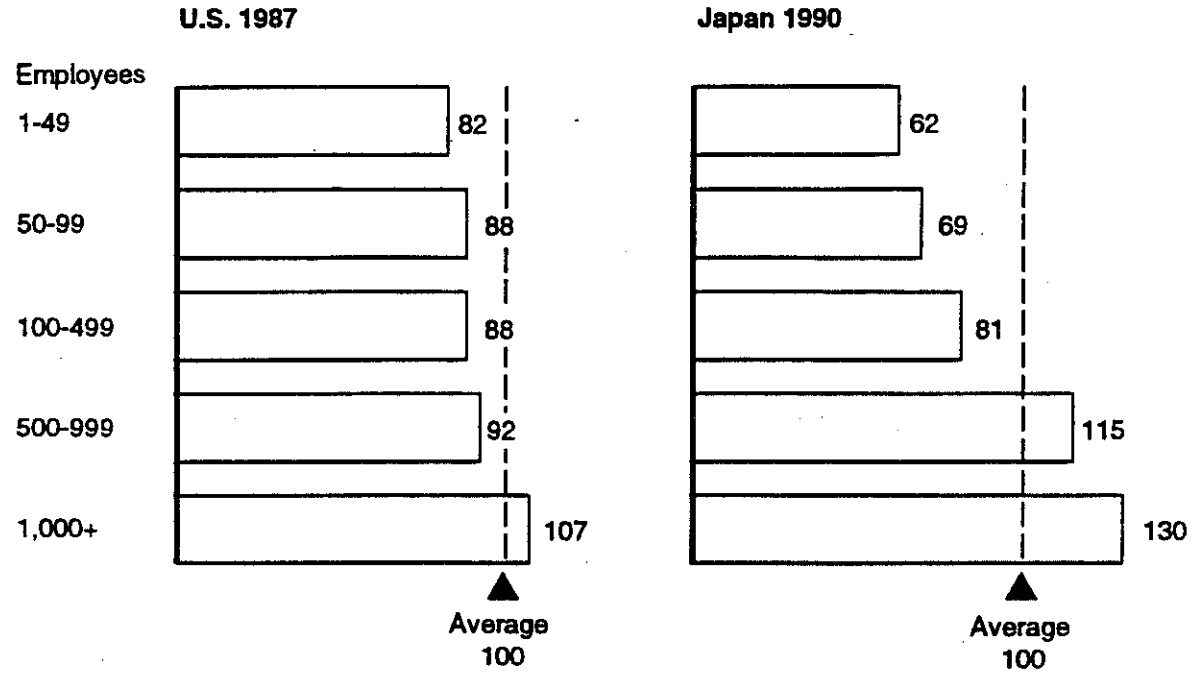
- **Government procurement and subsidies**. Government involvement retarded the restructuring of European national players in hardware. We generally found that France and Germany had a competitive intensity similar to that of the U.S. The small differences are almost entirely due to a higher degree of government involvement. Government procurement and subsidies resulted in significant advantages for national companies in Europe. Bull received subsidies of over FF11 billion between 1985 and 1993, which fully compensated its financial losses. In addition, Bull and Siemens-Nixdorf both receive around one third of their home market revenues from governments or related agencies. This allowed national companies to maintain some of their employment and led to slower productivity growth.

3. **Labor market factors.** Labor costs do not play an important role in explaining differences in competitive intensity. They do, however, provide a direct causal link to differences in trade. Low labor costs in small firms helped Japan maintain its positive trade balance.

It is true that labor costs are small in computer assembly itself, because of the high level of automation. But total labor costs include the labor share of components, which are often relatively labor intensive. In addition, pressure on profit margins forces companies to pursue the lowest cost position in the world. Therefore, wages are important in determining the location of plants. This affects

Exhibit 25

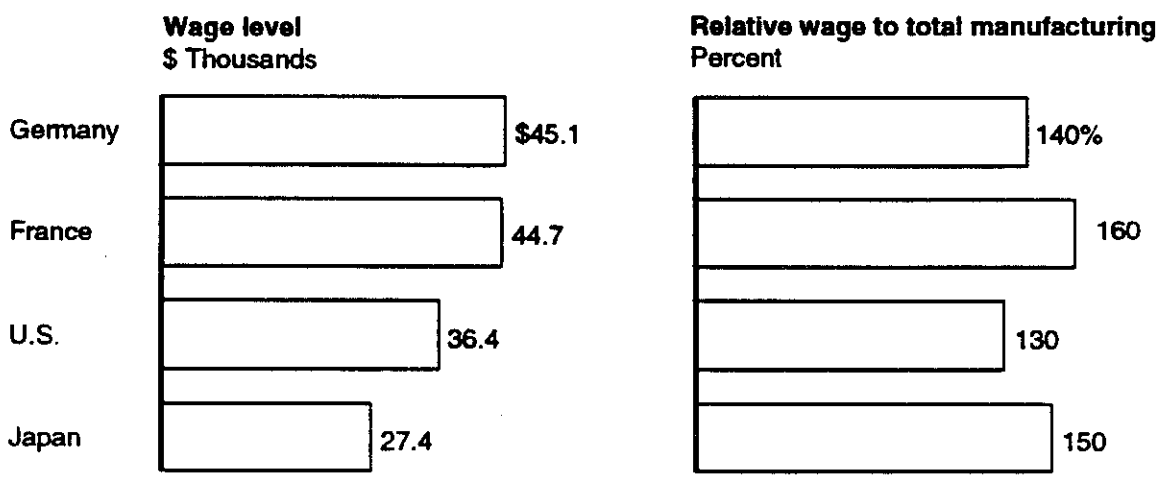
WAGES BY SIZE OF ESTABLISHMENT IN HARDWARE



Source: Census of Manufactures; McKinsey analysis

Exhibit 26

WAGE COMPARISON IN HARDWARE* 1990



* Converted by exchange rate

Source: Census of Manufactures; McKinsey analysis

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employment in each country differently. In Japan, a relatively flexible wage system allows for low wages in small firms, which helped preserve employment domestically (Exhibit 25). Also, Japan has low absolute wage levels (Exhibit 26). For U.S.-based manufacturers, high competitive intensity forced companies to locate transplants for low-end and labor-intensive products in Southeast Asia and in the UK or Ireland. The absence of tariffs within the EC attracted PC plants to the UK and Ireland rather than to Germany and France, partially due to cheaper labor costs, partially due to higher government subsidies.

We found neither availability of labor nor flexibility to be important causal factors in explaining employment differences across countries. Wage levels in the computer manufacturing industry are higher than average manufacturing wages. Computer firms thus had few problems finding employees, even in Japan in the middle of the bubble economy. Flexibility in adjusting the labor force is also not an important issue. Union power is weak both in the U.S. and Japan compared to other industries. Unions in Europe are somewhat more influential. However, when large integrated manufacturers were forced to lay off employees recently, they did so despite union protests. Between 1989 and 1992, Bull has laid off 25,500 workers, Siemens-Nixdorf 7,800 workers.

SUMMARY AND IMPLICATIONS

Technological breakthroughs changed the computer industry structure dramatically. Specialized companies at each step of the value-added chain replaced the large integrated companies of the 1970s. This affected employment in three ways. First, it led to large productivity gains in the total industry chain, leading to strong restructurings in integrated suppliers. Second, it affected output through trade and foreign direct investment. And third, it also affected output through price-induced growth of domestic consumption, leading to a faster adoption of innovative new products (PCs, packaged software). We captured this effect under "More innovation/new products" in our causality framework (Exhibit 27). Output differences were found to be more important than productivity differences, and the analysis of trade figures shows that trade explains much of these output differences. Lower price competition worked to the advantage of Japan, leading to less restructuring and lower productivity growth. The differences across countries can be mostly explained by a time lag of the structural change in the industry, which in turn is due to differences in competitive intensity. Japan was able to achieve the highest employment performance because of the low competitive intensity. The product market factors affecting competitive intensity (e.g., channel structure, language barriers) are captured under "fewer restrictions on output and competition."

What are the implications for countries that are trying to create jobs in high-tech industries such as computers?

- The U.S. has experienced the most drastic restructuring of its industry, yet it achieved the lowest employment performance. The outlook for

Exhibit 27

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Computer

Benchmark: Japan

● Important
○ Secondary
X Undifferentiating

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X				X*
• Less government ownership/support	X	X*	X				X
• Readily available capital	X	X	X				X*
Labor market							
• Low labor cost	●	●	●				●
• High availability/low benefits	X	X	X				X
• More flexibility	X	X	X				X
Product market							
• Fewer restrictions on output and competition	X*	X*	X*				X*
• More new business facilitation	X	X	X				X
• Rapid demand growth	○	○	○				●
Industry dynamics/competitive intensity							
• Better trade/FDI performance	●	●	●				●
• More price competition/restructuring	X*	X*	X*				X*
• More innovation/new products	X	X	X				X*
Higher output growth	●	●	●				●
Higher productivity growth	X	X	X				X
Lower productivity growth	○	X	X				○

* Opposite is true with strong influence

Source: McKinsey analysis

other countries is thus not very good. But the structural change which occurred in the U.S. seems largely inevitable, given the globalization of the computer industry. We expect that Japan and Europe will also experience the restructurings that the U.S. hardware sector already went through. In fact, first signs of this can be observed in all countries analyzed, with large companies in Japan and Europe announcing layoffs and restructurings. Even NEC just started to import key components for PCs from Southeast Asia. Other countries should gradually and continuously increase their competitive intensity. Holding back structural change means holding back productivity increases. This is likely to lead to more drastic restructurings and lower employment.

- The main job creation opportunities exist in services, no longer in manufacturing. The U.S. example shows that a shift of value creation from hardware to distribution, and software and services has occurred. It leads to strong job creation opportunities in these subsectors. It seems clear that hardware manufacturing is no longer an attractive job creation part of this industry. However, this does not always mean that manufacturing is declining. Manufacturing in core technologies such as semiconductors created a large number of jobs in spite of rapid productivity growth.

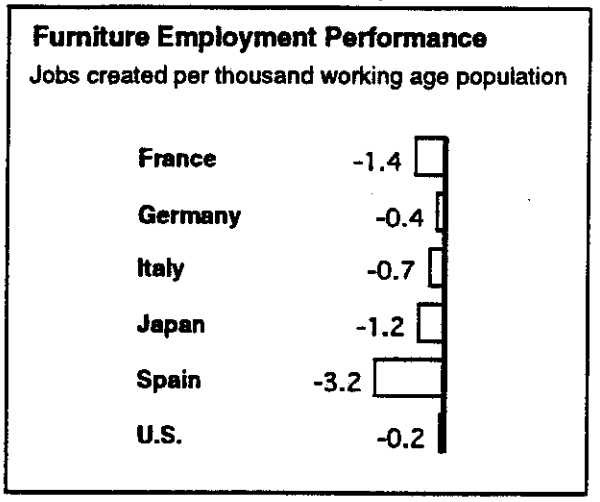
- The impact of innovation on employment differs by type of innovation. In the computer case, personal computers represent the most drastic innovation example. This negatively affected employment in the total value-added chain, since it fundamentally changed core processes of the industry and led to extreme productivity growth. On the other hand, Japanese innovation focused more on high value-added peripheral equipment. This led to job creation. The impact of innovations has to be evaluated not only from the perspective of a given industry. It is likely that personal computers had a strong positive impact on the economy as a whole.

- The computer industry provides a good example of a "positive productivity loop." Large productivity gains led to declining prices, output growth and job creation. However, the positive productivity loop works only with a highly competitive industry and fierce price competition. The reason why Japan grew faster than the U.S. is not due to a faster positive productivity loop, it is largely due to a "catching-up" effect.

- The computer industry illustrates that low competitive intensity can represent a barrier to natural evolution. The computer industry, similar to the economy as a whole, transitions from manufacturing to services. However, not all the countries underwent this transition to the same degree and we found competitive intensity to be the main differentiating factor. Japan, with a lower competitive intensity than in the U.S., ended up with more employment growth but lower

productivity. In service sector cases, we often found regulations to be the critical barrier for the evolution of the sector. The computer industry shows that other factors such as a closed distribution structure, language barriers, less ownership pressure or a lack venture capital can be just as important.

FURNITURE INDUSTRY CASE SUMMARY



As in most mature manufacturing sectors, the long-term employment trend in the furniture industry has been and will be downward. Innovation helped to slow this trend in the U.S., Italy and Germany.

Trends in furniture employment may well represent a broader pattern taking place in many low profile, mature manufacturing sectors. In furniture, some countries, such as France, lost jobs primarily because output stagnated. Others, like Japan, suffered employment declines because rapid productivity rises outstripped gains in output. Still others, such as Spain, experienced both a sharp increase in productivity and a decline in value added. The result for all three countries was poor employment performance.

In contrast, the net decline in jobs was relatively mild in the U.S., Germany, and to some extent Italy. The reason for the differing rates of decline can be found in the structure of the furniture manufacturing and retailing industries in each country, rather than in capital, labor or product market differences.

Demand was flat in the French and Spanish furniture industries primarily because new products and styles emerged more slowly in these countries than elsewhere. Consumers stuck with traditional designs, and producers were hesitant to invest in new projects. In contrast, flexible networks of small Italian firms flourished by rapidly bringing new ideas to market. Large German retailers and manufacturers competed by spending heavily on design, equipment, and promotion, while U.S. companies focused on creating and expanding specialty niches.

Furniture manufacturers in all countries face constant financial exposure due to highly cyclical demand, limited financial reserves, and few barriers to entry or exit. In order to survive, furniture makers have found ways to hire people when needed and to lay them off during down cycles. As a result, employment is not as sticky as it is in some other sectors. Nearly 30 percent of the furniture workers in Spain, France and Japan, for example, lost their jobs in the global recession of the late 1970s and early 1980s. Employment rebounded somewhat in the second half of the 1980s as real output expanded.

Traditional furniture manufacturers can expect additional employment pressure from low-wage countries in the near future, although it is highly unlikely that the majority of the industry will shift production. While labor-intensive componentry will be increasingly outsourced, design and assembly will still be done close to the consumer.

Employment in the furniture industry

The furniture industry is a relatively small and fragmented part of each of the national economies we have examined. It employs less than 1 percent of the labor force in each country and tends to be composed of a large number of very small firms. On their own, trends in furniture employment explain little of the aggregate employment performance differences across countries. We believe, however, that these trends may represent a broader pattern that is taking place in many low profile, mature manufacturing sectors.

Furniture and similar industries can be separated from higher profile manufacturing industries such as auto and computer production and from emerging service industries like media and banking using two sets of factors:

- **Constant financial exposure.** Highly cyclical demand, limited financial reserves, and few barriers to entry or exit cause many furniture manufacturers to face the real possibility of bankruptcy each year. As a result, employment is not as sticky as it is in some other sectors. In order to survive, furniture makers have found ways to hire people when they are needed and lay them off during down cycles. Larger companies with deeper pockets run a greater risk of being forced to pay generous severance benefits if they behave in a similar manner. When this type of action has not been sufficient, bankruptcies and company closings have provided rapid downward adjustments in employment

- **Relatively small decision making units.** This structure is one reason the furniture business has been slow to internationalize. Small family-run businesses often lack the desire, scale and resources to shift production abroad even when there are relatively substantial cost differences. These entrepreneurs look for new markets and even cross border affiliations, but their loyalty and their companies are likely to remain primarily local.

This report is divided into four sections. The first gives a brief definition and description of the elements of the furniture business we are examining. The second describes the employment performance of the six countries covered in the case. The third section explores the reasons for the different rates of employment decline across countries, and the final section synthesizes our findings and provides implications for the future.

THE FURNITURE INDUSTRY

The furniture industry is defined rather broadly in this case. It includes all of the manufacturing activities that are captured under the two-digit industrial codes for Furniture and Fixtures in the U.S. and Japan. This definition emphasizes the final use of the product rather than the material that is used to produce it, and thus cuts across several of the material-based industrial classifications used by the statistical offices in many European countries. Exhibit 1 identifies the major industrial categories used in our analysis.

Using this definition, the furniture industry encompasses two large blocks of economic activity and a number of related products. Household furniture represents an average of about 65 percent of the total output of the sector, while office furniture accounts for another 10 to 20 percent. These two subsectors are highly independent in almost all the countries examined. The producers, distribution channels and retailers overlap very little, if at all, and purchasing behavior differs substantially.

Household furniture manufacturing tends to be highly fragmented, with many small companies occupying narrow product niches. The production process is usually craft-based, relying on a mix of skilled designers, trained woodworkers and ordinary laborers. Some of these companies operate retail storefronts and use these as significant market outlets. The majority sell through specialty furniture retailers, department stores, and to some extent, discounters. Supplier relationships are often forged during one of the large furniture expositions held in each of the major markets, though buying co-ops are emerging as powerful middle men in many countries.

Household furniture purchases tend to be major events for customers. In many cases a household will spend a great deal of time and money selecting a piece that projects the style they want for their home. Purchases are often postponable and thus highly tied to economic cycles.

Office furniture production is usually more concentrated. A handful of companies dominate the market in most countries. The materials used by some of these manufacturers (metal rather than wood) and their scale allow office furniture makers to have factories that are industrial in size and approach. Small volume and difficult to produce products are often outsourced to smaller, less automated subcontractors. Larger manufacturers tend to have a direct sales force and a dealer network that interact directly with customers or with the architects and interior designers who are planning new buildings or renovations. Smaller companies utilize independent dealers and retailers, or sell through one of the larger manufacturers.

Office furniture purchases are even more closely tied to economic cycles. Sales of single item pieces do not change dramatically over time, but bulk sales to companies that are expanding or upgrading their office environment increase rapidly during good economic times. Cost plays a significant role in purchases, but it is often less important than delivery and product functionality.

Exhibit 1

INDUSTRY DEFINITION

National census industrial codes

	France	Germany	Italy	Japan	Spain	U.S.
Total furniture	49/2113	54 (most of)	36.1	17	79	25
Household						
Wood	4901	5421 (part of)	20/36.14	1711 (part of)	79	2511
Upholstered	4902 (most of)	5424	36.11	1711 (part of)	79	2512
Metal	2113	3847 (part of)	36.121	1712 (part of)	316.6*	2514
Mattresses		5427	36.15	1713	?	2515
Office	49/2113 (part of)	5421/3847 (part of)	36.12	1712 (part of)	79, 316.6	252
Public buildings, partitions and other	49	5411	–	172/173/179	–	253/254/259

* Estimates for these numbers are used in most of our analysis

Source: National establishment surveys

Partitions, sliding doors and screens, public furniture, and other special categories account for up to 25 percent of total furniture output, but they are classified in different subcategories in each country. These smaller subsegments of the industry can have dramatic effects on the aggregate data. In Japan, for example, the sliding doors and screens subcategory make up 20 percent of the employees and 40 to 50 percent of the registered enterprises during the period examined. The "other" category is much smaller but it is the fastest growing part of the business. Unique factors play a role in explaining some of the output and employment trends in these subcategories, but the broad pattern can be attributed to the same factors that influence the office and household sectors.

EMPLOYMENT PERFORMANCE

Furniture employment fell in all countries except the U.S. during the period from 1980 to 1991, and even in this "benchmark" country the slight increase in employment did not keep pace with the expansion of the working age population. As Exhibit 2 shows, the net decline in jobs was relatively mild in the U.S., Germany, and to some extent Italy, with 0.2, 0.4 and 0.7 jobs lost per thousand people in the working age population (after adjusting for growth in the working age population). The furniture industries in Spain, France and Japan were less fortunate, with losses of 3.2, 1.4, and 1.2 workers per thousand working age population.

The decline in this measure for Spain and Italy can be attributed in part to the relatively large size of their furniture industries. The Italian furniture industry employed 0.55 percent of the working age population, while the Spanish industry employed 0.75 percent in 1980. Spain's level is more than twice that in Japan or the U.S., and 30 percent above Germany, the next highest country. The same percentage decline in furniture employment, thus, would have a greater overall effect on the economies of Spain and Italy than on the other countries analyzed. Spain's poor performance also reflects the rapid rise in the working age population in that country with 0.7 of the 3.2 drop due to population growth.

A comparison of 1980 and 1991 employment levels tends to understate the sector's importance in gross job creation and destruction since it masks large cyclical swings in output and employment. In most countries much of the employment drop in furniture came in the late 1970s and early 1980s (Exhibit 3). The global recession at that time forced a downsizing in the industry from which it never fully recovered. The depth of restructuring was especially severe in Spain, France and Japan, the three countries with the worst overall employment performance. Together they lost approximately 30 percent of their furniture workers during this period. In the second half of the 1980s, real output rebounded and employment expanded as well. Germany stands out during this period as the country with the most robust recovery. By the early 1990s another recession had begun in most parts of the world, and furniture employment began to decline again.

Exhibit 2

EMPLOYMENT PERFORMANCE IN FURNITURE 1980-91

* Adjusted for change in the working age population

Source: BLS; VDM/Statistisches Bundesamt; Japan Statistics Bureau; SESST/UNIFA; AIDIMA; CSIL; McKinsey analysis

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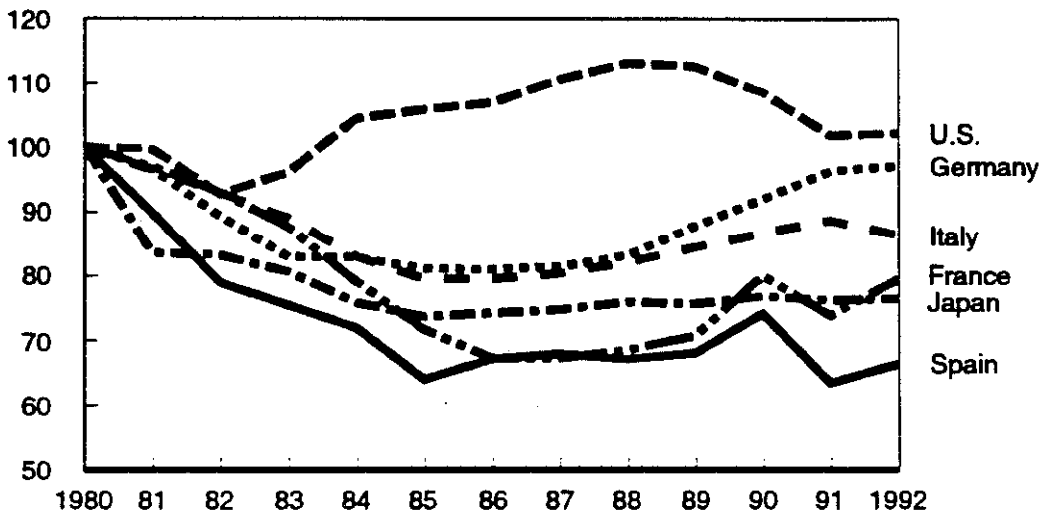
Exhibit 3

FURNITURE INDUSTRY EMPLOYMENT

Index: 1980 = 100



Source: National establishment surveys; industry associations; McKinsey analysis

Furniture employment varies seasonally as well as cyclically. Data from the U.S. indicates that there is a persistent 5 to 10 percent difference in employment between the low point in July and the higher period in December and January. Interviews with Japanese office furniture manufacturers revealed an even more dramatic pattern. Output in March was more than double that in August. Variations in employment were not as wide, though there was extensive use of temporary workers and overtime during the spring. Industry sources in Japan, Italy, the U.S. and Germany all suggested that flexible employment levels were necessary to match demand and supply, but this appeared to be a problem only in Germany, and even there work shifting during the course of a year was allowed. The extensive use of temporary workers and work shifting during the volatile 1980s reflects a slight adaptation of the techniques manufacturers' developed to deal with these seasonal fluctuations.

The sector is highly fragmented in all countries. Hundreds of companies with fewer than 50 employees serve specialized regional or niche markets. Average firm size is well under 100 people in all countries except Germany, and even in that country more than 40 percent of companies have less than 50 employees (Exhibit 4).

CAUSES FOR EMPLOYMENT DIFFERENCES

Employment reductions in a relatively mature, primarily domestic manufacturing industry such as furniture are not too surprising. Output growth has been limited by moderate rates of household formation and an increasing number of goods competing for consumers' discretionary spending, while productivity increases have become more possible and necessary. What is surprising is the differing rates of decline, and the relatively minor inroads low wage countries have made in this labor-intensive industry.

The structure of the furniture manufacturing and retailing industries appears to hold the answer. Countries with dynamic, competitive furniture markets that promoted flexibility, innovation and high levels of initial productivity performed better than more conservative industries. The positive effect of these factors can be seen in higher levels of output growth (measured in value added), better local consumption and trade positions, and less of a need to "catch up" in productivity.

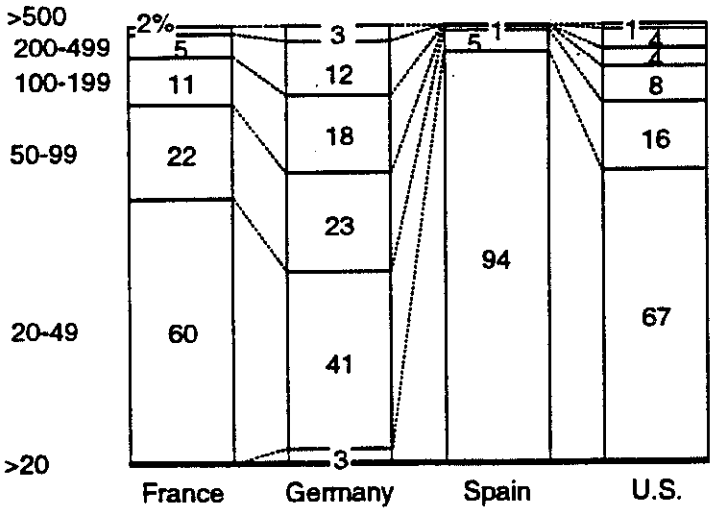
Each country's employment performance can be disaggregated into an output growth component and a productivity change component. Exhibit 5 shows this relationship. France's poor employment performance clearly comes from its decline in real producer value added, while Japan's decline in employment is due to its particularly rapid increase in productivity. The poor employment performance in Spain stems from both a rapid increase in productivity and a decline in value added. The other three countries show remarkable consistency on both factors, with value-added increases of around 2 percent and productivity increases of 2 to 3 percent.

Exhibit 4

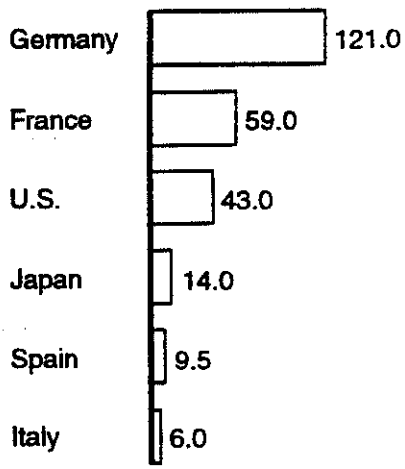
FURNITURE INDUSTRY STRUCTURE 1991

Number of employees

Percent of companies by number of employees



Average size of furniture manufacturing establishments



Source: County Business Patterns; VDM; SESSI; AIDIMA; McKinsey analysis

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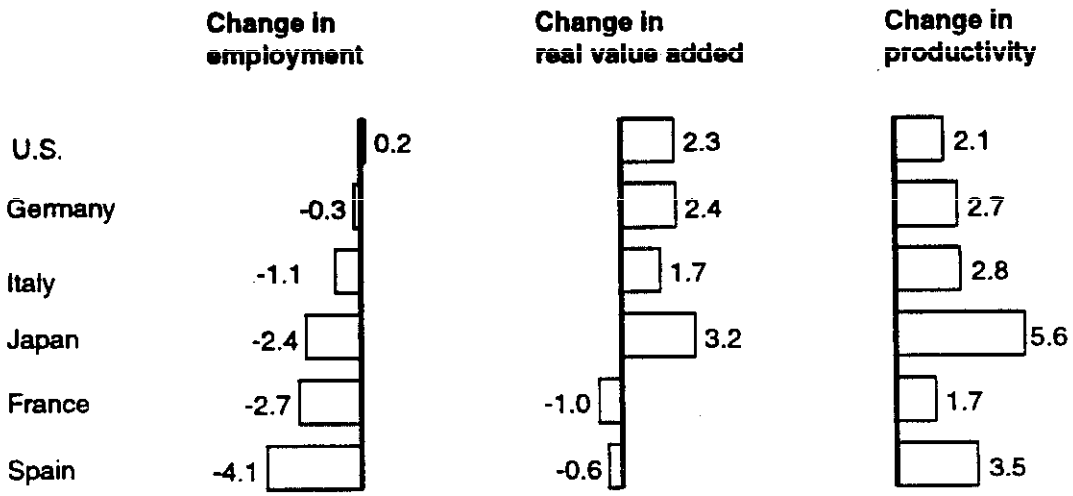
Exhibit 5

PRIMARY SOURCE OF CHANGE IN EMPLOYMENT 1980-91

ESTIMATE

Percent p.a.



Source: National establishment surveys; industry associations; McKinsey analysis

Low output growth due to low consumption particularly in France and Spain

The most striking difference between France and Spain and the countries with flatter employment performance is the rate of increase in real consumption. Demand in both countries was essentially flat from 1980 to 1991 while many other countries saw increases of 3 percent per year. Exhibit 6 illustrates this dramatically by showing the effect consumption growth had on employment. If trade flows and productivity had remained unchanged, France would have increased its employment 4 percent and Spain would have expanded 6 percent. These rates are small next to the 35 to 40 percent figures achieved elsewhere.

While fully comparable segment data is not available, it appears from Exhibit 7 that real declines in household furniture spending (together with the related other category) were the primary source of the overall declines, though the expanding office furniture segment also grew more slowly in France, Italy, and probably Spain than in Germany, the U.S. and Japan.

Furniture spending per person in France and Spain has always lagged rates in Germany and Italy. Rather than catching up during the 1980s, demand in France and Spain stagnated and fell further behind. Exhibit 8 shows the extent of this gap. Per capita spending in France and Spain in 1991 was 35 percent below that of the U.S, and Japan and less than half of Italy's and Germany's levels. This decline in expenditure appears to be part of a broader reduction in the fraction of income that customers devote to furnishing and equipping their homes (Exhibit 9).

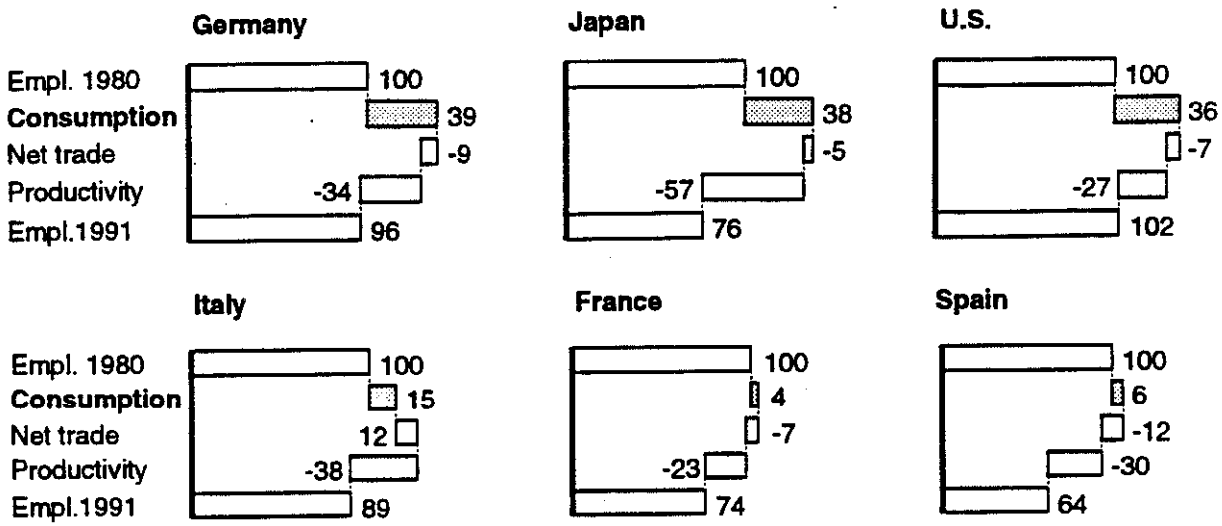
Household furniture demand is a function of the number and size of households to be furnished, the amount of furniture preferred in a given space, the frequency with which pieces are replaced, and the quality and price of the average item sold. Exhibit 10 shows that customers in the U.S. buy more furniture than those in France and Spain primarily because of the first factor – they live in larger houses and apartments. Spending per square meter in the U.S. is actually the lowest of all the countries examined. Differences among the European countries appear to be more related to spending per square meter than living space. Germans spend almost two and a half times more per square meter than customers in France. Adequate data does not exist on the amount of furniture installed in residences in different countries; so it is difficult to determine whether Germany 's higher consumption comes from higher levels of furniture usage or more rapid turnover, though experts suggest that both factors are important.

Demographic changes during the 1980s might partially explain why the U.S., Japan and Germany had particularly strong growth rates (Exhibit 11). U.S. population, households, and living space increased rapidly. Japan increased its living space and number of households as it upgraded its housing stock. Germany also experienced a significant increase in households despite a slow population growth. Reunification also contributed to increased furniture spending during the end of the period we examined.

Exhibit 6

IMPACT OF EACH FACTOR ON EMPLOYMENT 1980-91

Employment index: 1980 = 100



Source: National establishment surveys; industry associations; McKinsey analysis

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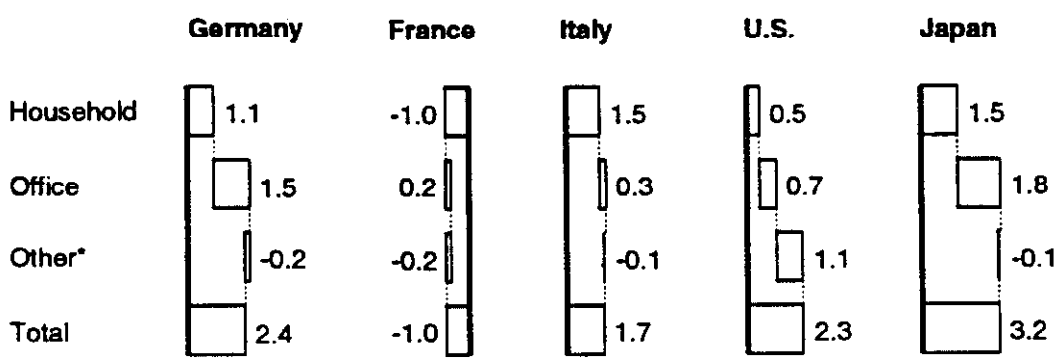
Exhibit 7

VALUE-ADDED GROWTH BY SUBSECTOR 1980-91

ESTIMATE

Percent of total 1980 furniture volume



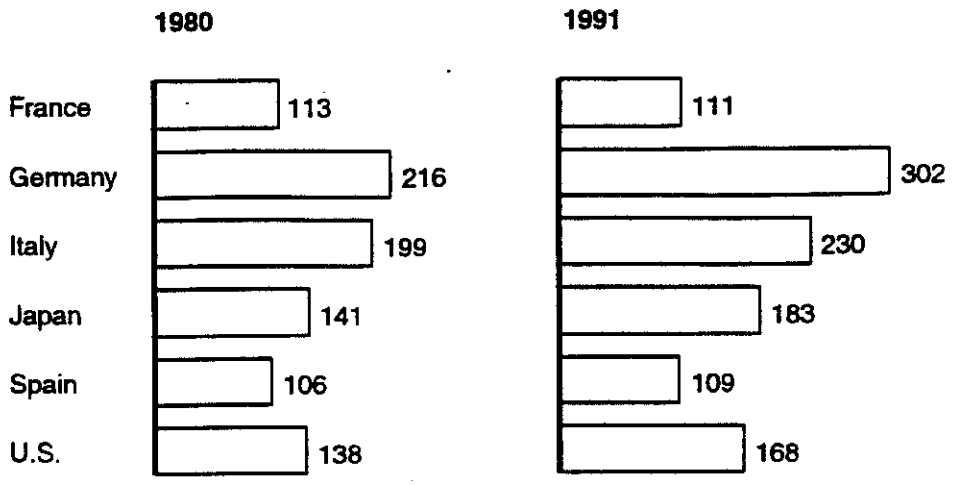
* Primarily partitions and public buildings

Source: National establishment surveys; industry associations; McKinsey analysis

Exhibit 8

PER CAPITA SPENDING ON FURNITURE

Dollar levels using 1990 GDP PPPs



Source: National establishment surveys; industry associations; McKinsey analysis

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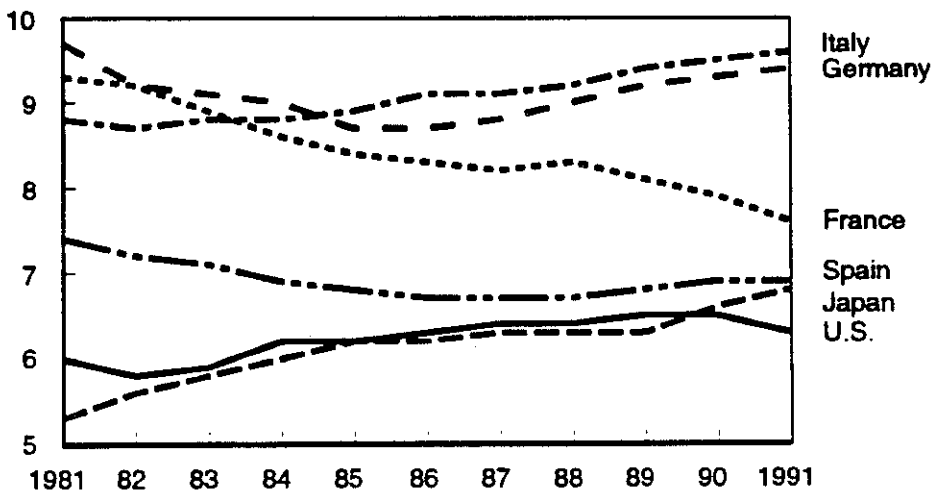
Exhibit 9

HOUSEHOLD CONSUMPTION DEVOTED TO FURNISHINGS AND HOUSEHOLD EQUIPMENT

Percent of total household expenditure



Source: OECD National Accounts; McKinsey analysis

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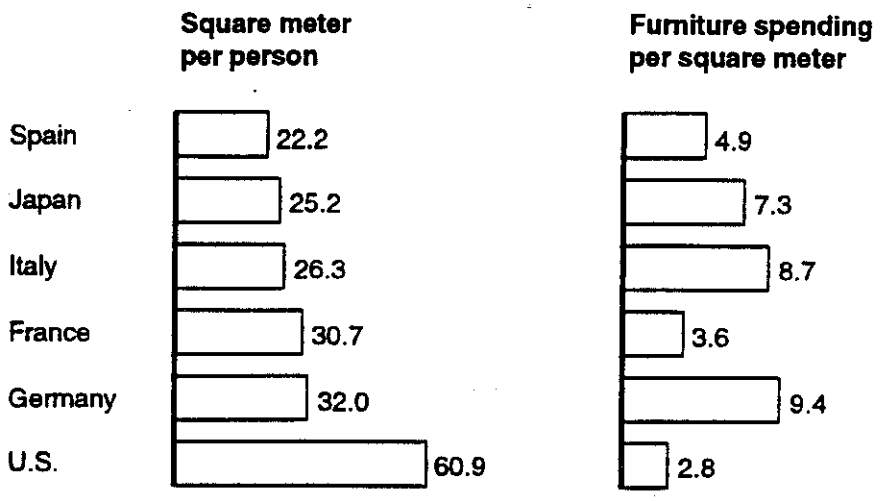
Exhibit 10

FURNITURE CONSUMPTION 1991

Dollar levels using 1990 GDP PPPs



Source: National establishment surveys; industry associations; Japan Almanac 1993; Statistisches Jahrbuch 1993; McKinsey analysis

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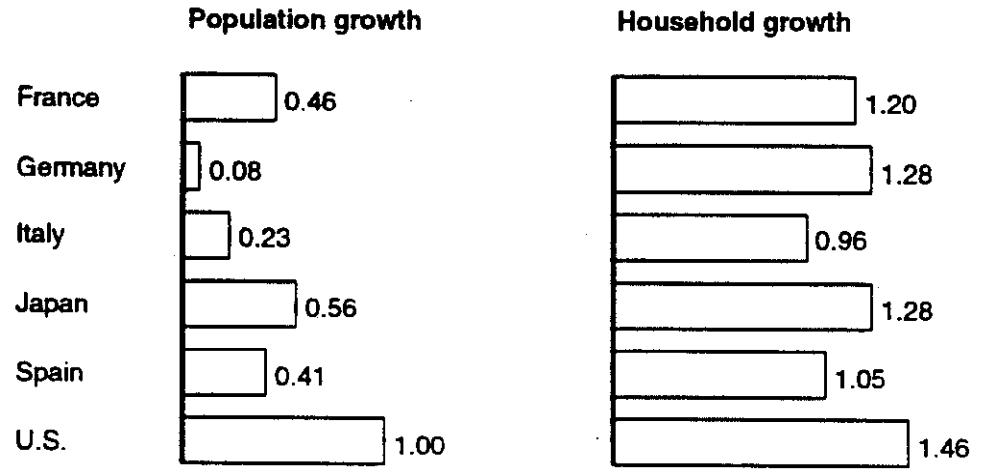
Exhibit 11

POPULATION AND HOUSEHOLD GROWTH 1980-90

Percent p.a.



Source: OECD; McKinsey analysis

Differing prices, as seen in Exhibit 12, fail to separate the rapidly expanding industries from lagging ones. Germany and Italy had much higher consumption growth rates than France despite the fact that all three experienced price increases nearly in line with overall inflation. Spain failed to match the output growth of Japan and the U.S. despite a similar reduction in furniture prices relative to other goods. The importance of low price levels is similarly cloudy. They help explain why German consumption is high, but this factor is clearly not necessary for superior growth rates or spending levels since furniture consumption grew rapidly in Japan and Italy despite high relative prices. One possible explanation for this pattern is that price is not a key buying criteria, particularly at the high end of the market. Furniture purchases are usually in excess of $500; so small changes in price are unlikely to release significant demand for additional products. A survey of U.S. furniture buyers suggests that price was an important buying factor in only 50 percent of purchases, while quality and product style/selection were very important 90 percent of the time.

Innovation is a key factor in stimulating demand

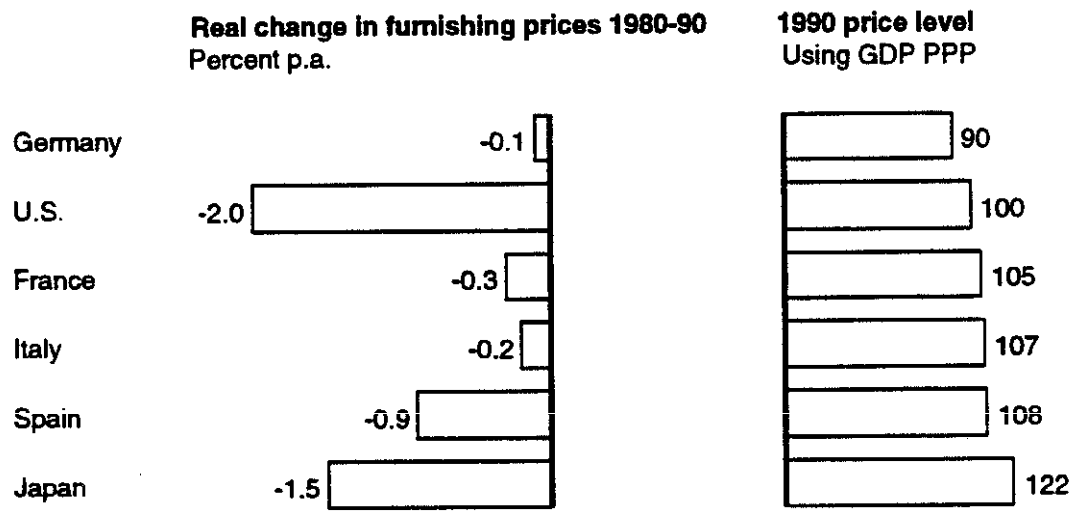
A better explanation for differing patterns of demand appears to lie in the effect that sustained periods of innovation and promotion had on consumer tastes. Italians, Germans, and to some extent Americans, tend to rank upgrading the furnishings in their homes as a higher spending priority than their peers in France, the UK, and probably Spain. This attitude is critical to output growth since furniture is often a discretionary purchase. Over 50 percent of U.S. household furniture buyers claim that the primary reason for their purchase was redecorating or upgrading the furnishings in their homes. These purchases would not take place unless consumers felt the products on the market were significantly different and better than what they already had.

Consumers in France appear to believe that this is not the case. When they do buy furniture, it is often in the Louis Philip style that has dominated the market for many years. The situation is significantly different in Germany and Italy where new sales are more heavily weighted toward contemporary designs and new niche products. Several companies in these countries estimated that more than 25 percent of their sales came from designs that were less than 1 year old. The German furniture industry experienced over 10 percent annual growth rates in a number of new forms of kitchen furniture and outdoor/occasional pieces, while the French industry showed fewer signs of new product growth.

Customer acceptance of new forms of furniture both influences and is influenced by innovation and experimentation. French and Spanish furniture manufacturers lack confidence that new products will be successful so they are less inclined to make the necessary investments and take the required risks. Their behavior over time, however, reinforces customers' attitudes and makes future innovation even less likely.

Exhibit 12

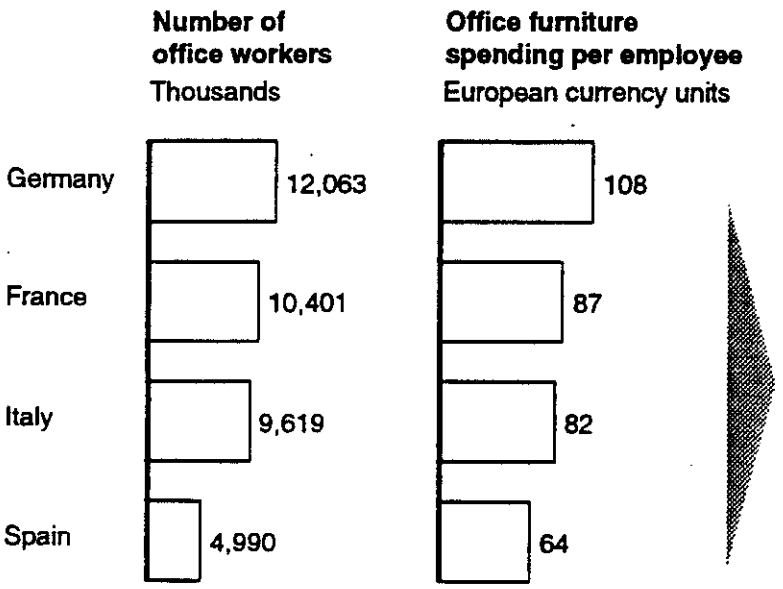
COMPARATIVE FURNITURE PRICES



Source: OECD Purchasing Power Parities; industry associations; McKinsey analysis

Exhibit 13

EUROPEAN OFFICE FURNITURE MARKET 1987



Explanation for differences

Rapid increase in the penetration of electronic equipment in France and Germany

Rapid penetration of "Organisations Möbel" in Germany but low initial acceptance of new forms of "systems furniture" in France

Strict regulations on safety and ergonomics in Germany

Tax laws which allow 1 year depreciation of assets costing less than 800 DM

Source: Databank Eurocompetition; interviews; McKinsey analysis

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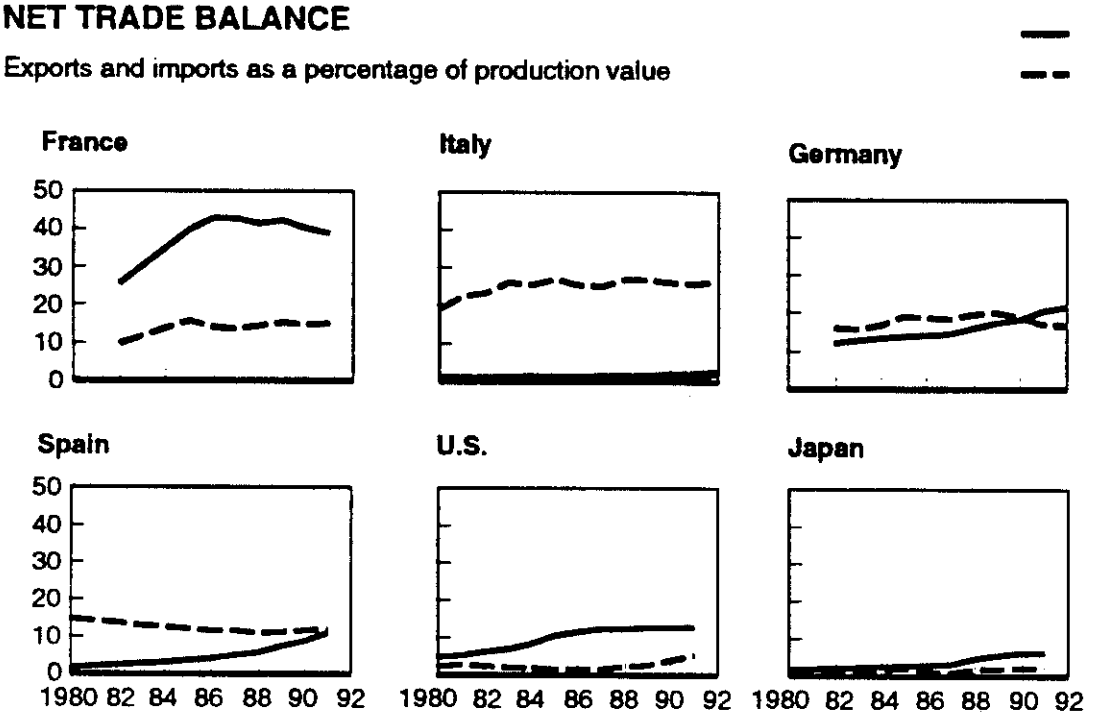
Exhibit 14

NET TRADE BALANCE

Exports and imports as a percentage of production value



Source: National trade statistics; McKinsey analysis

The historic difference in European furniture manufacturing appears to date back to the period immediately after the second world war. Large German munitions crate manufacturers looked for ways of applying their production technology to other wood products. They found a particularly large market for furniture given the large number of people who were relocating and the significant fraction of homes destroyed. These companies began experimenting with different styles in order to find the best possible match between their production capabilities and market desires. Customers became accustomed not only to new looks, but also to rapidly changing styles.

The Italian production system also fostered innovation, though for very different reasons. The stimulus came, not from large manufacturers, but from the other end of the size spectrum. A cluster of small manufacturers formed in the region around Brianza. Each of these companies had little fixed investment in equipment and, thus, was highly flexible. Specialists emerged and designers became independent from manufacturers. These free-lance designers had ample incentive to propose new styles since manufacturers would not need their services if styles remained constant. They also had a broad pool of capacity to tap and could easily find a collection of companies that would produce initial volumes of new products.

The French, and to some extent Spanish, furniture industries lacked both of these structures. They continued to be dominated by small, highly integrated manufacturers that produced furniture in much the same way that they had for 100 years.

A second factor driving customer acceptance of new products is promotion and advertising. These have more to do with furniture retailers and associations than the manufacturers themselves. Furniture retailing is more concentrated in Germany than in the rest of Europe or the U.S. The largest chains have sufficient scale to invest more heavily in promotions and advertising than their counterparts in other countries. In fact, population-adjusted spending on furniture advertising is nearly three times higher in Germany than in the U.S. Constant newspaper inserts and other forms of exposure increase the likelihood that customers will be aware of and favorably inclined to buy new forms of furniture. These strong intermediaries influence innovation indirectly as well, by putting pressure on producers. Manufacturers that fail to introduce new products have trouble surviving because they cannot gain access to large retailers and the significant part of the market that they serve.

Some countries that lack this concentrated retail structure have found other ways to provide the stimulus needed to shape spending patterns. In Italy it comes from strong regional associations. These function like the retailers in Germany in that they influence both customers and producers. New styles and niche markets are actively promoted to the public using the association's common pool of funds. Direct financial awards for innovative designs also encourage producers to keep the pipeline filled with new products. These activities have been successful to date for two reasons. First, they have been focused on commercial

Exhibit 15

TRADE EFFECT ON EMPLOYMENT 1980-91

Change in trade as a percentage of total 1980 output

Source: National establishment surveys; trade statistics; McKinsey analysis

viability rather than artistic merit, and second, they have coincided with a period of rising national wealth.

MITI pursued a similar path in Japan in the latter part of the 1980s. It officially encouraged companies to invest more in their office environment during the bubble period. The cumulative effect of economic and government stimulus was dramatic. The demand for office furniture nearly doubled from 1985 to 1990. Expansion in this relatively small product category accounted for about half of Japan's total output increase during the 1980s.

Finally, regulations and tax incentives, particularly in Germany, may also have helped output and employment somewhat. Laws enabling employees to sue their employer if the work environment is not ergonomically sound help explain why German companies invest 20 to 30 percent more per office worker in office furniture (Exhibit 13). Accounting rules in Germany and other countries that allow accelerated depreciation of small ticket items including office furniture help explain why office furniture purchases become so popular during good economic times.

Trade is becoming increasingly important with negative consequences for all countries except Italy

Furniture is still primarily a regional, and in some cases domestic, industry. Transportation costs, service and delivery requirements, and a desire to do final assembly, finishing and quality checks locally keep most production near the end use market. Few of the small companies that dominate this industry have the inclination or resources to import or export. The furniture association in France estimates that only 50 of its 900 members export at all, and only 10 of them export to any significant extent. Ninety percent of furniture consumed in Japan and the U.S. is still domestically produced (Exhibit 14). The four European countries have higher levels of trade, with an average of about 20 percent of production crossing national boundaries, though much of it is intra-European (the top seven importers to France and export locations for French furniture products were all European in 1992).

The isolation of national furniture industries is gradually breaking down, especially in Europe. With the possible exception of Spanish exports, both imports and exports increased in all countries examined. The net effect on employment of this increase in trade was negative in all countries examined except Italy. If nothing had changed except the trade balance, five of the countries would have lost somewhere between 5 and 12 percent of their employment. Only Italy remained as a strong and increasingly important net exporter. Its value added and employment were increased by 12.1 percent during the 1980s as a result of changes in trade (Exhibit 15).

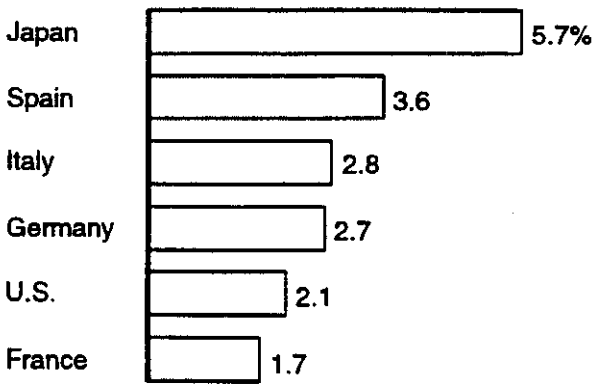
Italy's trade advantage stems from the same flexibility and innovation that helped its performance in the domestic market. The network of loosely affiliated designers and small companies in Brianza is much faster at bringing concepts to

Exhibit 16

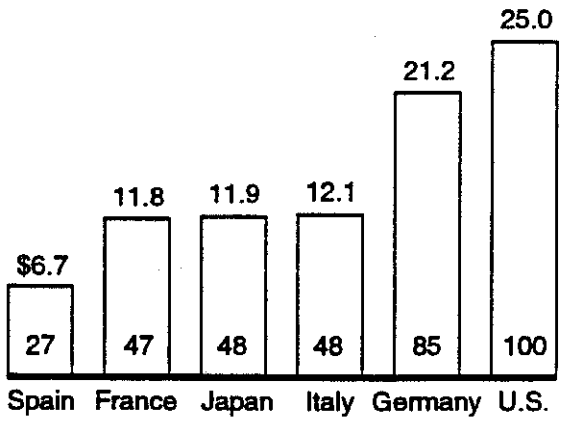
APPARENT PRODUCTIVITY DIFFERENCES

ESTIMATE

Annual increase in productivity 1980-91
Percent p.a.



1980 productivity levels
In U.S. $ Thousands per employee using 1980 furnishing PPP, index: U.S. = 100



Source: National statistics; industry associations; McKinsey analysis

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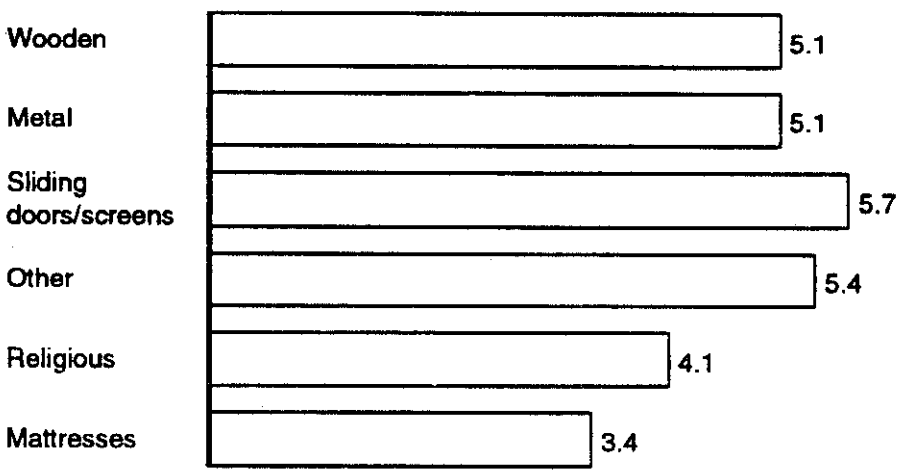
Exhibit 17

PRODUCTIVITY GROWTH BY SEGMENT IN JAPAN 1980-91

Percent p.a.



Source: Japan Statistics Bureau; McKinsey analysis

market than the more vertically integrated and independent producers in Germany and France. The Italian industry is the only one capable of picking up trends at the Cologne furniture trade show and converting them into a wide variety of salable new products by the Milan show a few months later. The unique blend of competition and collaboration in Italy allows the industry to gain access to distant retailers without the imposing burden of a larger and more bureaucratic corporate structure.

Producers in low wage countries have made only modest advances in the furniture market to date, but they pose at least some threat for the future. Cost differences between Germany and Poland, Japan and China or the U.S. and Southeast Asia or Mexico are enormous. One source estimates that there is a 22 to 1 labor cost advantage to operating in Poland rather than West Germany. While there are still many concerns about quality and the ability of furniture to travel well over long distances, the size of the labor cost difference is sufficient to encourage many larger manufacturers to explore foreign production, particularly for solid wood components where labor can account for as much as 40 percent of the total cost. Some manufacturers are outsourcing component work while others are setting up subsidiaries in Eastern Europe. While precise figures are not available, it appears that 1 percent of total German production has been transferred east in the last few years and shipments from Eastern Europe now represent over 15 percent of total imports. A similar trend is occurring in the U.S., where imports rose to over $4 billion by 1991. Much of this entered the country in the form of components that were then assembled and lacquered or finished in the U.S. Some Italian manufacturers have even entered affiliations with Asian companies in order to serve the growing Chinese market rather than trying to export themselves. The Italians provide the designs and initial production know-how and the Asians control the actual manufacturing.

Final product imports from low wage countries have increased at a slower rate, though this is beginning to change as well. Many of the major exporting countries do not have abundant supplies of the type of native wood stock that appeals to customers in the major markets. If a developing country wanted to compete in the large U.S. oak market it would have to import materials (possibly from the U.S.) and then export final goods. Shipment costs could become significant since sending assembled product overseas can double the customary 8 to 15 percent of wholesale cost required to get the product to retail stores. There is also a greater risk of damage when shipping final product rather than prefinished parts. Low end "knock down" furniture has experienced the greatest rates of growth in large part because it does not face many of these difficulties since it is often unfinished and capable of being efficiently packed in containers.

Overseas producers of office furniture face the additional difficulty of meeting local delivery schedules and service requirements. Many products are custom ordered with relatively short lead times. Furthermore, after-sales service is critical since as much as 15 percent of "systems furniture" may need to be remanufactured at some point. Shipping these parts back and forth across the ocean adds unwanted time and expense. Finally, office furniture manufacturers

Exhibit 18

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Furniture

Benchmark: U.S.

● Important
○ Secondary
X Undifferentiating

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X	X	X	X	
• Less government ownership/support	X	X	X	X	X	X	
• Readily available capital	X	X	X	X	X	X	
Labor market							
• Low labor cost	X	X	○	X	X	X	
• High availability/low benefits	○	X	X	X	●	X	
• More flexibility	X	X	○	X	X	X	
Product market							
• Fewer restrictions on output and competition	X	X	X	X	X	X	
• More new business facilitation	X	X	X	X	X	X	
• Rapid demand growth	●	●	X	●	X	●	
Industry dynamics/competitive intensity							
• Better trade/FDI performance	○	X	○	X*	X	○	
• More price competition/restructuring	X	X	X	○	○	X	
• More innovation/new products	○	●	X	X	X	●	
Higher output growth	●	●	X	●	X	●	
Higher productivity growth	X	○	X	X	X	X	
Lower productivity growth	●	X	●	●	●	●	

* Opposite is true with strong influence

Source: McKinsey analysis

need to participate in joint selling programs with dealers and thus must maintain some presence in each major market. These factors combined with the fact that office furniture is somewhat less labor intensive than many household items help ensure that major office furniture manufacturers keep production facilities near each of their major markets.

Universal increases in productivity, particularly where the starting point was low

Rapid productivity increases have occurred in all countries and all types of furniture. Global best practice has begun to swept the industry while global competition has not. Companies in all countries have invested in automation and computer controlled machinery. The extent to which this has happened appears to be a function of starting point position and competitive pressure.

The Japanese and Spanish industries have had particularly rapid increases in productivity, with rates of increase that are 170 percent and 70 percent above what occurred in the U.S. Much of this difference can be described as "catching up." Exhibit 16 shows that the 1980 productivity rates in Spain and Japan were only 30 and 50 percent of the level achieved in the U.S. and Germany. This suggests that there was sufficient room to improve just by applying techniques commonly used in other countries. Incremental increases in productivity were somewhat more difficult in Germany and the U.S. where manufacturers had to push the frontier of automation. Even in these countries, however, there were increases of more than 2 percent per year, suggesting that there is ample room to further automate what is essentially still a craft-based business.

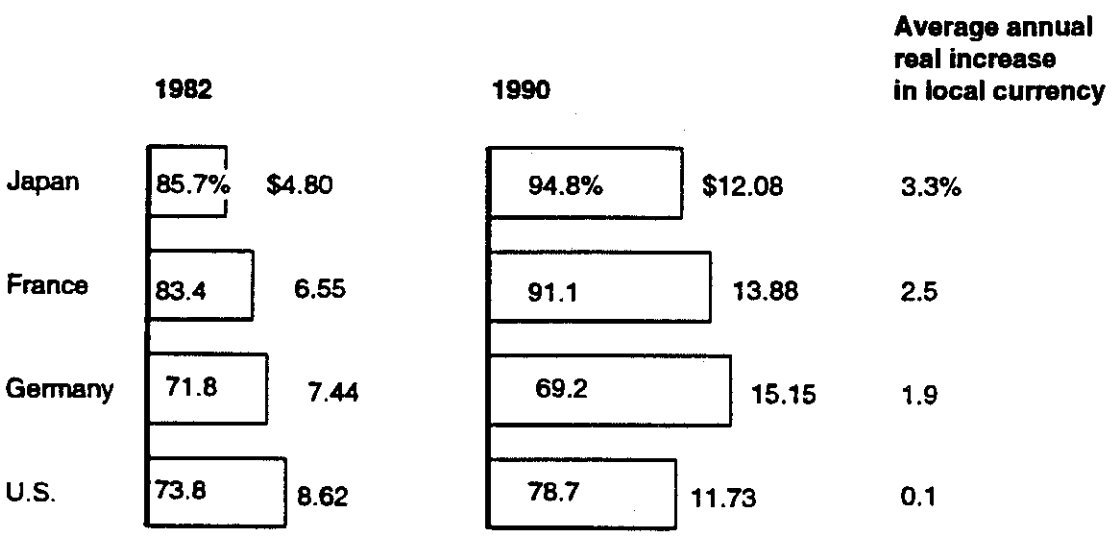
The productivity increase in Japan was fairly uniform across segments (Exhibit 17). Mix effects had relatively little impact. The rapid rise of highly efficient office furniture manufacturers did pull the average productivity upward, but this explains only 0.5 of the 5.7 percent annual rate of increase. Economic Darwinism also had an effect, as many inefficient small manufacturers left the market. Yet the most proximate cause of productivity increases were individual company investments in new technology.

While the Japanese manufacturers appear to have had ample room to improve their productivity, this alone does not explain why they began to do so in the 1980s. Part of the reason is increasing channel pressure and competitive intensity. Discounters emerged in the household furniture segment and placed significant pressure on manufacturers to hold or decrease prices. Similarly, sales of office furniture became increasingly concentrated in large players. Manufacturers with extensive sales forces were best positioned to capitalize on the trend to buying in bulk rather than in individual pieces, and as a result smaller manufacturers were pushed down the chain as subcontractors. Their livelihood became highly dependent on their ability to meet the cost targets provided by the larger players.

Exhibit 19

LABOR RATES IN FURNITURE PRODUCTION

U.S. $ per hour* and percent of average manufacturing wage



* Including benefits; using current exchange rates

Source: BLS; McKinsey analysis

Channel pressure was effective because of the large number of suppliers available to purchasers. Not only were there 20,000 manufacturers of furniture, but the large companies tended to compete head to head in a number of industry subsectors.

Another reason why Japan felt particular pressure to improve productivity can be found in the labor market. Permanent furniture workers have always been somewhat difficult to find given the generally low level of unemployment. Farmers, housewives, and foreigners were utilized to meet seasonal and cyclical peaks. During the bubble era in Japan, these workers became increasingly expensive and difficult to attract. Furthermore, the physical capacity of more automated office furniture manufacturers began to limit their ability to fulfill customer requirements even if they could find the workers. As a result several companies invested heavily in state-of-the-art equipment that allowed them to meet the pressing demands of customers and reduce their long-term reliance on an increasingly uncertain labor pool.

These forces were not unique to Japan. Discounters emerged in a number of other countries and buying groups became increasingly important, particularly in Germany. Efforts by manufacturers to stem this tide often proved futile. Many French manufacturers tried to boycott the initial large scale retailers, but some small companies provided product, and they quickly became the volume leaders in the industry. Channel pressure did not translate into productivity improvements as directly in the U.S. because of high initial levels of productivity and an increasing trend toward highly specialized niche players.

A final factor driving productivity at the company level in Europe is lack of wage flexibility. As trade became more important in furniture, industrywide salary levels became more of a hindrance. Rather than leveling the playing field, they stacked the deck against manufacturers in developed European countries. Productivity increases and layoffs were the only levers companies had to influence their cost position and stay competitive.

SUMMARY AND IMPLICATIONS

Exhibit 18 summarizes our findings from the furniture industry case. It illustrates that internal industry dynamics were much more important than independent factors in the capital, labor or product markets in explaining cross country differences in employment performance. Competition, innovation and demand growth combine to cause the output and productivity outcomes that directly determine employment. Furniture appears to be a rather "pure" case, in that many of the barriers that determine the outcome in other industries do not come into play.

Furniture companies in all countries, whether family owned or publicly traded, are under intense pressure to succeed. They do not have the resources or other forms of support needed to consider other objectives. Down cycles have

inevitably eroded the equity to capital ratio of firms, though those who survive these periods have continued to invest in order to keep up with the competition. They have been able to secure the financing necessary to fund productivity increases or new product expansions. Thus, differences in the structure in the capital markets in the six countries we analyzed appear to have little effect on furniture employment in either the short or the long term.

Labor market differences have been only slightly more important. Pressure in the product market has kept the labor market fairly fluid, and the decentralized nature of the industry has kept union power relatively low in all countries except Germany.

Furniture labor costs have not played a major role in decreasing output. Wages are below the manufacturing average in all countries where data is available (Exhibit 19). This is particularly true in Germany and the United States and helps explain the low price levels in these countries. Changes in wages and prices are much less tied, however. Wages are rising somewhat more quickly than pay in other parts of manufacturing in most countries, yet prices are falling compared to other goods and services. Germany is the only country where relative pay fell, but it also had the slowest decrease in furniture prices. The influence wages have on employment appears more closely related to a country's exposure to imports from low cost countries than to absolute differences in costs. When viewed this way, the wages in the German industry have recently begun to dampen employment. Eastern European countries look like an increasingly attractive alternative to the larger German-based companies. Similar threats do not exist for countries with lower absolute wages or greater distance from low cost alternatives.

Labor flexibility and availability are not major differentiating factors because the labor market in furniture is highly fluid in most countries. A few companies complain of an inability to get people with specific skills on short notice, but only the Japanese industry has experienced systematic difficulty in attracting workers. The general labor shortage in Japan made it increasingly difficult for furniture makers to hire people during cyclical and seasonal peaks. As workers became more difficult and expensive to get, Japanese manufacturers had an increasing incentive to invest in labor saving equipment. Once output returned to normal levels, these moves served to permanently reduce the need for both full-time and temporary workers.

European countries have increased their labor flexibility through the extensive use of temporary workers. Many of the new people who are hired sign limited contracts that can last for up to 18 months. This is particularly the case in Germany, where the union, Gewerkschaft Holz und Kunstoff, has limited producers' ability to adjust work times and has fought to make sure permanent workers get generous severance payments if laid off. The net result of this practice is higher, but more volatile employment than would be possible otherwise.

In the product market, government regulations and procurement play a relatively small role in all countries examined. Government action which occurred in the area of product codes and requirements has tended to facilitate increased output rather than restrict it. The French government is currently considering taking this approach even further by providing rebates to customers who buy new forms of kitchen furniture.

Finally, demand growth in furniture has shown little evidence of convergence across countries. In many of the other industries we have examined, countries with low initial rates of consumption caught up during the 1980s. The reverse was true in furniture. France and Spain started with low spending levels and fell further behind during the decade. Higher spending countries showed little evidence of saturation.

In the end, employment has fared best where high levels of productivity and rapid rates of innovation have combined to stimulate customer demand. This virtuous relationship has been missing in France and Spain, and their furniture employment has suffered. Fixing this problem is primarily a private sector issue, though policymakers can assist directly and indirectly by creating an environment that fosters innovation and rewards entrepreneurship.

Looking forward, it appears that furniture industry employment is unlikely to rebound significantly in the countries examined. Cyclical increases will continue, and employment may rise as economies recover, but the long-term trend is unquestionably down. Aggregate job creation will need to occur in other sectors of the economy where innovation, like that found in furniture, will have an even greater influence on customer demand.

Exhibit 1

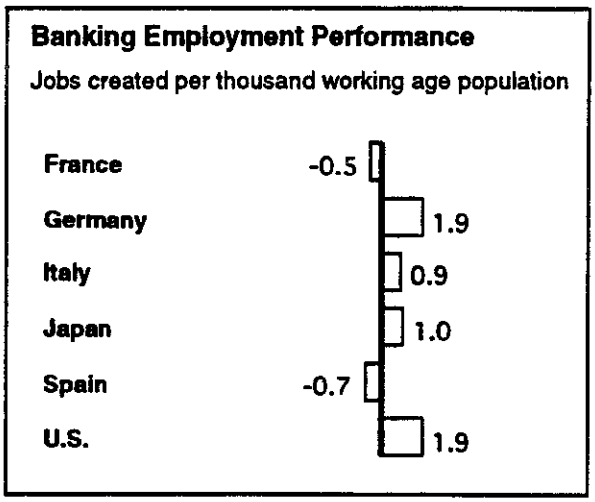
INDUSTRY DEFINITION

Area of analysis	Type of institution	France* INSEE codes	Germany*	Italy* ISTAT codes	Japan SIC codes	Spain* CNAE codes	U.S. SIC codes
Commercial banking	Commercial banks	65.1	Universal banks	65.1	61	812-3	60
	Savings and loans	65.2A		65.21	62	814	
	Mortgage banks	65.2C		65.22	63	8191	61
	Personal and business credit				64		
Securities	Mutual funds	65.2E		65.23	65	8199	62
	Investment advice	67.1		67.1	66		
	Trading/underwriting						
	Investment banks						

* Universal banks included with commercial banks in continental Europe

Source: National statistics

BANKING INDUSTRY CASE SUMMARY



The banking case shows how product, labor and capital market barriers can affect employment through changes in competitive intensity. The U.S., France and Spain all experienced employment declines in traditional banking products as competitive intensity increased during the 1980s. In the U.S., however, the right combination of product, labor and capital market factors also led to employment increases in mortgages and securities.

Deregulation and privatization caused competition to increase in the U.S., France, Spain and among Japanese city banks during the 1980s. In mature traditional banking products, increased cost pressure and newly available automation technology caused banks to increase efficiency and reduce employment. Competition remained low in Germany, Italy and Japan (outside of the city banks), and this allowed employment to continue to grow.

Increased competition in the U.S. also led to a boom in residential mortgages that created more than enough jobs to compensate for the decline in traditional products. This boom was partly due to falling interest rates, demographics and tax law changes, but it would not have been nearly as large without a radical change in the mortgage business system. Specialized mortgage banks used securitization and IT-driven underwriting to increase efficiency, lower interest margins and origination fees, and thus stimulate demand. This innovation was dependent on a favorable regulatory environment, securitization and flexible labor. The absence of these conditions in Europe and Japan prevented a similar development.

In the U.S. securities industry, regulations such as strong antitrust enforcement, "Chinese walls" in underwriting, and transparent accounting standards encouraged high retail penetration and employment. The same regulations also helped the U.S. develop an international competitive advantage in securities origination, structuring, and trading. Japan achieved high securities employment without many of these regulations, although a substantial part of employment in Japan is maintained by high, regulated commissions in equity trading.

The "productivity" of a banking industry is increasingly becoming a concern of national policymakers, both in terms of international competitive advantage and the efficiency of intermediation. The importance of the banking industry goes well beyond the 1 to 2 percent of the working age population it employs. The fundamental underpinning of employment policy in this industry remains one that allows for employment growth consistent with high productivity and efficient intermediation services to the rest of the economy.

Employment in the banking and securities industry

This case covers the entire banking industry (both commercial banking and securities). Its objective is to understand the way employment evolved in six major countries in the last two decades and to use this historical analysis to derive generalizable recommendations for entire economies.

The importance of the banking industry goes well beyond the 1 to 2 percent of the working age population it employs. Banks and securities firms provide payment settlement and financial intermediation services that are indispensable to the rest of the economy. A banking industry should provide efficient and low cost intermediation, a stable and reliable payments systems, and convenient and low cost services to consumers, as well as jobs. These goals conflict at times; measures that aim to increase competition in the industry can also lead to bad lending practices and costly failures.

The six national industries studied differed significantly in terms of regulation, government participation and labor rigidity. These differences led to different levels of competition, innovation, productivity, and ultimately, employment. By comparing six countries, this case will attempt to draw generalizable conclusions about the effects of the various policy levers available to governments. The goal will be to identify policies that allow employment growth that is consistent with high productivity and the provision of efficient and reliable intermediation services to the rest of the economy.

This case will begin by explaining the structure of the banking industry in the six countries and will then describe their employment performance in the last decade. Subsequent sections will examine the causes of cross-country differences in employment performance in first the commercial banking, and then the securities industry. A fifth section will summarize the causal storyline using the framework common to all seven case studies, and a final section will draw out implications for policymakers and discuss the outlook for the future.

THE BANKING INDUSTRY

In the U.S. and Japan, the banking industry encompasses depository institutions (commercial banks, savings banks and credit cooperatives), nondepository institutions (focused on credit cards, specialized credit, or mortgages) and securities firms (Exhibit 1). The first two groups of institutions are grouped into

Exhibit 1

INDUSTRY DEFINITION

Area of analysis	Type of institution	France* INSEE codes	Germany*	Italy* ISTAT codes	Japan SIC codes	Spain* CNAE codes	U.S. SIC codes
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	Trading/underwriting						
	Investment banks						

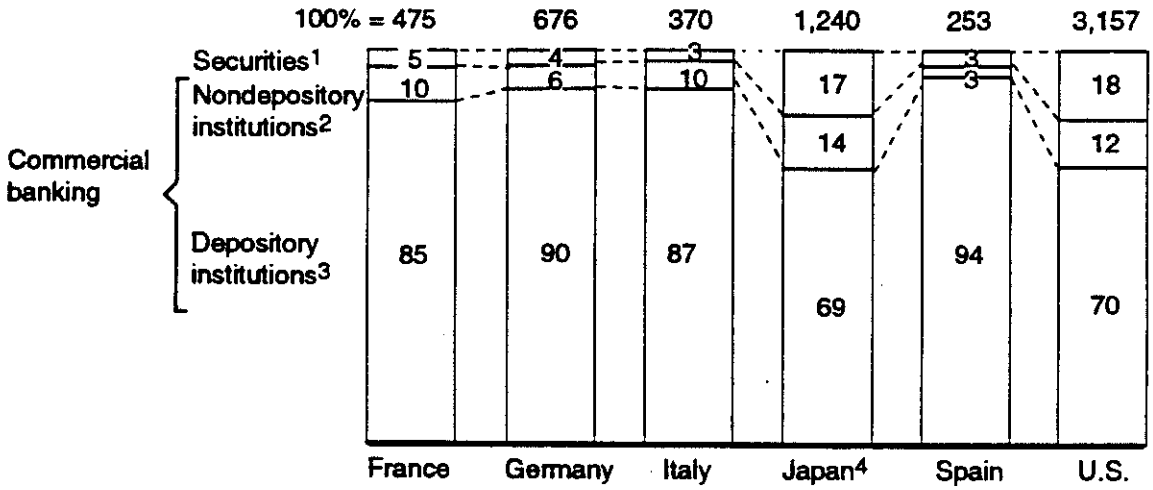
* Universal banks included with commercial banks in continental Europe

Source: National statistics

Exhibit 2

EMPLOYMENT IN BANKING AND SECURITIES 1992

Thousands of employees, percent



1 Includes estimate of securities employment in universal banks
2 Personal credit, business credit, mortgage banks
3 Commercial banks, savings and loans
4 1991

Note: Postal bank employees are not included
Source: National statistics; banking associations; McKinsey analysis

"commercial banking" which has been legally separated from the securities business in the U.S. and Japan for most of this century.

Depository banks in Europe are allowed to offer many of the services provided by nondepository and securities firms in the U.S. The larger scope of these "universal" banks leads to a smaller role for nondepository institutions in Europe (Exhibit 2). Even when the securities activities of European universal banks are included, the U.S. and Japan still have much larger securities industries.

Among depository banks, the exact types of institution and the mix among them in a given country is very dependent on its regulatory history. All countries have commercial or city banks which have been the main lenders to business. In addition, all countries have encouraged the creation of savings banks, which were originally focused on (or limited to) consumer savings, loans and mortgages. While commercial banks are allowed to compete with savings banks in these areas, savings banks are usually given some advantages by the government (e.g., Regulation Q in the U.S., the contract savings system in France). A third type of bank, credit cooperatives, are institutions created to serve a targeted group of people such as members of a trade union, citizens of a small town, or farmers in a given area.[1]

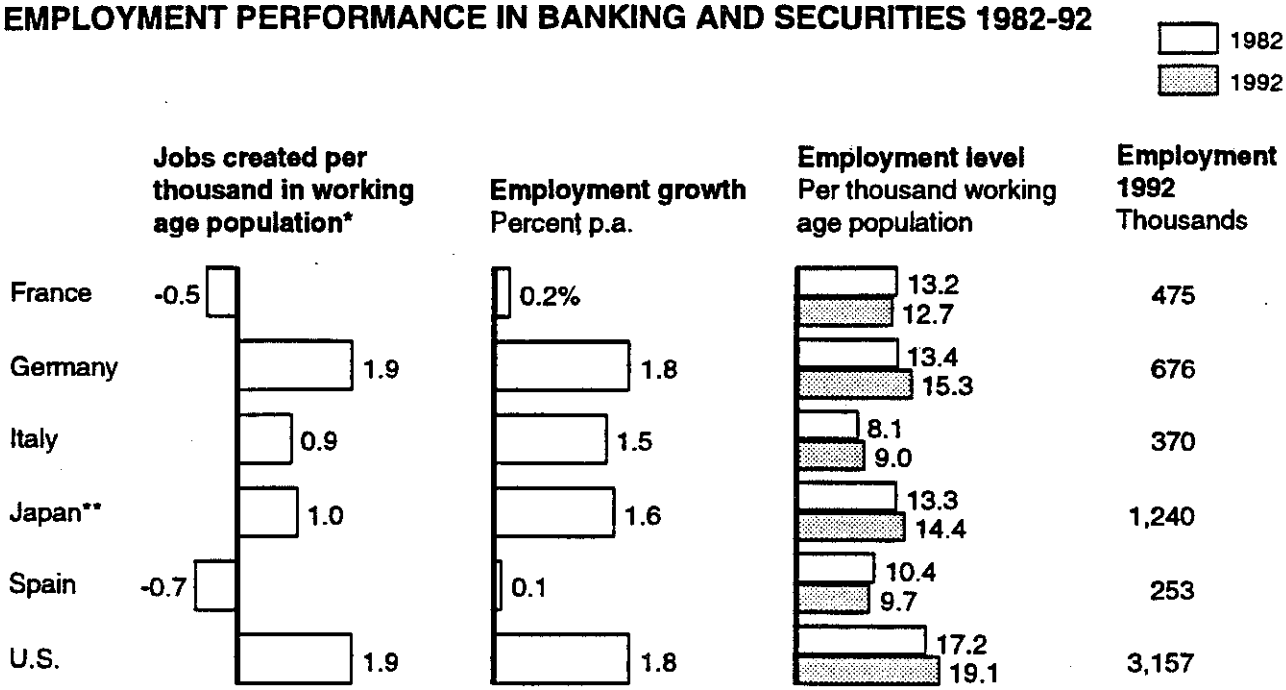
Non-depository institutions include specialized firms offering leasing, credit cards, consumer loans and mortgages. In Japan these firms are mainly focused on consumer lending and include credit card companies, high-risk lenders (such as the Sarakin) and leasing companies. Borrowing from many nonbanks is considered "lower status" in Japan. In the U.S. the nondepository banks are split roughly evenly between mortgage banks and companies that provide personal credit, business credit or processing services. European nondepository banks are much smaller in terms of employment.

While the commercial banking sector is mainly domestic, the securities industry is much more global. Employment in origination, structuring and trading is largely concentrated in the international financial markets (e.g., New York and London), but sales and distribution is normally local. The level of trading-related employment depends mainly on a country's role as an international financial center, while the level of distribution employment depends on the penetration of securities among retail investors. Historically, countries with a legal separation between commercial banking and securities (the U.S., the UK and Japan) have developed larger securities industries.

[1] In Japan there are seven separate types of banks: city, trust, long-term credit, and regional banks (which resemble commercial banks), second-tier regional and Shinkin banks (which resemble savings banks), and credit cooperatives. The activities allowed each bank are not completely overlapping

Exhibit 3

EMPLOYMENT PERFORMANCE IN BANKING AND SECURITIES 1982-92



* Adjusted for growth in the working age population

** 1981-91

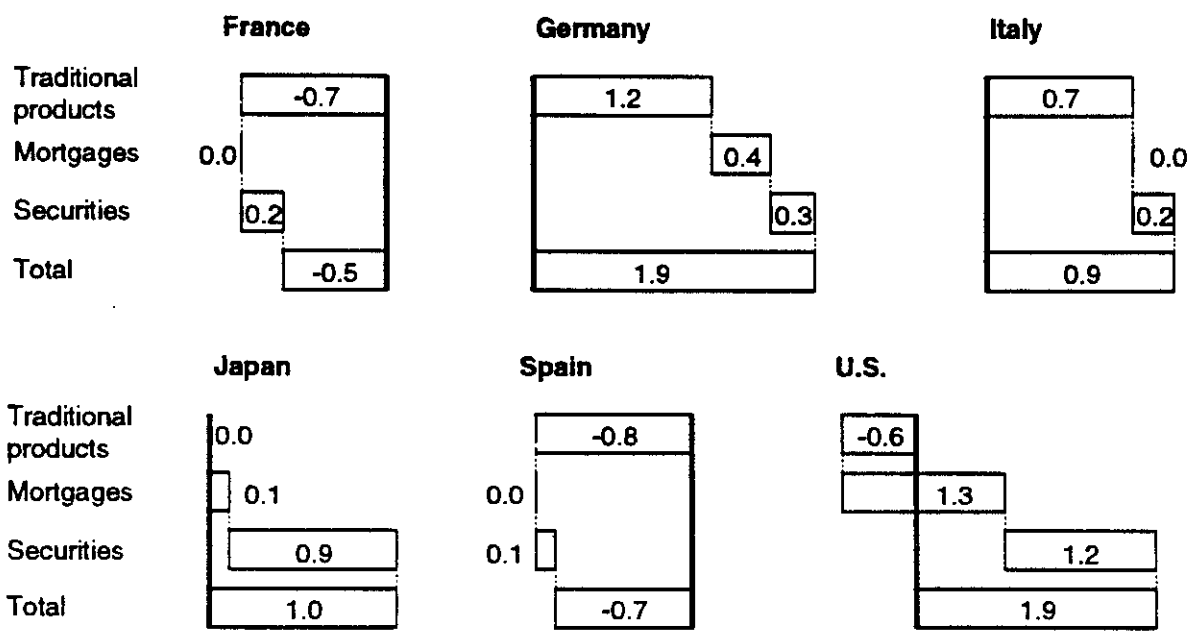
Source: Establishment surveys; McKinsey analysis

Exhibit 4

EMPLOYMENT PERFORMANCE BY SUBSECTOR 1982-92

ESTIMATE

Jobs created per thousand in the working age population*



* Adjusted for growth in the working age population

Source: Establishment surveys; McKinsey analysis

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EMPLOYMENT PERFORMANCE

Employment performance from 1982 to 1992 was strongest in the U.S. and Germany. Both countries created 1.9 jobs for every thousand in the working age population (adjusted for the growth in working age population) (Exhibit 3). Italy and Japan also performed well, adding 0.9 and 1.0 jobs, respectively. France and Spain increased absolute employment but lost 0.5 and 0.7 jobs relative to the working age population. The U.S. was chosen as the benchmark rather than Germany because we found that its employment growth was consistent with high levels of competition and productivity growth and thus yielded more interesting lessons for the entire economy.

Employment performance was not uniform across product areas (Exhibit 4). The strong U.S. performance resulted from rapid growth in mortgages and securities compensating for employment losses in traditional products (payments, deposits, and consumer and business loans). The shift in commercial banking employment from traditional products to mortgages was accompanied by a shift from depository banks to more specialized institutions. France and Spain also experienced employment losses in traditional products, but in these countries there was little offsetting growth in mortgages and securities. Germany, Italy and Japan are different in that they experienced less restructuring in traditional products. Germany experienced steady growth across products, while employment growth in Italy and Japan was dominated by traditional products and securities, respectively.

The growth in many countries was also not uniform over time (Exhibit 5). After rapid growth (over 4 percent p.a.) from 1972 to 1987, employment in the U.S. began to decline. The downturn after 1987 represented both a downward correction after rapid expansion in the early 1980s (especially in S&Ls) and a change in the industry structure (exemplified by the M&A among banks and thrifts). France also grew from 1972 to 1987, albeit at only 1.4 percent per annum, and has since decreased in employment. Spain and Japan experienced rapid growth during their economic booms in the latter part of the 1980s. Employment growth in Japan continued until the end of the bubble economy in 1991, while the growth in Spain ended with the sudden increase in competitive intensity that accompanied the 1989 deposit pricing war.

In addition to more rapid growth, the U.S. also had a significantly higher initial employment level relative to other countries. About half of the level difference between Germany and the U.S. is explained by the larger securities industry in the U.S., but the U.S. also has the largest commercial banking industry. Some of the level differences could be explained by differences in GDP per capita, as richer countries tend to use more financial services. Not surprisingly, Italy and Spain had the lowest initial levels. The employment growth in Italy is partly due to a catching up from a low initial employment level, and some of the employment growth in Japan may be due to the rapid economic growth which occurred during the 1980s. The employment measure used in this case

Exhibit 5

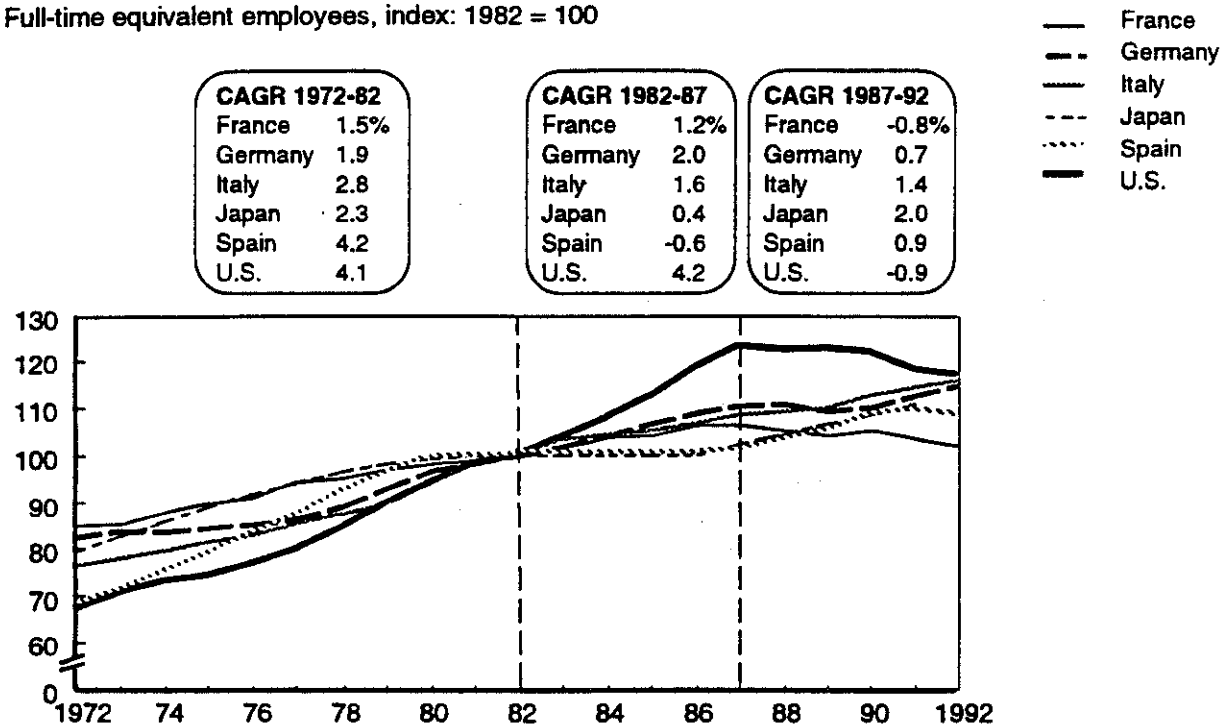
EMPLOYMENT EVOLUTION IN BANKING AND SECURITIES 1972-92

Full-time equivalent employees, index: 1982 = 100

CAGR 1972-82	
France	1.5%
Germany	1.9
Italy	2.8
Japan	2.3
Spain	4.2
U.S.	4.1

CAGR 1982-87	
France	1.2%
Germany	2.0
Italy	1.6
Japan	0.4
Spain	-0.6
U.S.	4.2

CAGR 1987-92	
France	-0.8%
Germany	0.7
Italy	1.4
Japan	2.0
Spain	0.9
U.S.	-0.9



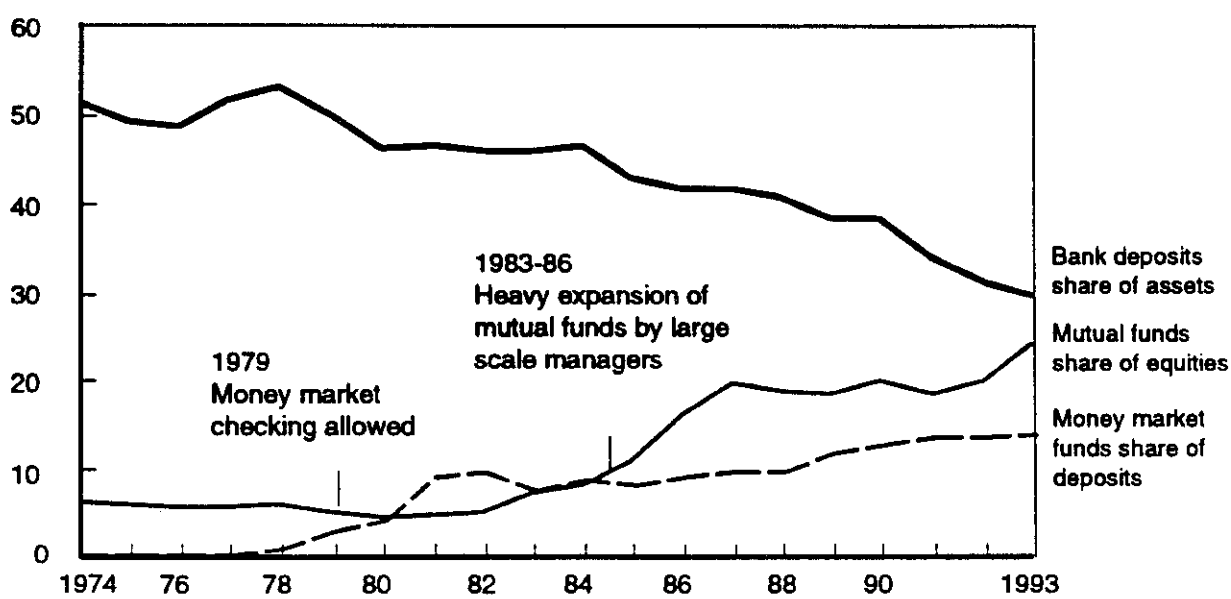
Source: National statistics; McKinsey analysis

Exhibit 6

MUTUAL FUNDS AND THE DISINTERMEDIATION OF HOUSEHOLD ASSETS

U.S. EXAMPLE

Percent of total holdings



Source: Federal Reserve; interviews; McKinsey analysis

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incorporates both initial employment level and growth rate and thus is less likely than per annum growth rates to be distorted by catching up effects.

CAUSES FOR EMPLOYMENT DIFFERENCES IN COMMERCIAL BANKING

In the 1970s, competitive intensity in commercial banking in all countries was rather low. In the U.S., and to a lesser extent in France, Japan and Spain, regulatory changes and the emergence of substitute products caused competition to increase during the 1980s. Increased competition in the U.S. had two major effects led to rationalization and employment reduction in traditional products but motivated innovation that led to an employment increase in new or emerging products. The gains from innovation were large enough to compensate for the losses due to rationalization, so competition did not have a negative net effect on employment growth in the U.S. In France and Spain, barriers to innovation and employment expansion in new products caused the rationalization effect of competition to predominate, and increased competition led to slower employment growth. Germany and Italy experienced less change in competitive intensity and, as a result, maintained and even expanded employment in traditional products while experiencing less growth in mortgages and securities.

This section will first examine the causes of changes in competitive intensity. It will then explain why competition caused a decline in traditional products in all countries and why competition also helped fuel an expansion in mortgages in the U.S. Finally, it will examine why expansion in mortgages did not occur in other countries. This section will attempt to distinguish differentiating factors in the product, labor and capital markets of the six countries; these factors will be summarized in a later section.

Competitive intensity increases

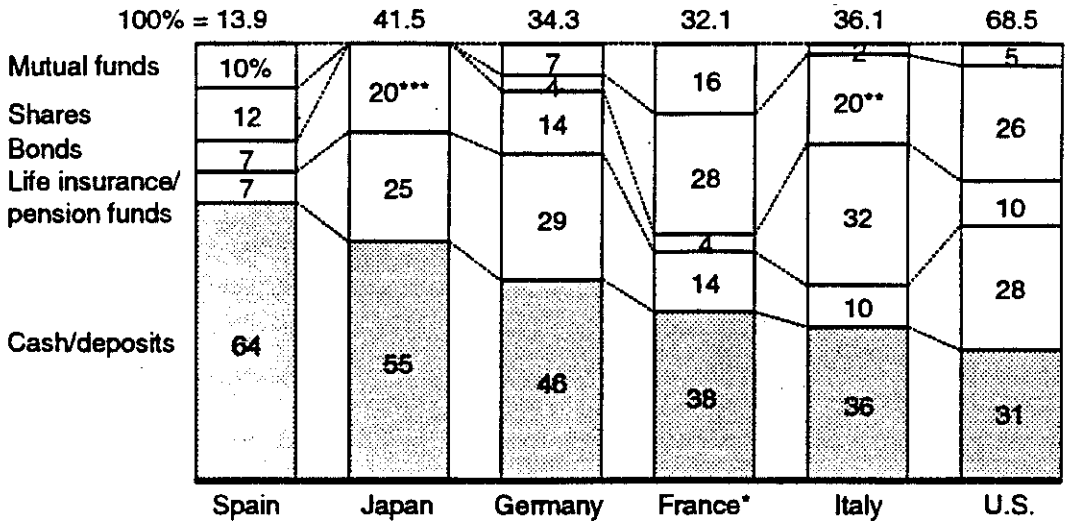
Barriers to competition broke down in the 1980s, leading to increased competitive intensity in the U.S., France, Spain, and among city banks in Japan. The causes of increasing competitive intensity come mainly from the product market of the banking industry. The most important are substitute products, pricing deregulation, competitive local markets, and less government ownership.

- **Emergence of substitute products.** Both household investing and corporate finance are becoming increasingly disintermediated in all countries. Households and firms are increasingly bypassing the mediation services of commercial banks and going directly to the bond or equity markets to invest or borrow (Exhibit 6). Disintermediation puts pressure on bank profits and increases competitive intensity by lowering the supply of cheap deposit funds and low-risk lending opportunities. Disintermediation of both household assets and

Exhibit 7

PERSONAL FINANCIAL ASSETS 1992

$ thousands at market exchange rates per capita, percent



* 1991

** Includes shares in privately held companies

*** Includes bonds and mutual funds

Source: The Global Capital Market: Supply, Demand, Pricing and Allocation (McKinsey Global Institute, Nov 1994); McKinsey analysis

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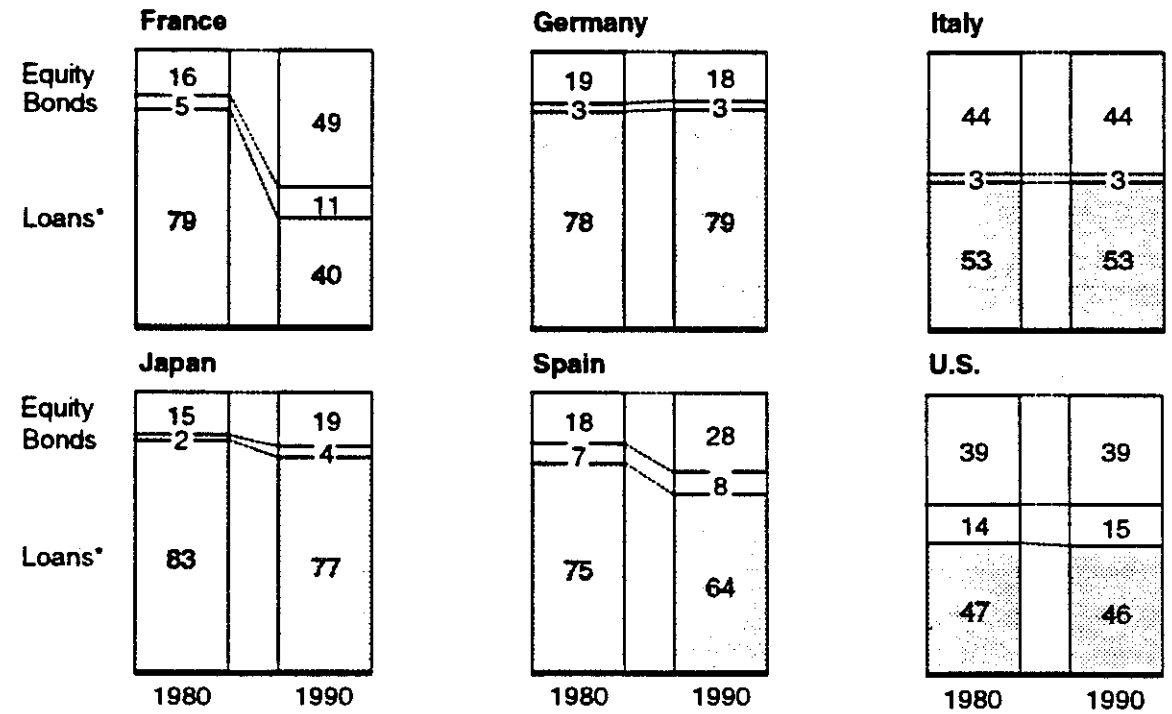
Exhibit 8

DISINTERMEDIATION OF CORPORATE LIABILITIES

ESTIMATE

Percent



* Includes bank loans, trade credit, accounts payable, money owed to employees, and other nonsecuritized debt

Source: Central banks; McKinsey analysis

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corporate borrowing has progressed the furthest in France and the U.S. (Exhibits 7 and 8).

In the U.S., the legalization of money market fund checking accounts in 1979 accelerated the shift in household assets from deposits to mutual funds and forced banks to lobby for deposit pricing deregulation. The 1984 liberalization of regulations on mutual funds in France increased profit pressure on banks. German banks have lobbied against the legalization of money market checking accounts precisely because of the threat it poses to deposit margins and profits.

¶ **Pricing deregulation.** In the 1970s, deposit pricing was regulated in every country studied except for Germany and Italy. By 1992, these regulations had been removed in Spain and the U.S., and the minimum account size above which banks could price freely had been lowered to ¥10 million in Japan. In the U.S., the effect of deregulation was dramatic (at least in part because government bond yields had climbed far above regulated rates); commercial banks and thrifts quickly began offering higher rates. In Spain the impact was also dramatic. Nine months after the 1987 deregulation Banco Santander started the "liabilities war" by significantly increasing deposit rates. France experienced a more gradual but not insignificant increase in competition after deregulation in 1984.

The absence of pricing regulation has not always led to intense competition, however. Germany and Italy did not regulate pricing even in the 1970s, but deposit margins are still quite high. Given the lower penetration of substitute products, German and Italian banks do not have to compete intensely on pricing. They have also not been aggressive in extending opening hours and other customer services. Citibank has recently broken with industry practice in Germany by opening some of its branches on Saturday and offering telephone banking, but for most of the period studied, legal barriers were not necessary to keep competitive intensity low.

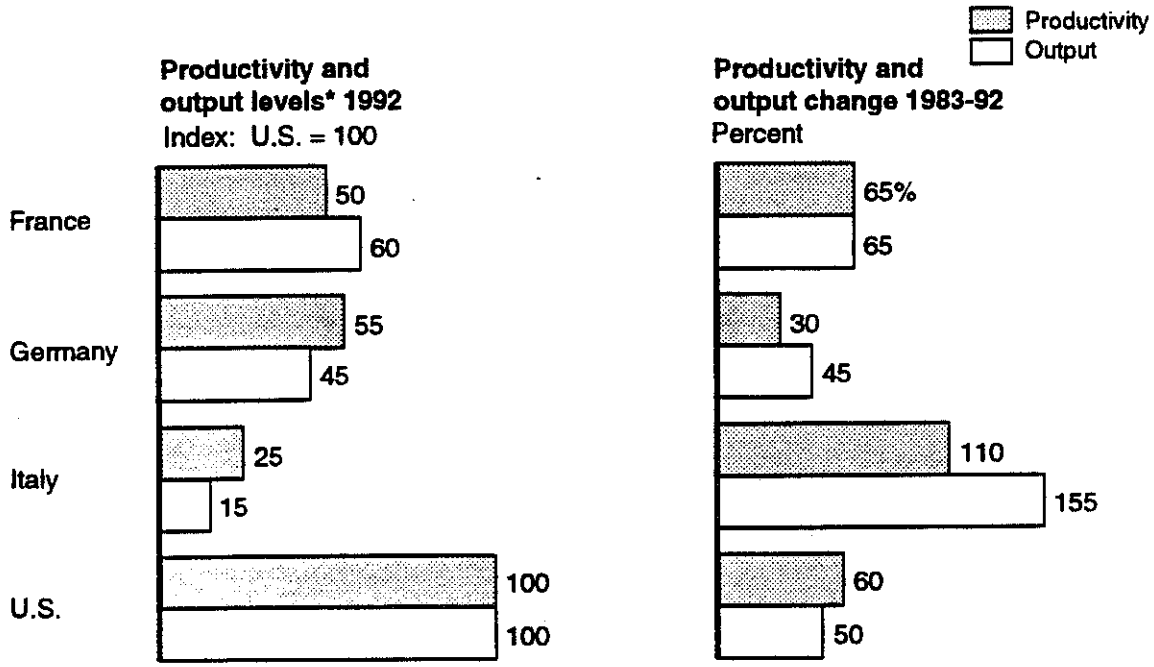
Governments do not always welcome intense competition because it brings with it the possibility of bank failures and a loss of confidence in the payments system. Pricing deregulation has been gradual in Japan because of concerns about underfunded deposit insurance, and low competitive intensity has been tolerated in Germany because of concerns about the stability of the system.

¶ **Competitive local markets.** In almost every country studied, competition has been more intense in cities than in the countryside. Savings banks, cooperative banks, credit unions and Shinkin banks, located in small towns, do not face the same competition as commercial banks in large markets. Outside the U.S. and Spain, these noncommercial banks have continued to face less intense competition. In the U.S., however, the erosion of barriers to interstate banking and

Exhibit 9

ESTIMATE

LABOR PRODUCTIVITY IN PAYMENTS AND CASH WITHDRAWALS



* Productivity: transactions per employee in payments; output: transactions per capita (15 years+)

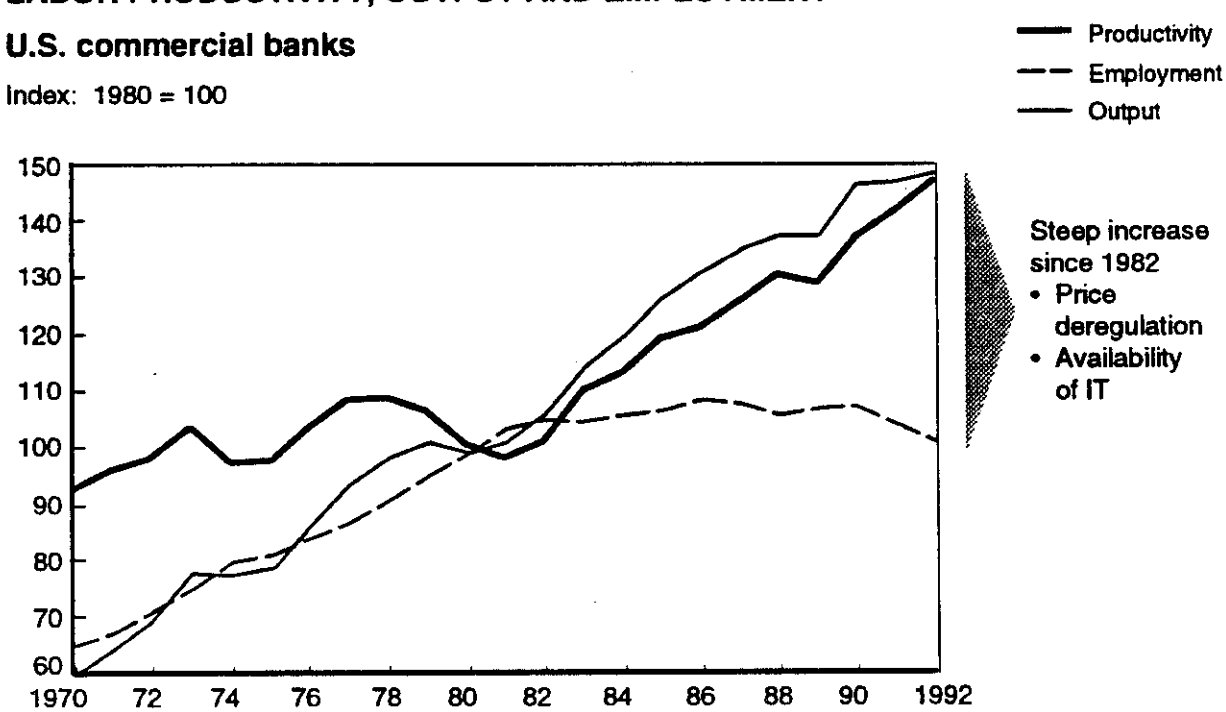
Source: BLS; McKinsey analysis

Exhibit 10

LABOR PRODUCTIVITY, OUTPUT AND EMPLOYMENT*

U.S. commercial banks

Index: 1980 = 100



* Includes both traditional products and mortgages, FTEs

Source: BLS; McKinsey analysis

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the branching expansion (mainly through M&A) of the more sophisticated players has increased competitive pressure on all bank types. In the 1980s, major banks in Spain evolved from regional to national players, expanded their branch networks, and put increasing pressure on the savings banks.

¶ **Less government ownership.** Governments usually enter the retail banking industry or restrain competition in order ensure a stable payments system, safe bank deposits and affordable housing. Many governments have tried to ensure the adequate provision of housing finance by either preferentially treating specific institutions or entering the market itself. Savings banks in France and S&Ls in the U.S. (during the 1970s) are examples of institutions to which governments have given advantages. The Japan Housing Loan Corporation and the mortgage arm of Argentaria in Spain are examples of public housing finance institutions.

Outside of housing finance, European governments own a significant part of the retail banking system. The government controls 70 percent of bank assets in Italy, 40 percent in Germany, and 20 to 30 percent in France and Spain. Privatizations in 1986 (Société Générale among others) and 1993 (BNP) have significantly reduced government ownership and increased competition in France, however.

Increased competition causes productivity increases and employment losses in traditional products

Since 1980, new tools for increasing banking productivity have become available. Information technology has become more powerful and less expensive, allowing procedures previously done by hand to be automated. As a result, banks centralized processing functions, simplified or eliminated paperwork, closed unneeded branches, used part-time workers to meet demand peaks, and directed customers to less labor intensive delivery systems (like ATMs and telephone banking).

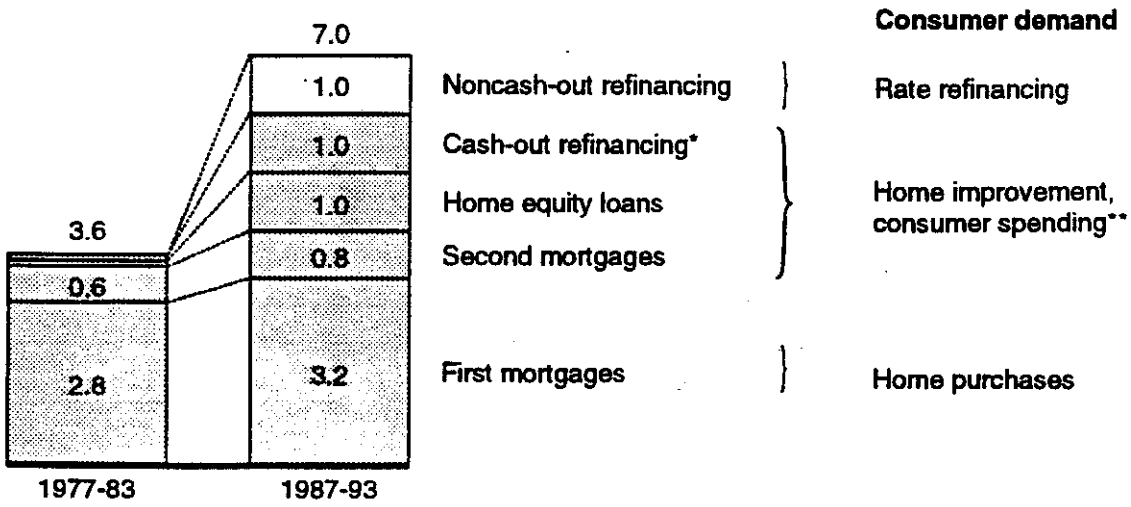
With few exceptions, these productivity improvements are equally feasible in all countries, but they have been implemented more readily in more competitive markets. Systems expenditures are high in the U.S., France and in Japanese city banks and much lower in Germany, Italy and Japanese regional and savings banks. The McKinsey Global Institute's Service Sector Productivity report found that banking productivity was 35 percent higher in the U.S. than in Germany, and an extension of the methodology for payments suggests that the gap with France is similar and that it is even larger with Italy (Exhibit 9). It also suggests that productivity has increased more rapidly in France than in Germany. This, along with the fact that the rapid productivity increase in the U.S. began at the same time as pricing deregulation (Exhibit 10), suggests that increased competition has led to productivity increases.

Exhibit 11

U.S. MORTGAGE ORIGINATION BY TYPE OF LOAN

ESTIMATE

Millions of loans per year; average of 7-year periods



* Defined as refinancings in which the new principal amount is more than 5% higher than the old amount

** About 25% of second mortgages, home equity loans, and cash-out refinancings are for home improvement

Source: Berstein Research; Federal Reserve; Fannie Mae; McKinsey analysis

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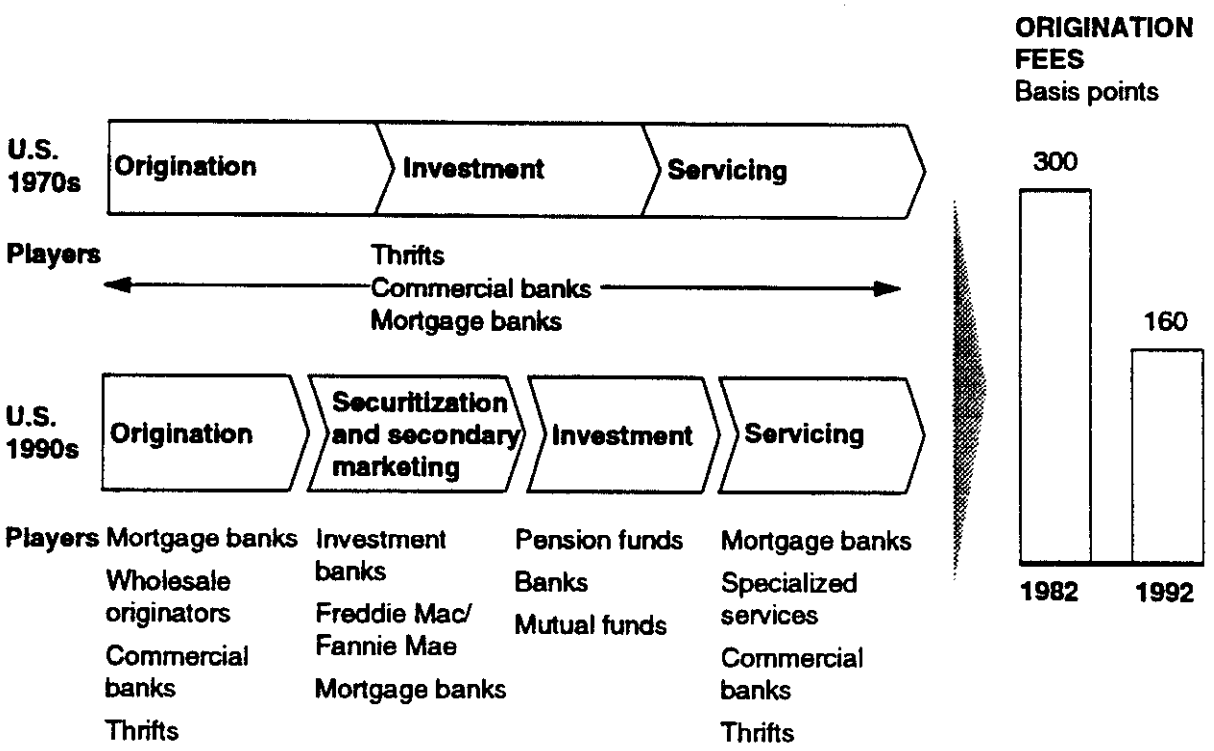
Exhibit 12

U.S. MORTGAGE INDUSTRY BUSINESS SYSTEM



Source: Interviews; McKinsey analysis

Due to the high penetration of traditional banking products (over 90 percent of households in Europe have current accounts) and the resulting limits on output, productivity increases in traditional products probably result in employment decreases. The decline in employment in payments and deposits in the U.S., France and Spain (and the steady growth in Germany and Italy) supports this conclusion.

Competition and profit pressure lead to employment gains in U.S. mortgage industry

The increase in competitive intensity in the U.S. did not lead only to job destruction, however. Banks and thrifts had their traditional revenue sources undermined by deposit regulation and their profits threatened by the interest rate environment in the early 1980s. Many sought to compensate by growing and realizing economies of scale – from 1982 to 1987 this took the form of expanding branches and lending, while after 1987 mergers and acquisitions were more common.

The expansion in lending was not entirely healthy, especially within the thrift industry. The relaxation of asset mix requirements by the DIDMCA and Garn-St. Germain Acts that accompanied pricing deregulation, particularly the increase in the amount of commercial real estate lending allowed, enabled S&Ls to expand lending in more risky areas. The S&L crisis and expensive government bailout that followed was a result of the combination of increased competition and decreased government supervision. Many argue that the crisis could have been avoided if regulators had better overseen the risk of thrifts' loan mix and set deposit insurance premia to fully reflect that risk.

A healthy expansion did occur in mortgages. Employment in residential mortgages more than doubled, increasing from 223,000 in 1982 to 455,000 in 1992. About half of that increase occurred in specialized mortgage banks, whose employment increased from 61,000 to 172,000 in the same period. The doubling in employment in mortgages was matched by a near doubling in mortgages originated in the same period (Exhibit 11). Almost all of this increase came from second mortgages, home equity loans, and both cash-out and rate refinancings.[2] The increase in demand was motivated by a combination of exogenous factors (the most important being the interest rate cycle and the 1986 tax reform) and a fundamental change in the way mortgages are financed.

Securitization changed the mortgage industry by allowing different players to originate, service and hold the mortgages on their balance sheets (Exhibit 12). Previously, equity requirements had limited the mortgage lending of banks and thrifts. By using government sponsored mortgage pools like Fannie Mae or

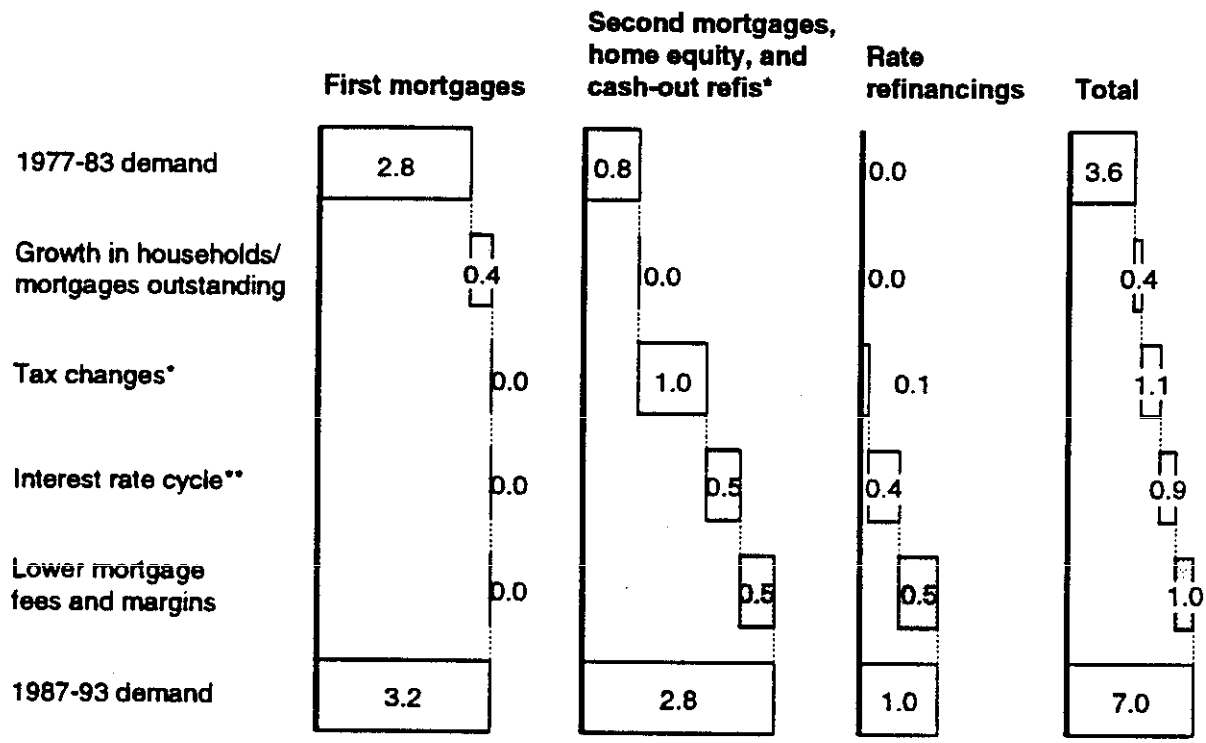
[2] Cash-out refinancings are those motivated primarily by a desire to borrow against accumulated home equity by increasing the principal amount. Rate refinancings are those done only to take advantage of lower coupon rates

Exhibit 13

ESTIMATE

SOURCES OF CHANGE IN U.S. MORTGAGE DEMAND

Millions of originations per year



* Both the change in interest deductibility and the change in marginal tax rates in the 1986 tax reform

** Includes the subsidy effect of the S&L crisis and the effect of high consumer interest margins

Source: McKinsey analysis

By giving a large number of small players the opportunity to grow and realize scale economies, securitization dramatically increased both competition and

SUMMARY AND IMPLICATIONS

The "productivity" of a banking industry is increasingly becoming a concern of national policymakers, both in terms of international competitive advantage and the efficiency of intermediation. Trade is already quite intense in securities; origination, structuring and trading are almost completely global. In commercial banking, the European Single Market has lowered entry barriers within Europe and threatens to make banking a pan-European industry in the medium term. Furthermore, policymakers are becoming increasingly aware of the importance of a lean and efficient intermediation system to the functioning of the entire economy.

Many governments have implemented some measures designed to increase competition, and thus, productivity: Spain and the U.S. deregulated deposit pricing, France privatized the two largest state-owned banks, and Japan has gradually liberalized deposit pricing and expanded the functions allowed certain bank types. The enthusiasm for reform has been tempered by concerns that increased competition will destabilize the system and lead to employment losses and/or an expensive government bailout like the one following the S&L crisis in the U.S.

A main finding of this case is that increased competition does not necessarily have to lead to employment losses. In the U.S., the squeeze on profits following deregulation encouraged banks to seek not only increased efficiency in their existing businesses but also increased penetration in new or emerging businesses. Residential mortgages was the emerging business which generated the most employment, but banks and nonbanks also expanded aggressively in consumer loans, credit cards and processing services (such as bill opening or airline ticket processing).

A similar expansion in emerging products did not occur in France and Spain, the other countries in which competition increased significantly. The flexibility of the U.S. capital market, regulatory authorities, and labor market enabled innovation to occur in the U.S., and rigidities in the same areas retarded innovation elsewhere. The lesson to be drawn from the experience of the U.S. mortgage banking industry is not that other countries should allow mortgage prepayments and generate large swings in interest rates in order to create employment in refinancings. The lesson is that an industry with fewer rigidities in the product, labor, and capital markets is more likely to innovate and create jobs even when competition intensity increases.

OUTLOOK

While employment in banking increased to some degree in all six countries during the 1980s, the employment outlook for the 1990s is less positive. Employment in the U.S. and France peaked in 1987 and has been falling slowly since. Italy and Spain may continue to increase in employment given their low

initial levels, but Germany and Japan will probably also cease to grow as competition increases.

- Many of the 455,000 jobs in the U.S. mortgage industry in 1992 are not sustainable. Interest rates are increasing again as the economy recovers, and although a significant number of outstanding mortgages remain "refinanceable" (i.e., with a coupon rate more than 40bp above current market rates), refinancing is already slowing from its pace in 1992 and 1993.

  It is difficult to predict where new innovations will occur in banking and whether they will create enough jobs to balance the inevitable further decline in "traditional" payments, deposits and loans. Securities should continue to grow, as the U.S. capital market continues to provide more capital and intermediation services to the developing world.

- The sustainability of employment gains in Germany is also in question. The barriers that kept deposit margins high are beginning to break down. Luxembourg money market funds are attracting more and more German assets, and the major banks have recently launched a money market checking account (legalized in August 1994). The securities market is in the process of reforms that should increase its transparency, and thus its attractiveness to retail investors. German banks will not only have to compete with substitute products, but also with entrants like Citibank that are offering telephone banking and may attempt to compete on price.

  Mortgage penetration in Germany is the second highest of the countries studied, but given high house prices in Germany it may have growth potential. Germany is geographically best situated to become the main capital market for Eastern Europe, but it must become as transparent and efficient as London. To avoid employment decline, German banks must aggressively pursue new business opportunities, and German regulators must remove the barriers to their doing so.

- Japan also faces a potential employment decline. Its large securities employment is sustained by high regulated commissions (they have been recently lowered, but are still five times U.S. levels); full deregulation will lead to a consolidation of its small firms. The second-tier regional and Shinkin banks are also currently insulated from competition but will be threatened as more sophisticated city and regional banks expand. Further deregulation may result in declining employment and a destabilized industry (a danger made greater by the underfunded deposit insurance system) unless banks develop new income sources.

  Banks have captured only a small share of the rapidly growing consumer loan and credit card markets because of weak creditor protection laws. Strengthening these laws would provide a new income

source. Corporate underwriting and mutual funds are less developed than in the U.S., in part because of the lack of transparency described above. Reforms of accounting standards and improvements of the bond rating system would enable some sustainable employment growth in securities. Mortgage penetration is quite low despite high land prices. Changing the JHLC from a primary player to a Ginnie Mae-style subsidized security packager would encourage mortgage employment growth without undermining Japan's social housing policy.

- France also has low mortgage penetration; a French Fannie Mae and reforming the subsidized contract savings plan would encourage the expansion of independent mortgage banks. Securities have a high retail penetration in France, but France needs to capture more of the structuring, originating and trading employment by making Paris more attractive as a marketplace. The success of the MATIF exchange, opened in 1986, is a good start. French banks have been focused on improving their profits through technology and efficiency gains, a change in focus toward providing more customer value (through services like credit cards, leasing, telephone banking, etc.) would lead to better employment performance.

- The industry in Spain is likely to consolidate further, continuing the trend started by the Bilbao-Vizcaya and Banesto-Santander mergers. In order to create productive employment, banks need the freedom to banks need the freedom to expand on other products. Securities and mortgages both have large growth potential, especially given high home ownership rates. Spain has the advantage of a less concentrated industry; if barriers to innovation are removed, the potential for a dynamic, innovative sector exists.

- The growth of the banking industry in Italy has been due to a lack of competition and increased penetration in the South. The successful entry of Abbey National in the mortgage industry has shown that the industry in Italy may become increasingly vulnerable if entry and competition barriers break down. The greatest threat to long-term employment is exactly what sustains employment in the short term: the product and labor market regulations that prevent banks from becoming more efficient.

APPENDIX: SOURCES OF CHANGE IN U.S. MORTGAGE OUTPUT

The model used to understand the sources of supply and demand for originations is shown in Exhibit 24. Lower costs, increased competition, and underpriced deposit insurance influenced the bank's decision of what margins and fees to charge (and implicitly, how much money to lend). The margins and fees combine with exogenous factors to influence household decisions to take out three broad types of loan: rate refinancings (refinancings primarily to get a lower interest rate, rather than to increase principal), cash-out loans (refinancings, home equity loans, and second mortgages primarily intended to borrow against new home equity), and first mortgages.

The change in mortgage origination by type of loan is shown in Exhibit 11. Most of the increase in demand between the periods 1977 to 1983 and 1987 to 1993 came from refinancings (both cash-out and rate-motivated) and home equity loans. Exhibit 13 attributes the increased demand for different loan types to the major exogenous and endogenous factors in the model. The effect of the S&L crisis is included in the interest rate cycle rather than in lower mortgage fees and margins; lower fees and margins therefore represent only the effect of the endogenous factors. The implicit subsidy provided by unsound S&L lending to residential mortgages during the 1980s was quite small, averaging only four basis points (Exhibit 25). The following sections explain the allocation for each loan type.

First mortgages

This analysis assumes that the increases in first mortgages originated and outstanding were completely exogenous to the industry. The increase in first mortgages originated was caused primarily by population growth and increased household formation (due to the baby boomers entering their thirties). Rising housing prices also caused a slight increase in the percent of home buyers needing a first mortgage.

Cash-out refinancings, home equity loans, and second mortgages

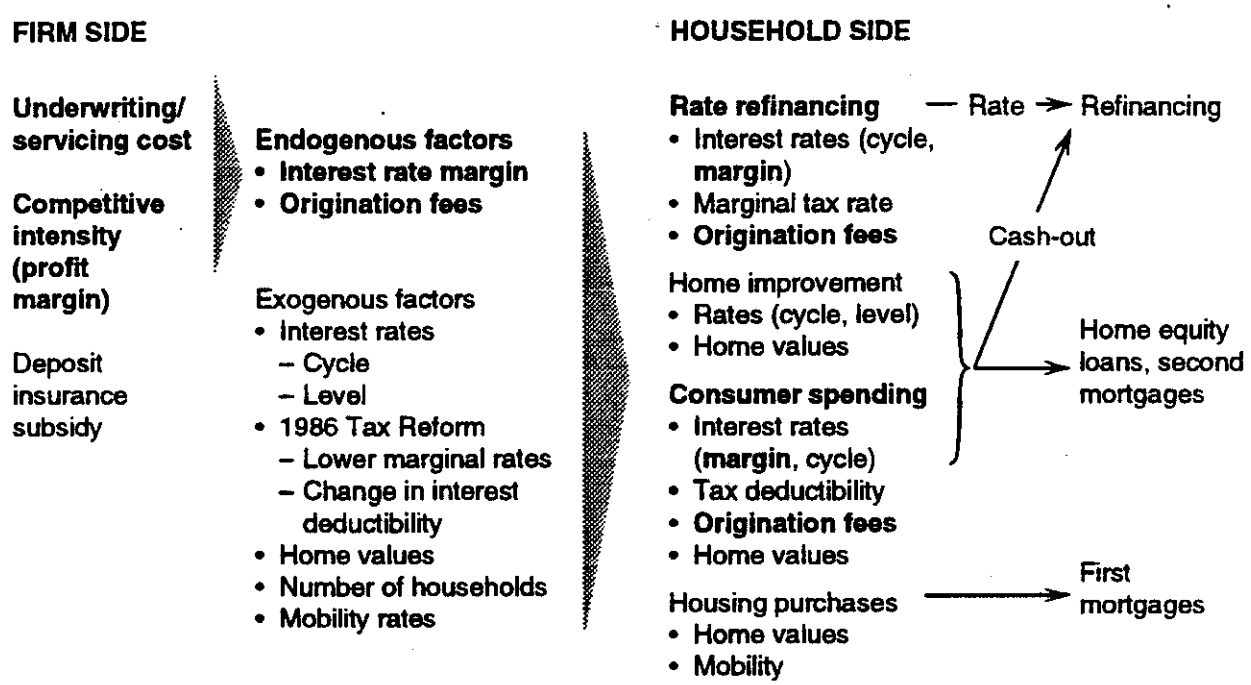
If a homeowner wanted to borrow to finance a consumer purchase or home improvement, his or her choice of financial instrument will depend on whether enough home equity is available to borrow against, and on whether a housing-backed loan is more attractive than a consumer loan. Consumers usually choose a cash-out refinancing when current interest rates are lower than the coupon on their first mortgage. They choose home equity loans and/or second mortgages when current rates are higher than their coupon. This model assumes that since

Exhibit 24

FRAMEWORK FOR ANALYZING DEMAND FOR MORTGAGE ORIGINATIONS

ILLUSTRATIVE

Bold = Factor influenced by the change in business system

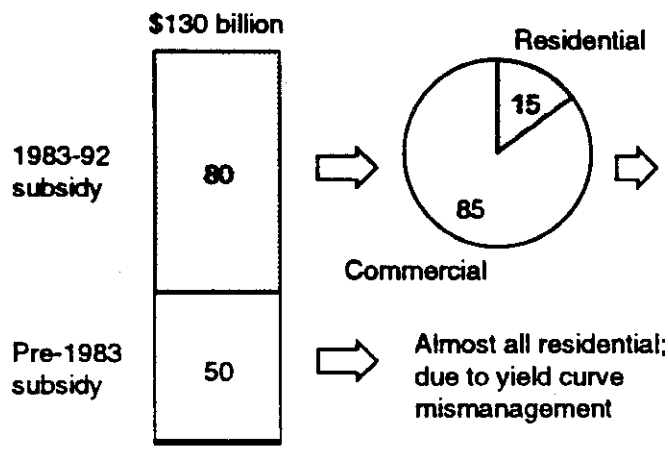


Source: McKinsey analysis

Exhibit 25

ESTIMATED "S&L SUBSIDY" TO RESIDENTIAL MORTGAGES AND COMMERCIAL LENDING

Taxpayer cost of S&L bailout*



Taxpayer subsidy of residential and commercial lending

	Total subsidy 1983-92 Billions	Average** loans out-standing Trillions	Estimated subsidy Basis points
Resi-dential	$12.0	$2.7	4
Com-mercial	$68.0	$1.3	50

* In 1993 dollars, deflated by 1-year treasury bond yields to control for interest compounding

** Loan outstanding figures are for entire financial industry; commercial refers to real estate loans only

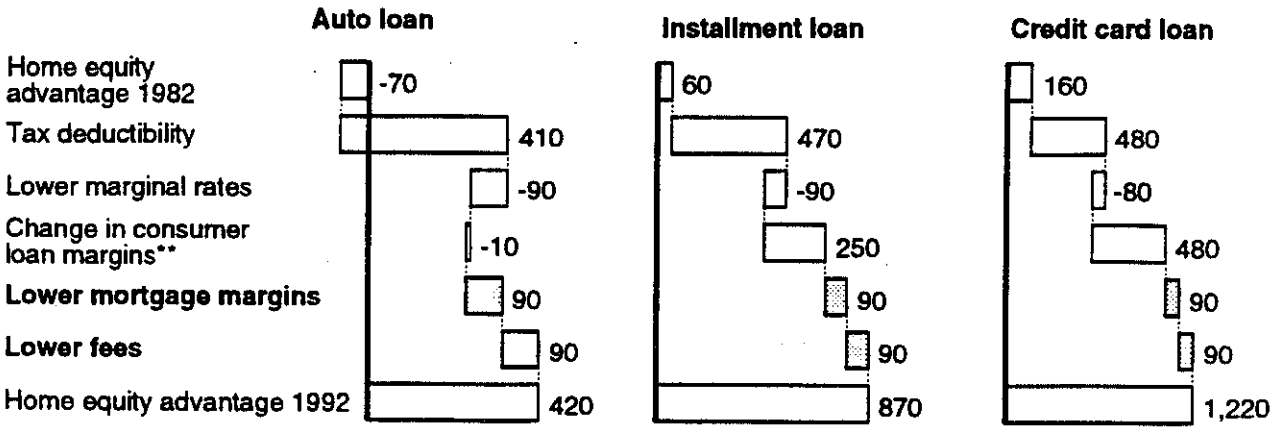
Source: RTC; Bert Ely; McKinsey analysis

Exhibit 26

EFFECT OF TAX, ORIGINATION FEE, AND INTEREST MARGIN CHANGES ON THE HOME EQUITY VS. CONSUMER LOAN DECISION

ILLUSTRATIVE

Basis points*



* Difference in the effective after-tax interest rate of financing $20,000 through a consumer or a home equity loan

** The change in consumer loan margins captures the effect of the downward cycle in risk-free rates; consumer loan margins are historically higher in low rate environments

Source: Berstein Research; Consumer Bankers Association; Federal Reserve; McKinsey analysis

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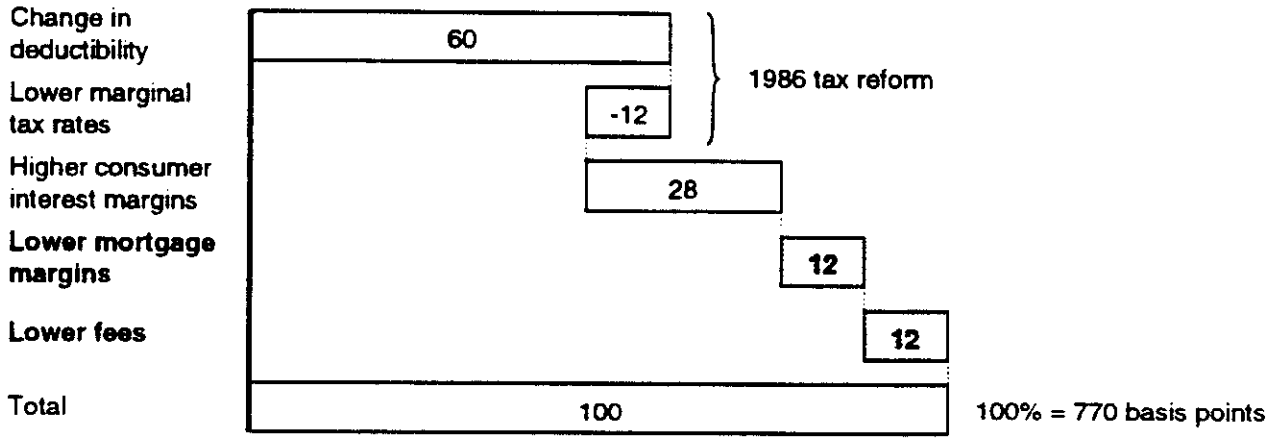
Exhibit 27

SOURCES OF CHANGE IN THE ECONOMICS OF HOME EQUITY LOANS*

ESTIMATE

Percent**



* Includes second mortgages and cash-out refinancings

** Average of auto loan, consumer loan, and credit card loan examples, weighted by the total amount of each type of debt outstanding in 1992

Source: Berstein Research; Consumer Bankers Association; Federal Reserve; McKinsey analysis

both "falling rate" and "rising rate" options are available, only the form of a cash-out loan and not the decision to make it will not depend on the interest rate cycle.

Real home values increased more rapidly in the late 1970s than in the late 1980s. A consumer 5 years into a mortgage (the average time when a home equity loan is made) would have had more equity available in the 1977 to 1983 period than from the 1987 to 1993. The rapid increase in home values in the 1980s is, therefore, not likely to have caused the increase in cash-out loans; more equity was actually available in the 1970s.

Exhibit 26 shows why the trade-off between consumer loans and housing-backed loans became so tilted toward housing loans in the 1980s. The elimination of consumer interest tax deductions in 1986 had a large effect on all three loan types, although this effect was mitigated somewhat by the lower marginal tax rates of the 1986 Tax Reform. The interest rate cycle made installment and credit card loans less attractive, as their rates did not fall with car loan and mortgage rates. Lower origination fees and mortgage margins also made housing loans more attractive. When the effects on these three loan types are averaged (Exhibit 27), lower fees and margins account for about 25 percent of the change in the trade off. This model therefore assumes that 25 percent of the increased demand for cash-out loans was caused by the change in fees and margins.

Rate refinancings

Two factors affect the decision to refinance a mortgage for a lower rate: the refinancing fee charged and the difference between current rates and the coupon rate of the mortgage. Exhibit 28 shows how 30-year fixed rates fell from their peak in 1982. About 5.3 percent of the 6.5 percent decline came from lower risk-free rates, and the other 1.2 percent decline came from lower margins. The subsidy resulting from unsound S&L lending practices was very small relative to the other changes.

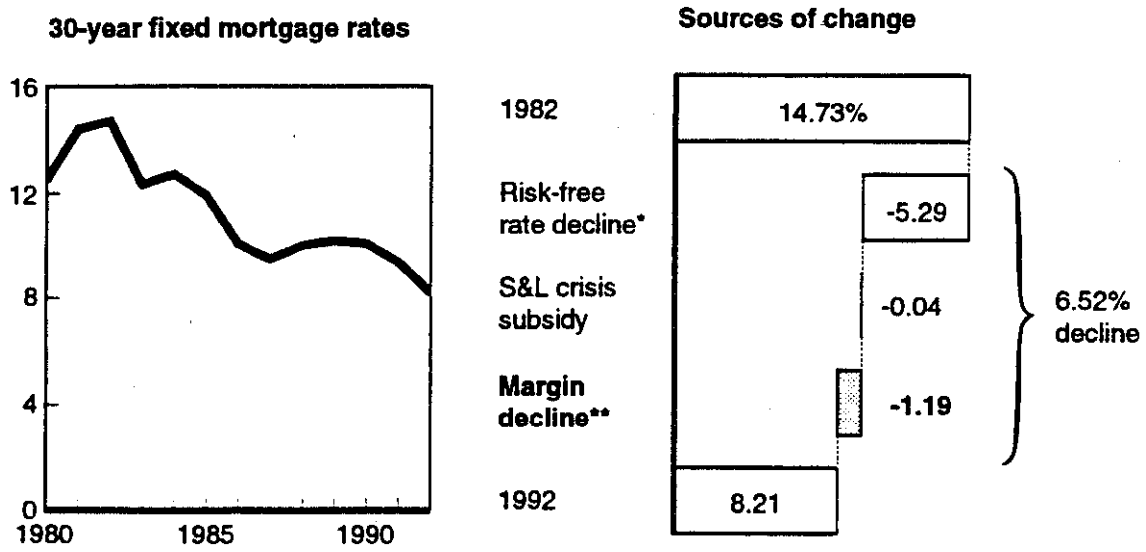
A combination of lower origination fees and lower marginal tax rates (due to the 1986 tax reform) reduced the difference required between current and coupon rates from 210 to 80 basis points (Exhibit 29). Most of this change was due to the lower origination fees.

Exhibit 30 is constructed by assuming that the decrease from 210 to 80 basis points in the threshold at which a refinancing was economic caused a doubling in the number of refinancings that actually occurred. American Housing Survey data on the coupon rates of outstanding mortgages suggests that the decrease in the break-even threshold made 50 percent more mortgages refinanceable (Exhibit 31). The combined effects of lower margins on mortgage rates and lower fees on the refinancing decision explain about 55 percent of the increase in rate refinancing.

Exhibit 28

SOURCES OF CHANGE IN 30-YEAR FIXED MORTGAGE RATES

Percent



* 10+ year government bond yield

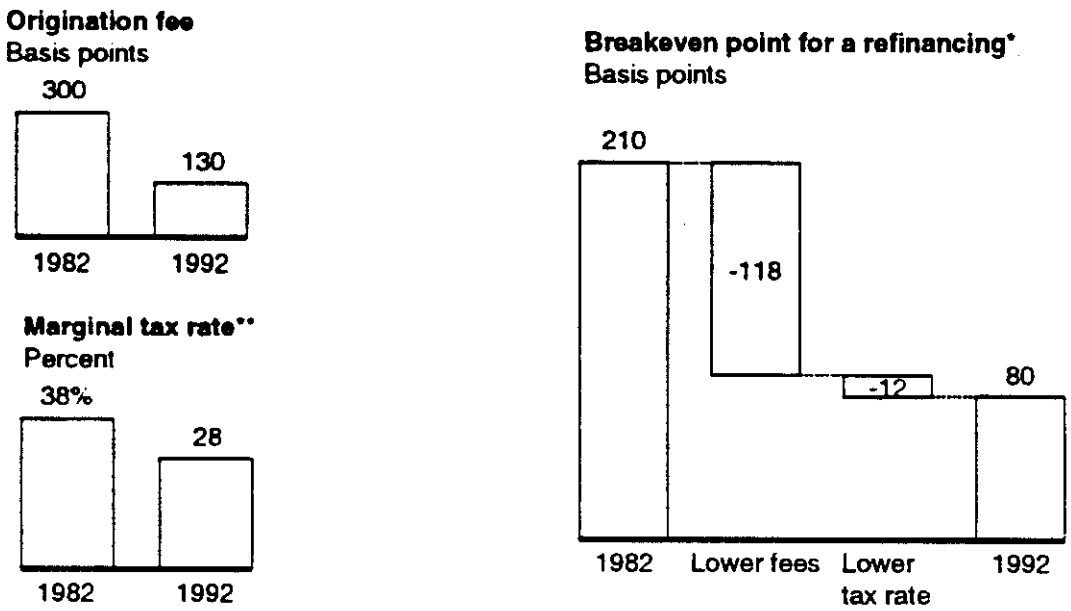
** Difference between primary market rate and government bond yield

Source: HUD; IMF; McKinsey analysis

Exhibit 29

EFFECT OF TAX RATE AND ORIGINATION FEE CHANGES ON RATE REFINANCING BREAKEVEN POINT

EXAMPLE



* Based on a 15-year repayment period and assuming further rate drop is anticipated

** Married couple with 2 children earning $75,000 (1990 dollars)

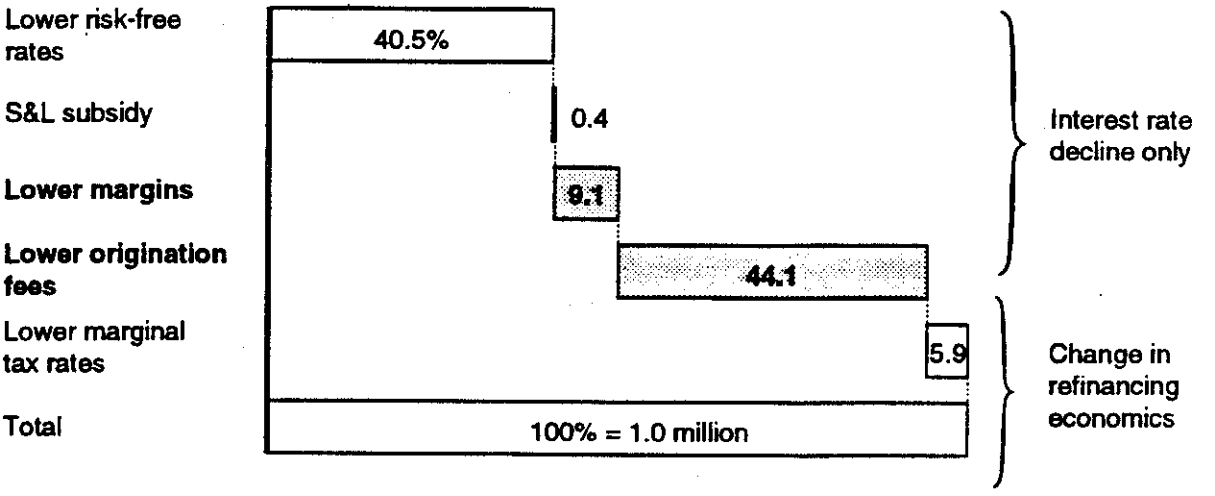
Source: U.S. Department of the Treasury; Inside Mortgage Finance; McKinsey analysis

Exhibit 30

SOURCES OF DEMAND FOR RATE REFINANCINGS 1987-93

ESTIMATE

Millions of originations per year, percent



Source: Berstein Research; Fannie Mae; IMF; HUD; RTC; McKinsey analysis

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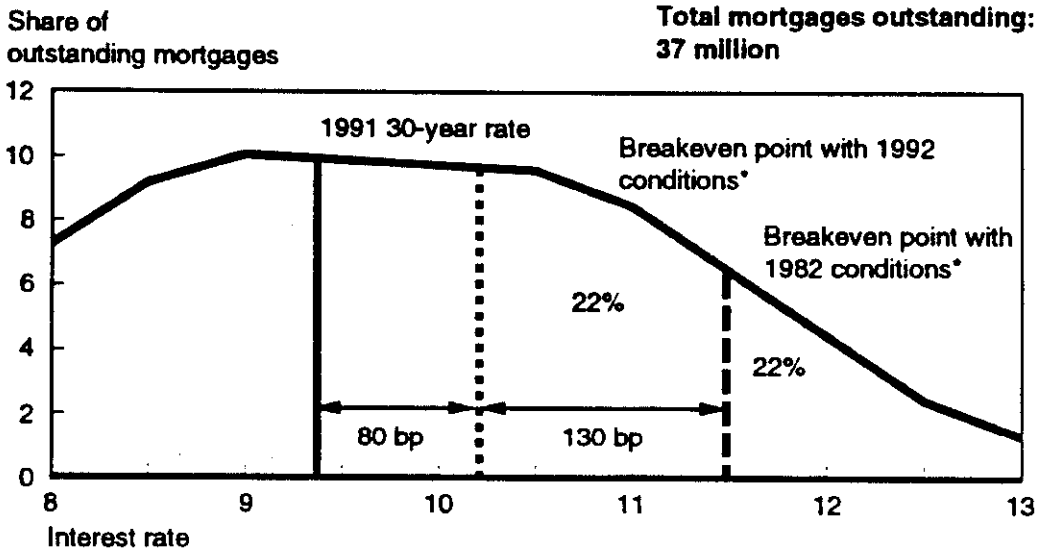
Exhibit 31

DISTRIBUTION OF COUPON RATES OF OUTSTANDING FIXED-RATE MORTGAGES 1991

Percent



* 1982 conditions: 38% marginal tax rate, 3% refinancing fee; 1992 conditions: 28% marginal tax rate, 1.3% refinancing fee

Source: American Housing Survey; McKinsey analysis

Assumptions made

The more critical assumptions are explained below:

- **First mortgages are unaffected by lower fees and margins.** Low mortgage funding costs probably allowed households to afford more expensive housing and thus take out more and larger loans. This effect is difficult to measure, and so, given the relatively small increase in first mortgages, it was ignored.

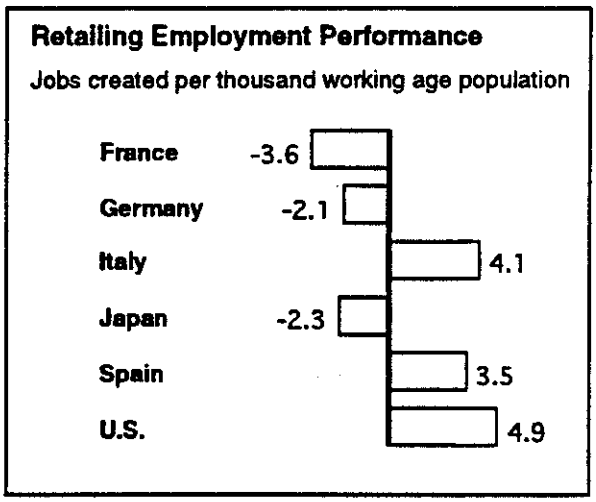
- **Cash-out refinancings (defined for this analysis as refinancings which raise the principal by more than 5 percent) are motivated entirely by the desire to borrow against equity.** While extreme, if this assumption were relaxed it would require reclassifying cash-out refinancings as rate refinancings. Since lower fees and margins had a larger effect on rate refinancings, this assumption causes the effect of endogenous factors to be understated.

- **Second mortgages and home equity loans are perfect substitutes for cash-out refinancings.** The alternative to this assumption is to assume that cash-out refinancings are partly motivated by lower rates, and that some cash-out refinancings should be reclassified as rate refinancings. See above discussion.

- **The ratio between actual refinancings and the number of refinancings that make sense economically will remain constant as the refinancing cost decreases.** This assumption is conservative. One could argue that each mortgage that was previously "refinanceable" would become even more likely to be refinanced as the threshold dropped.

On balance these assumptions should have led to a conservative estimate of the importance of lower fees and margins to the demand for mortgages. On the basis of this analysis, it seems reasonable to conclude that a significant portion (estimated here to be about one-third) of the increase in U.S. mortgage output would not have occurred without the lower costs and increased competition associated with the innovation during the 1980s.

RETAILING INDUSTRY CASE SUMMARY



Retailing is experiencing a structural shift: the destruction of old formats and the creation of new, innovative ones that offer more value to the customer and operate with greater efficiency. Rigidities in the product and labor market retarded the emergence of high value formats in France, Germany and Japan and this led to lower overall employment.

As the second largest employment sector that was studied, the sheer size of the retail sector and the large cross-country differences in employment performance make this industry important to our understanding of the overall employment performance of entire economies.

The transformation of retailing involves innovation in the form of new store formats – focusing on either increased efficiency through scale economies or on increased value to the customer by specializing on a particular product group. A shift towards high value formats tends to increase employment while one towards high efficiency operations tends to destroy jobs.

Policymakers are in a position to influence which kind of formats retailing entrepreneurs create. With modifications in such areas as zoning regulations, anti-competitive practices, and opening hour limitations, policymakers can foster job creation in high value formats. Product market barriers limited the development of the high value formats in favor of the high efficiency formats in France, Germany and Japan, and ultimately led to a decline in employment. Weaker constraints to innovation resulted in a shift beyond high efficiency stores to high value formats in the U.S. and led to net job creation. Italy and Spain increased employment by protecting their low productivity stores.

Retailing is one of the few industries we studied where labor market factors also appear to have a major effect on employment. High labor costs and a lack of flexibility in using part-time labor and in hiring and firing prevented entrepreneurs from successfully capitalizing on the advantages inherent in new formats.

Exhibit 1

DEFINITION OF THE GENERAL MERCHANDISE RETAIL SECTOR

Bold = Over 200,000 employees in U.S.

Included	Excluded
General merchandise stores	**Eating & drinking establishments**
Apparel and accessories stores	**Food retailers**
Building and garden supply stores	**Car dealers**
Home furnishing stores	**Oil and gas retailers**
Auto and home retailers	**Drug stores**
Furniture stores	Convenience stores
Jewelry stores	Liquor stores
Florists	
Sporting goods stores	
Mail order houses	
Fuel, coal and ice dealers	
Book stores	
Stationery stores	
Camera stores	
Cigar stores	

Source: McKinsey analysis

Exhibit 2

FORMAT DEFINITION

Type	Format	Definition	Stage
Non-specialized retailers	Discounters, mass merchandisers	Establishments with high volume, fast turnover, low prices, centralized check-out service, providing minimum customer service	2, 3
	Hypermarkets, supermarkets	Establishments in Europe providing mainly a large variety of food merchandise at low prices and minimum assistance	2
	Department stores	Establishments providing a large variety of products with medium and high prices, customer service in each department	2
	Variety stores	Establishments providing limited variety of merchandise at low and popular prices with low or no customer service	2
Specialized retailers	Specialty chains	Firm with more than 10 outlets or 50 employees	3
	Franchises	Member of a franchise chain	3
	Individual stores*	Firm with less than 10 outlets or 50 employees	1, 2, 3
Mail order	Mail order		

* Might include small nonspecialized shops

Source: McKinsey analysis

Employment in the general merchandise retailing industry

Retailing is a major employer in advanced economies, accounting for 8 to 13 percent of total employment in the countries we studied. The focus of this case is a subset of the entire retailing sector, general merchandise retailing, which excludes food, drugs, automotive, and fuel retail but includes clothing, furniture, home furnishings, and other miscellaneous goods (Exhibit 1). General merchandise retail accounts for 4 to 7 percent of total employment – with the exception of construction, this is the largest sector we studied. It is also the largest representative of what we expect to be the more dynamic service sector. During the 1980s, the employment of the sector evolved very differently in the different countries. The size of the sector and the cross-country differences in employment performance make this industry important to our understanding of the employment performance of an entire economy.

The output of the retailing sector is measured as the total value added to goods that pass through the sector. Retailers can add value not only by delivering goods from the wholesalers to the customers, but also by providing customers with a targeted range of products, convenient location and hours, or knowledgeable sales assistance. Retailers can obtain high productivity by achieving a rapid turnover of goods, by adding a lot of value to goods, or both.

The retailing sector of a country can be characterized by the types of stores that compose it. Variables like product variety, information technology intensity, logistical process, and gross margin allow us to classify groups of similar stores as one particular format. Formats include traditional mom-and-pop shops, department stores, discounters, and specialty chains (Exhibit 2). Formats will be the main variable through which the employment evolution in this case is analyzed.

Retailing is experiencing a **structural shift** – the destruction of old formats and the creation of new, innovative formats offering more value to the customer and operating with greater efficiency. The shift in formats is occurring in every country, but the speed of the shift and the formats that are emphasized differ by country. The employment of a retailing sector is determined by both the mix of different format types and the amount of shopping opportunities[1] provided by the sector. This case will analyze the employment performance of a given

[1] The term "shopping opportunities" refers throughout this case to a concept that approximates the total number of open store hours times the average size of a store. It incorporates the number, size, and opening time of stores.

Exhibit 3

STAGE DESCRIPTION

Nature	Stage 1	Stage 2	Stage 3
Value proposition	Provide goods to everybody	Provide a large choice of goods with low prices	Targeting precise groups of customers, emphasizing one value proposition (products, prices, services...)
IT intensity	Low or nonexistent	Cashiers, inventories	Controls all store operations, provides marketing information
Logistics	Dependent on the wholesalers	Integrated	Just in time, integrated logistics
Purchasing process	Through a complete chain of wholesalers	Centralized, direct with manufacturers	Centralized, global. Marketing functions internally done
Examples	General store, local boutique	Macy's, Sears	Toys 'R' Us, Ikea, Gap, Benetton

Source: McKinsey analysis

country by determining how product, labor and capital market factors have affected both the size and the format mix of the sector.

THE RETAILING INDUSTRY

Retailing formats can be roughly divided into three stages (Exhibit 3). All six countries have had a mix of the three stages at any given time, but over time most retailing sectors have seen stage one stores replaced first by stage two and then later by stage three. Stage one formats supply an untargeted range of goods to a variety of customers on a small scale. The typical stage one store is the mom-and-pop corner store that was quite common 50 years ago and still can be found in underserved markets such as rural and low income urban areas. Since these stores sell an untargeted set of goods at a high margin (a consequence of smaller scale), their main value proposition is either a convenient location or a lack of substitute formats. In areas where mom-and-pop stores have competed directly with more advanced formats, the stores have either been forced to specialize (and thus leave stage one) or have gone out of business.

Stage two formats supply an untargeted range of goods on a large scale. These stores benefit from scale economies in logistics and enjoy increased bargaining power with their wholesalers. Stage two formats include variety stores, department stores (like Hudson's and Kaufhof), and mass merchandisers (like Kmart and European hypermarkets). These stores emerged 30 to 40 years ago in the U.S. and slightly later in Europe. The main value proposition of these stores is some combination of better quality (high end department stores) and price (low end variety stores and mass merchandisers) than stage one.

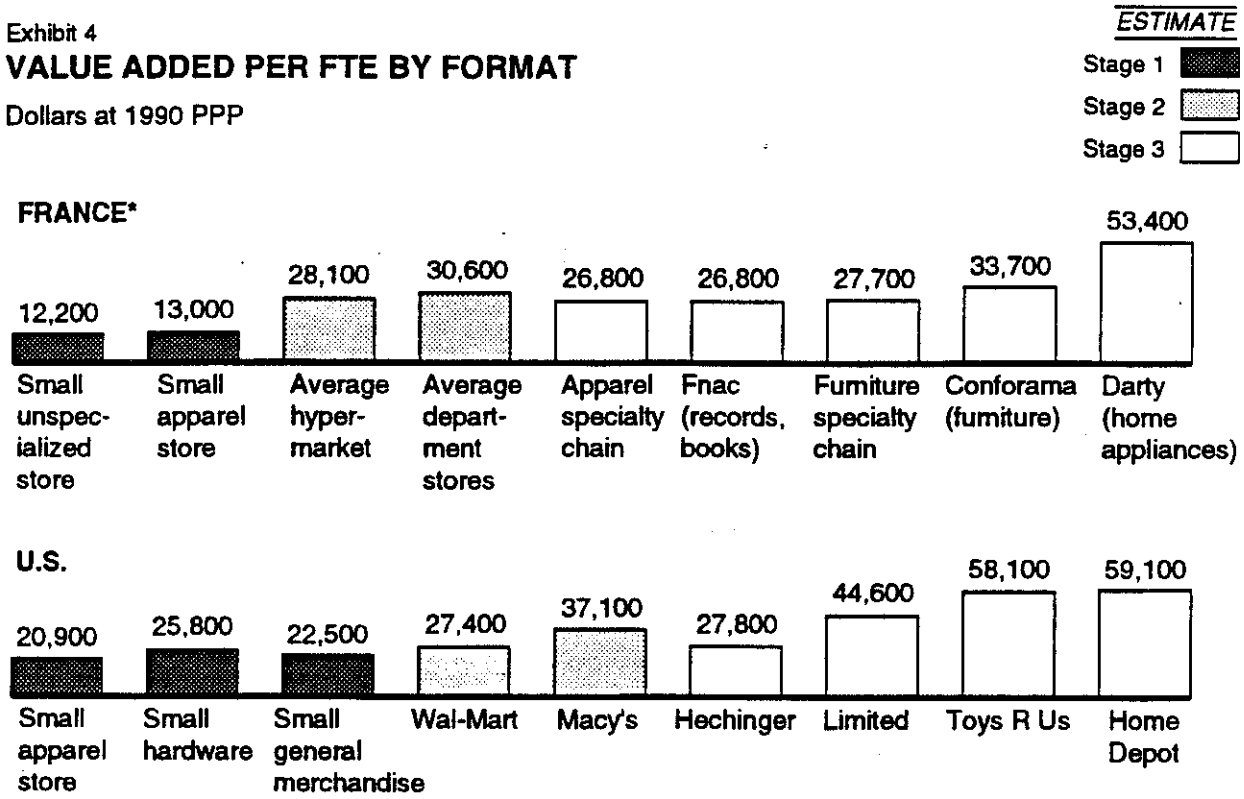
Stage three formats supply a targeted range of goods and/or customers on either a small or large scale. Stage three includes three distinct types of store: focused individual stores, specialty chains (such as the Gap and Toys R Us), and discounters (such as the Price Club). Mail order, although still quite small in terms of employment, can also be considered a stage three format. As a group, these stores offer higher customer value by focusing on a given customer or product group. Specialty chains and focused individual stores tend to be high margin – they deliver value by exactly providing the merchandise a narrow target group wants. Small specialized stores usually depend on shopping malls or downtown shopping areas to generate customer traffic. Discounters provide value to the customer by focusing on efficiency and low prices; they are differentiated from stage two mass merchandisers by their focus on only those products they can provide at "category killing" prices.

The relative productivity of the three format stages is different depending on how productivity is measured. In terms of sales per employee, stage two formats are more "productive" as a group than either stage one or stage three, although stage three discounters usually have higher sales per employee than stage two variety stores. But in terms of value added per employee (which incorporates the profit margin), stage three is more productive than stages two and one

Exhibit 4

VALUE ADDED PER FTE BY FORMAT

Dollars at 1990 PPP



* French accounting definition excludes rental and lease costs

Source: Enquête du Commerce 1990 INSEE; annual reports; McKinsey analysis

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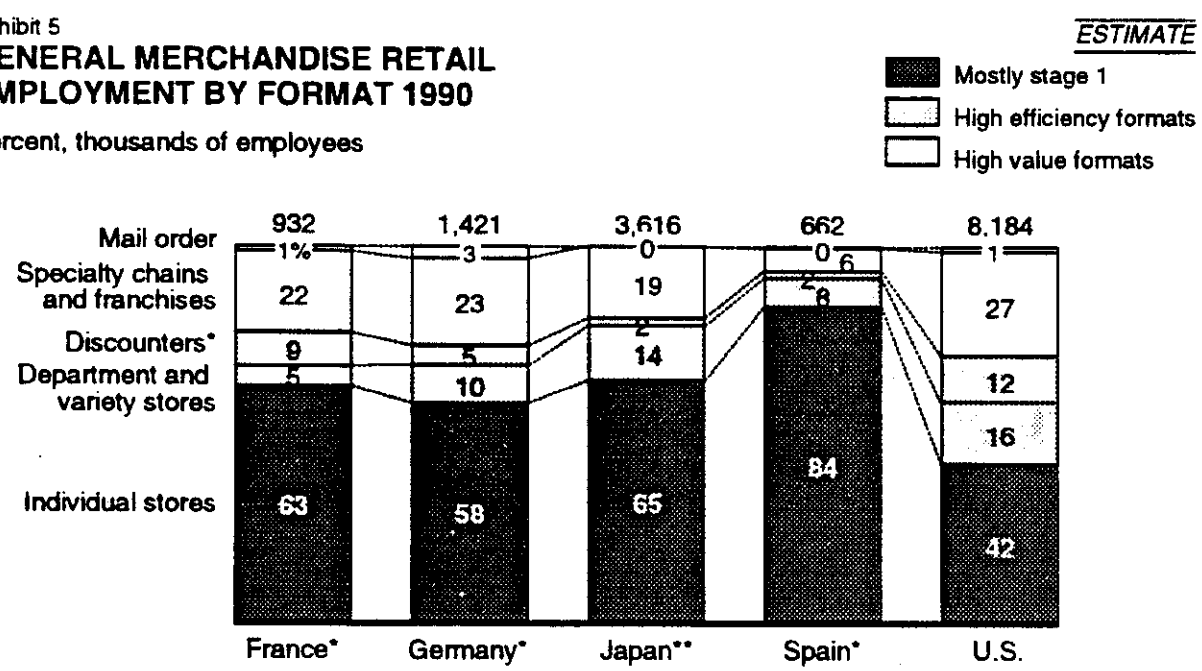
Exhibit 5

GENERAL MERCHANDISE RETAIL EMPLOYMENT BY FORMAT 1990

Percent, thousands of employees



* Excludes food sales in hypermarkets and supermarkets

** 1991 franchises are included in the individual stores; discounters are negligible

Source: Les Entreprises du Commerce INSEE 82/ 90; County Business Patterns; Retail Trade Census; Japanese Retail Trade Census; National Census; Fomento 1990; Anuario de la Fraquicia; Retail Opportunities in Spain; Federal Statistics Office; FS6; Reihe 3.2; Handels und Gaststättenzahlung; McKinsey analysis

(Exhibit 4). Stage three stores have tended to replace stage two, and stage two has replaced stage one when these formats compete directly, although even stage one stores have been able to survive if they are located away from more productive competitors.

Exhibit 5 shows the mix of formats in 1990. Individual stores include both mom-and-pop and focused stores; statistically these are difficult to differentiate. Discounters and mass merchandisers are also difficult to separate; together they represent a mix of stage two and stage three low margin stores. France, Germany and Japan had a similar format mix in 1990, while Spain (and Italy, we believe) had many more stage one stores. The U.S. has the most "advanced" format mix with a high share of stage three.

France, Germany, and Japan all experienced a decline in individual stores (presumably mainly of the mom-and-pop variety) in the 1980s (Exhibit 6). This decline was compensated to some extent by an increase in mass merchandisers (mainly hypermarkets in Europe), specialty chains, and in Japan, general merchandise stores. A shift from stage one mom-and-pops to stage two and stage three occurred in these countries. The U.S. experienced growth in individual stores (mostly in focused stores), specialty chains, and discounters, while it lost employment in department stores. The shift in the U.S. was more from stage two to stage three. Evolution data are not available for Italy and Spain, but interviews suggest that they experienced only a slight movement away from stage one during the 1980s.

EMPLOYMENT PERFORMANCE

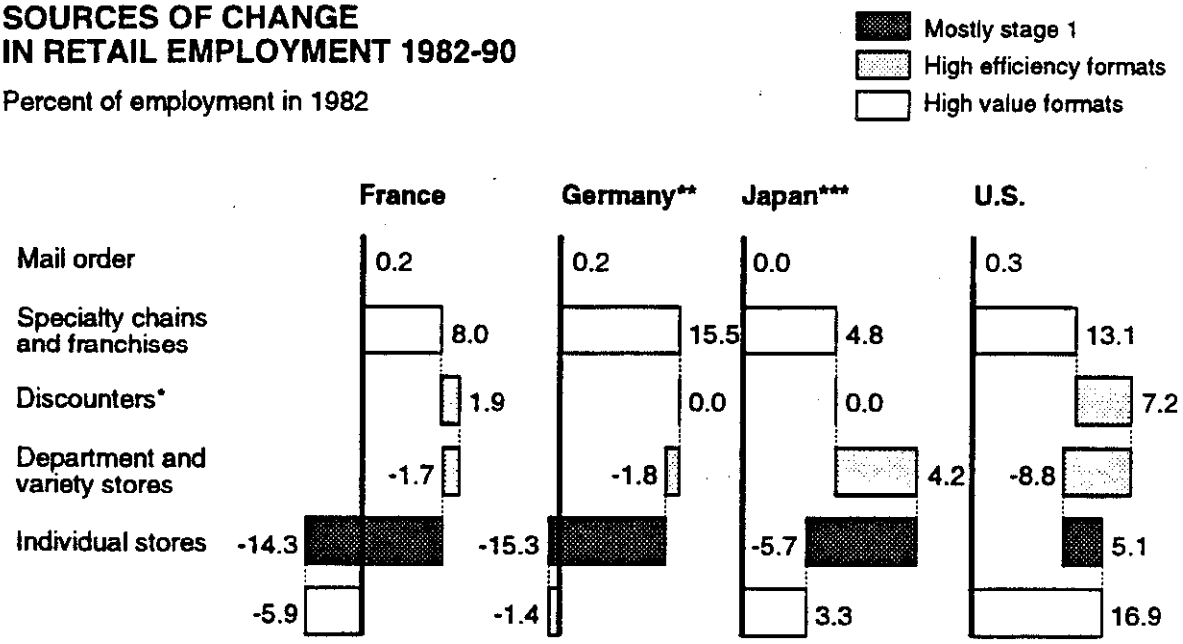
The U.S. had the best employment performance, adding 4.9 jobs per thousand in the working age population (adjusting for population growth) (Exhibit 7). The U.S. grew rapidly from a high initial employment level. Italy and Spain had equal or faster employment growth, but they began with an initial level less than half of the U.S. Germany and Japan had almost stable absolute employment levels; when these levels are adjusted for population growth they translate into significant declines. France had the worst employment performance; it lost jobs in absolute terms and ended the decade with the lowest employment per capita of the five countries.

The differences in employment performance are more pronounced if measured in FTE or hours worked (Exhibit 8). A large decline in hours per employee in France, Japan and Spain leads to differences of 0.7 to 1.1 percent in the p.a. growth rates of employees and hours worked. The legal work week in France was reduced from 41 to 39 hours during the 1980s, and the shift away from stage one formats allowed more use of part time. In the U.S. part time use was already high in 1980; the slight increase in the part time share that did occur was compensated by an increase in hours per FTE.

Exhibit 6

SOURCES OF CHANGE IN RETAIL EMPLOYMENT 1982-90

Percent of employment in 1982



* Excludes food sales in supermarkets and hypermarkets employment concerned with nonfood goods

** 1979-90

*** 1982-91

Source: Les Entreprises du Commerce INSEE 82/ 90; County Business Patterns; Retail Trade Census; National census; Federal Statistics Office; FS6; Reihe 3.2; Handels und Gaststättenzahlung; McKinsey analysis

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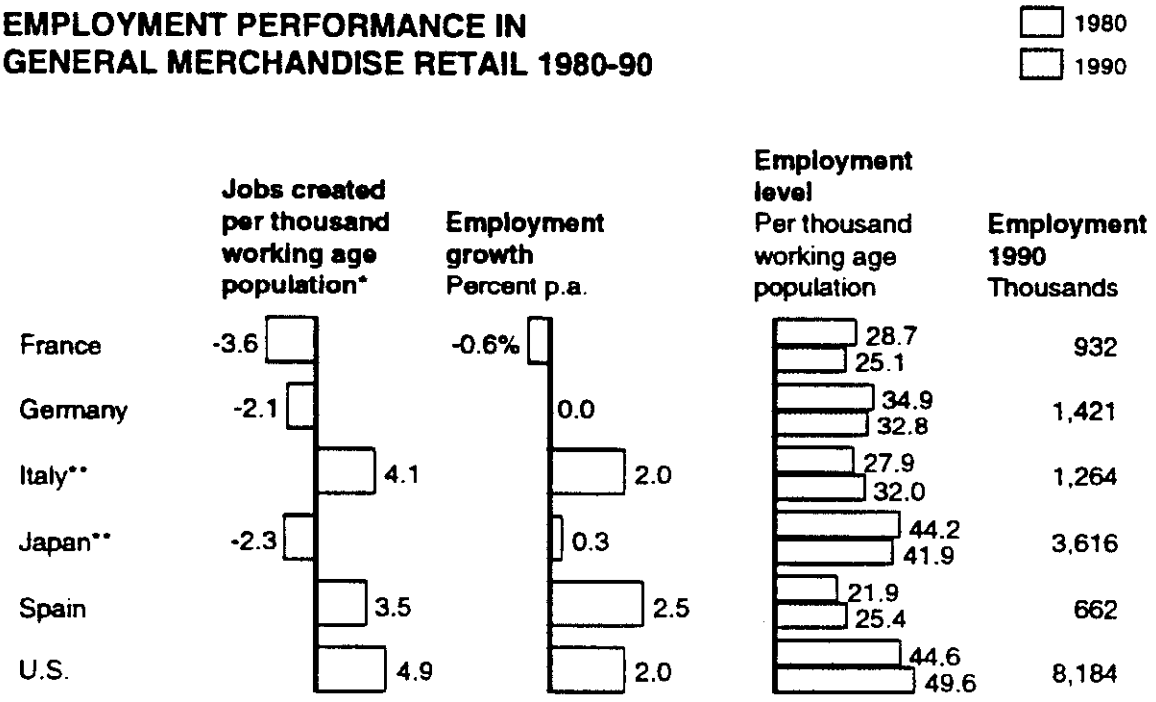
Exhibit 7

EMPLOYMENT PERFORMANCE IN GENERAL MERCHANDISE RETAIL 1980-90



* Adjusted for growth in working age population

** 1981-91

Source: Establishment surveys; McKinsey analysis

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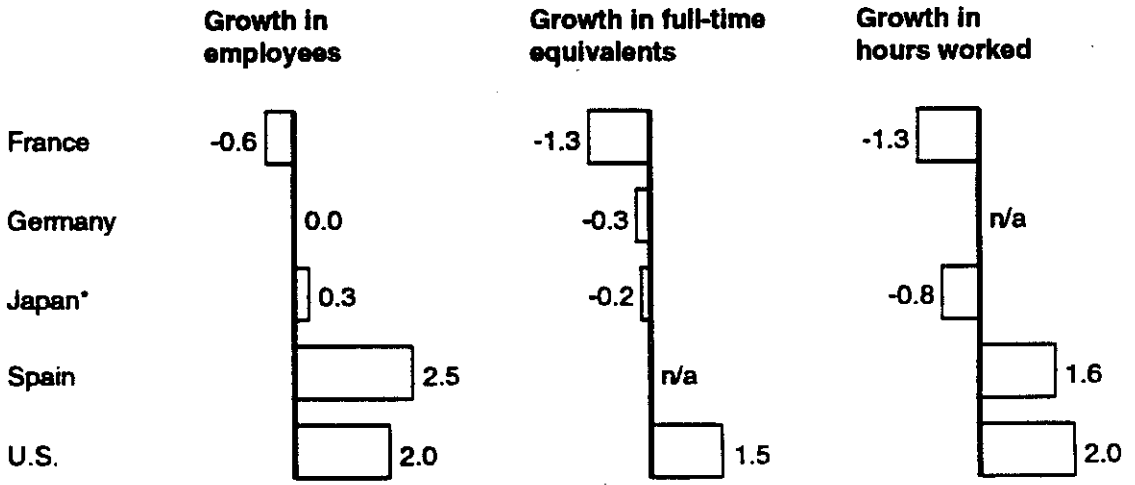
Exhibit 8

ADJUSTED EMPLOYMENT GROWTH MEASURES

Percent p.a.



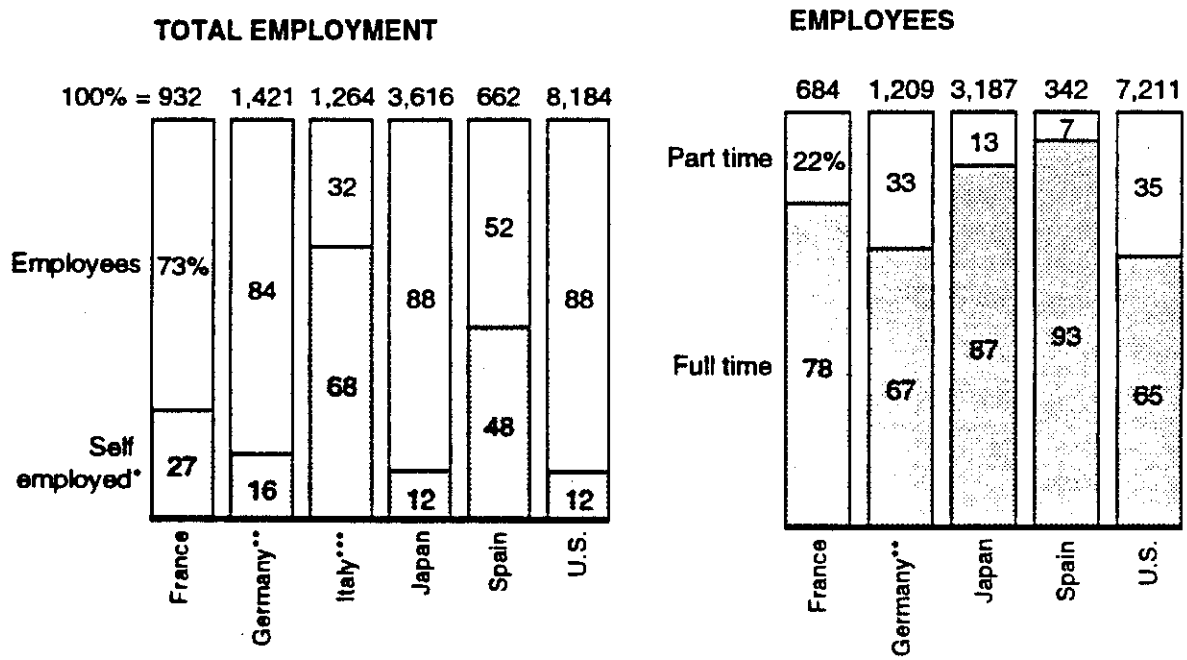
* 1981-91

Source: Establishment surveys; McKinsey analysis

Exhibit 9

EMPLOYMENT BY TYPE 1990

Thousands of employees, percent



* Includes unpaid family workers

** Calculation-based on the total retailing sector

*** 1991

Source: Household surveys; establishment surveys; Japan Retail Census; Censo de locales 1990; Encuesta de Comercio 1988; Statistisches Bundesamt; McKinsey analysis

Although France, Japan and Spain experienced significant increases in the use of part time, Germany and the U.S. had the highest part-time share in 1990 (Exhibit 9). Part-time workers are most important to stage three formats – stage one stores are often run by their owner, and stage two stores typically have a large enough scale that part time is not needed for flexible scheduling. Self-employed workers tend to be the owner/managers (of mom-and-pop stores) common in stage one. The much higher levels of self employment in Italy and Spain reflect the importance of stage one.

CAUSES FOR EMPLOYMENT DIFFERENCES

Barriers in the product and labor markets kept new formats from emerging in Europe and Japan, differentially affecting high value, high employment formats. Innovation in these countries was channeled into high efficiency rather than high value formats, and employment declined as a result. In Italy and Spain the barriers affected both high value and high efficiency formats. This led to a better, if less productive, employment performance since labor-intensive stage one formats were maintained. One key lesson of the case is that barriers in the product and labor markets can cause innovation to contribute to net job destruction rather than job creation.

In France and Germany, product and labor market factors affected the amount of shopping opportunities as well as the format mix. Higher rents and labor costs reduced the viability of marginal stores, and opening hours restrictions reduced the number of "open store hours" provided by the sector. The fact that customers had fewer stores and shopping times to choose from reduced the value that the retail sector was providing to them. At the same time, it meant that the general merchandise demanded was being provided using fewer worker hours, which led to lower employment.

The most important factors affecting differences in employment performance relative to the benchmark is summarized in our causal framework in Exhibit 10.

Output and productivity

The output of a retailing sector has two components, the goods delivered through the system and the value that is added to those goods in the form of the retailing service.

- **General merchandise demand**. Significant differences in general merchandise consumption are the major cause of output differences. Household consumption of general merchandise goods per capita is generally related to income per capita, although income elasticity does appear to be slightly less than one (i.e., a 10 percent rise in GDP per capita yielded 6 to 7 percent more general merchandise consumption in the 1980s). Most of the differences in initial level and change in

Exhibit 10

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Retail

● Important
○ Secondary
X Undifferentiating

Benchmark: U.S.

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X	X	X	X	
• Less government ownership/support	X	X	X	X	X	X	
• Readily available capital	X	X	X	X	X	X	
Labor market							
• Low labor cost	●	●	●	○	X	X	
• High availability/low benefits	○	○	○	X	X	X	
• More flexibility	○	○	○	X	X	X	
Product market							
• Fewer restrictions on output and competition	●	●	●	○	●	○	
• More new business facilitation	X	X	X	X	X	X	
• Rapid demand growth	○	●	○	○	X*	●	
Industry dynamics/competitive intensity							
• Better trade/FDI performance	X	X	X	X	X	X	
• More price competition/restructuring	X	X	X	X	X	X	
• More innovation/new products	●	●	●	X	○	X	
Higher output growth	●	●	●	●	X	●	
Higher productivity growth	X	X	X	X	X	X	
Lower productivity growth	○	○	●	X*	●	X*	

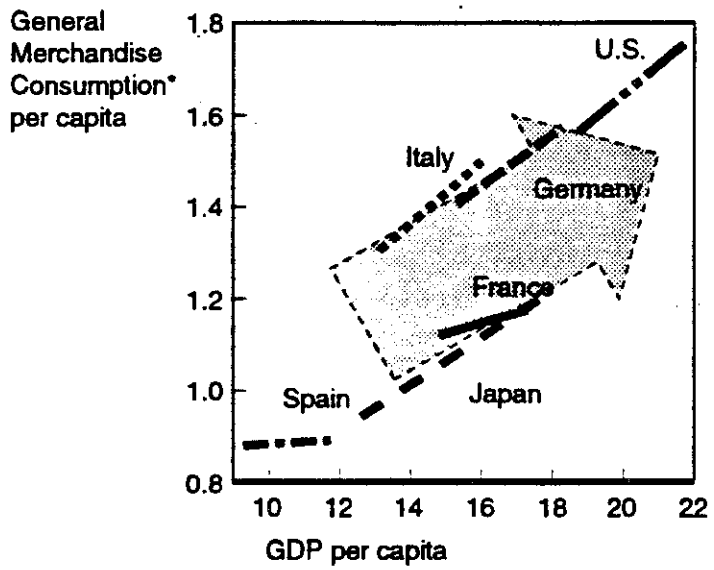
* Opposite is true with strong influence

Source: McKinsey analysis

Exhibit 11

GENERAL MERCHANDISE CONSUMPTION AND GDP PER CAPITA 1980-90

Thousands of 1990 $ at final expenditure PPP



Different growth rates
- U.S., Germany, Italy, Japan grow with income
- France and Spain do not

Different levels
- U.S., Germany and Italy have high consumption given income levels
- France and Japan have low consumption

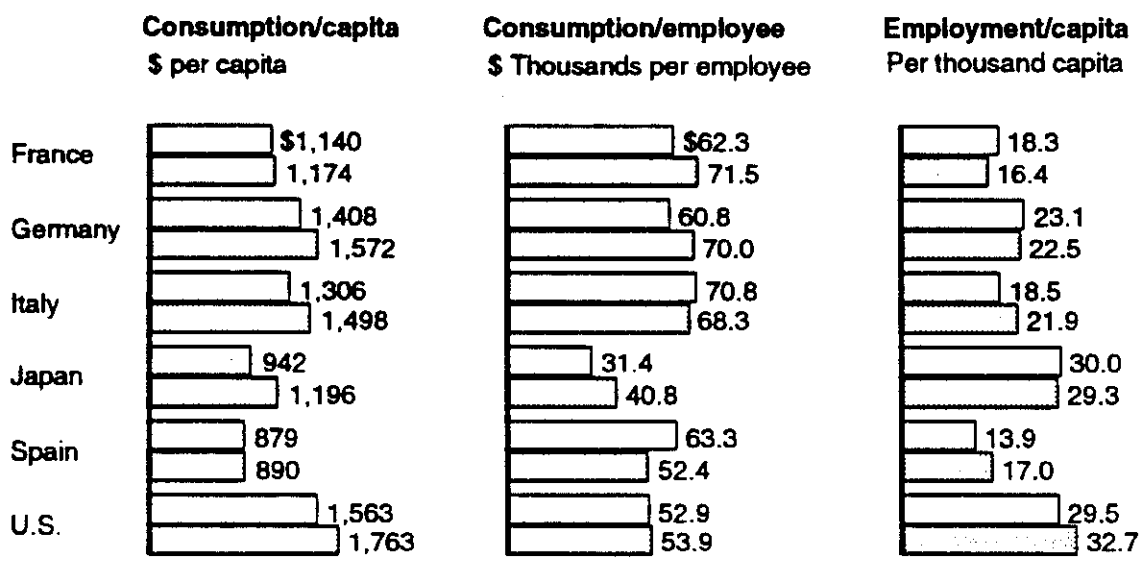
* Sum of final expenditures for "clothing and footwear" and "household equipment and operation"

Source: OECD National Accounts; McKinsey analysis

Exhibit 12

BREAKDOWN OF GENERAL MERCHANDISE EMPLOYMENT

In 1990 $ at final expenditure PPP



Source: OECD National Accounts; household surveys; McKinsey analysis

consumption can be explained by GDP per capita, but there are two major inconsistencies. France and Spain had about the same GDP per capita growth during the 1980s as Germany and the U.S., but their general merchandise demand grew only slightly. Japan began and ended the decade with an unusually low level of consumption given its income, but still experienced rapid demand growth (Exhibit 11).

- **Retailing value added**. Differences also exist in the value added to goods. These differences arise from both the mix of formats and the total amount of shopping opportunities. The U.S. industry, with both more stage three stores in its format mix and more shopping opportunities in general, adds the most value. Germany, France and Italy have both a format mix more focused on earlier stages and fewer shopping opportunities. Spain and Japan have similar shopping opportunities, but format mixes more oriented toward stage one. Japan did evolve rapidly toward stage two, however. Since the U.S. had one of the most rapid demand growths and also experienced the greatest shift toward high value formats, we can conclude that output has grown more rapidly in the U.S. and Japan than in Europe.

Just as it is easier to measure general merchandise demand than true retailing output, it is easier to measure consumption[2] per employee than labor productivity.

- **Consumption per employee**. General merchandise consumption per retail employee is highest and grew rapidly in France and Germany (Exhibit 12). High levels of consumption per employee suggest a format mix that emphasizes efficient stage two stores, and the growth suggests little transition into stage three. It also suggests a sector that offers limited shopping opportunities to consumers. Consumption per employee in Spain and the U.S. was lower and not increasing. This is consistent with Spain remaining mainly in stage one and the U.S. experiencing both a shift from stage one to two and two to three. Japan began the decade with extremely low throughput per employee, but the emergence of general merchandise stores helped it grow towards Western levels. Italy had high and stable levels of throughput per employee; this reflected a low level of shopping opportunities and a format mix that remained in stage one.

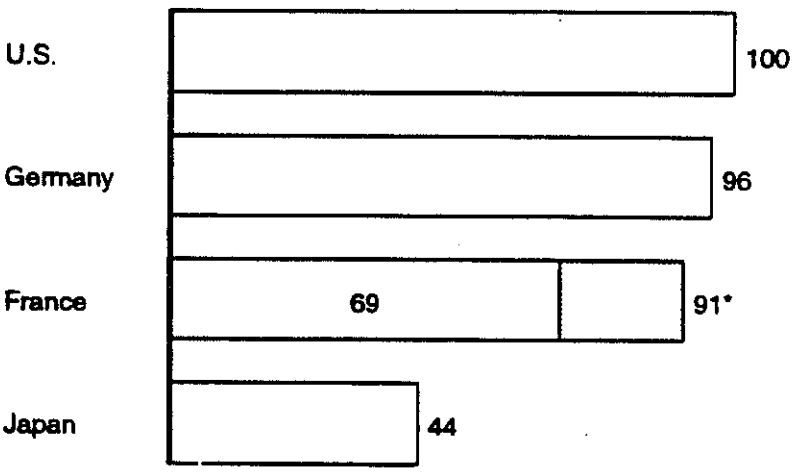
- **Labor productivity**. The difference between consumption per employee and labor productivity (value added per employee) is the value that is added to goods as they are passed through the retail sector. The U.S. industry adds more value to goods than in Europe or Japan; it

[2] Consumption is not equal to sales, as not every good consumed by households passes through the retail system and businesses buy intermediate goods at retail stores (such as office supplies). Consumption data is used because it is easier to obtain at the aggregate level and convert to a common currency and because data for France, Germany and the U.S. suggest that sales and consumption growth rates are similar.

Exhibit 13

LABOR PRODUCTIVITY IN GENERAL MERCHANDISE RETAIL 1987

Value added per full-time equivalent converted at GDP PPP



* Includes adjustment for different treatment of rent in value added

Source: MGI Service Sector Productivity report; McKinsey analysis

has more specialized stores that provide greater convenience and perform more logistics and marketing. U.S. consumption per employee data therefore understates its labor productivity.[3] The MGI Service Sector Productivity report found that the U.S. and Germany had the highest productivity (Exhibit 13). France had lower productivity because of low value added per good. Historical productivity figures have been difficult to measure, but rough calculations suggest that productivity (such as sales per employee) has grown more rapidly in France and Germany. This increase was not accompanied by increased value added per good, and therefore came at the expense of employment. Productivity levels in 1990 were lower in Japan and Spain, but appear to have increased rapidly in Japan, again at the expense of employment. Since the U.S. has attained its high productivity level through high value instead of efficiency alone, it has been able to combine high productivity with strong employment performance.

The relationship between output, productivity and employment can be summarized by country.

- ¶ France experienced a combination of low demand growth for general merchandise goods and rapid productivity growth through increased efficiency rather than through increased value. This combination caused an employment decrease.

- ¶ The U.S. experienced strong demand growth and a productivity increase through increased value rather than only through increased efficiency. This combination allowed strong employment growth.

- ¶ Germany was an intermediate case between France and the U.S. in both respects. It experienced slightly more moderate demand growth, and its productivity growth appears to have involved both efficiency and value increases.

- ¶ Japan began the 1980s with a very labor intensive, stage one-oriented system. Despite strong economic growth, the emergence of more efficient formats led to employment losses in relative terms. Employment growth was also affected by the fact that Japan's demand for general merchandise goods remains well below that of similarly wealthy countries.

- ¶ Spain and Italy were able to increase employment along with demand because productivity increases were minimal; stage one remained the dominant format.

[3] The difference between the consumption per employee and productivity figures in Exhibits 12 and 13 is also explained by the higher use of part time in the U.S. and higher share of general merchandise that is sold outside the retail industry in Europe.

Exhibit 14

REGULATIONS AFFECTING THE CREATION OF NEW STORES

	Regulations	Consequences
France	Loi Royer 1974 • Local authorization needed to open new stores if > 1,000 sqm in small towns > 1,500 sqm in larger towns (40,000 inhabitants) • Local authorization needed to expand by more than 200 sqm • Local boards composed of elected officials, local merchants and consumer Associations under authority of Prefect3	• Since 1984 almost all projects are rejected • Encouraged smaller formats • Resulted in suboptimal location and size decisions based on political and local considerations • Few large stores and malls developed • Land costs increased
Germany	Bebauungspläne and Baunutzungsverordnung 1977 • Restrict large store areas zoned outside cities • Only small, local stores allowed in residential and service zones • Require local authorization for stores >1,500 sqm • Länder are free to impose even more strict regulations	• Limits creation of large stores, especially in suburbs • Development of discount "cash and carry" (not affected by law) and direct mail retailing • Limits malls downtown • Cost of commercial land downtown increased
Italy	Commercial Law (1971) • New stores allowed only to fill gaps in local material industry • Regional authorization required for shopping centers, department stores and hypermarkets • Traditional stores have considerable influence on local authorities	• Hypermarkets limited to poor locations • Shopping centers limitied • Land costs increase
Japan	Large Scale Store Law (1973) • Local or national authorization required to open or transform any store of >1,500 sqm in small towns and 3,000 sqm in large cities • MITI considers – Population size and evolution – Prospects for existing retailers – Location and profitability of other large stores in area • Hearing must be held with local business and retailers; their opinions taken into consideration	• Very long process (7-10 years) with high failure probability • Slowed down creation of large stores; it was easier to buy out existing shops in a block and merge them • Encouraged smaller stores
Spain	• No national regulations until 1993 • Complex local approval requirements are main barrier	• Offers "quasi-monopoly" to first entrant • Different patterns of development depending on local authorities

Source: Standortfragen des Handels BAG Köln 1992; SECODIP; McKinsey analysis

Industry dynamics

Trade and competitive intensity, although important in other industries we studied, are usually not differentiating factors in retail. Significant international trade in mail order or home shopping (the only potentially tradable retail formats with employment consequences) has not yet developed, and retail is not concentrated enough for competition to be anything but intense. Japan may be an exception, as the retail price maintenance imposed on small retailers by wholesalers and manufacturers lowered competitive intensity among retailers and limited the ability of larger retailers to exploit their scale advantage. The breakdown of this system in the late 1980s and early 1990s appears to have had negative consequences for employment by allowing productivity to increase, although the most dramatic changes have occurred after 1990 and therefore are not in the period covered by this case. The role of competitive regulations in influencing the format mix will be discussed below.

The most important industry dynamic in retail is innovation in the form of the emergence of more productive and higher value formats. The U.S. achieved better employment performance because of the emergence of high value formats. Spain and Italy achieved strong employment growth because fewer high efficiency formats developed. France, Germany and Japan experienced innovation that only increased efficiency, and employment therefore declined. Innovation occurred in every country, but in very different forms and at very different rates. The key question for the next section to explain is why innovation was so different across countries.

Product market factors

The product market factors that limit retailing employment can be divided into those that limit the development of all formats and those that limit high value formats differentially. High land costs and opening hours restrictions in some countries limit employment in all retail formats, but these factors also differentially affect more advanced formats. Competitive behavior, lower income levels, and consumer behavior are additional factors which limited advanced formats in some countries. Exhibit 14 summarizes the regulations limiting the creation of new stores.

- **High land costs** for retailing in Europe and Japan are caused by more restrictive zoning laws, a higher population density, and less suburbanization (especially of higher income consumers). High population densities naturally make land more expensive, both by increasing the demand for a finite resource and by increasing concern about the environment and over development.

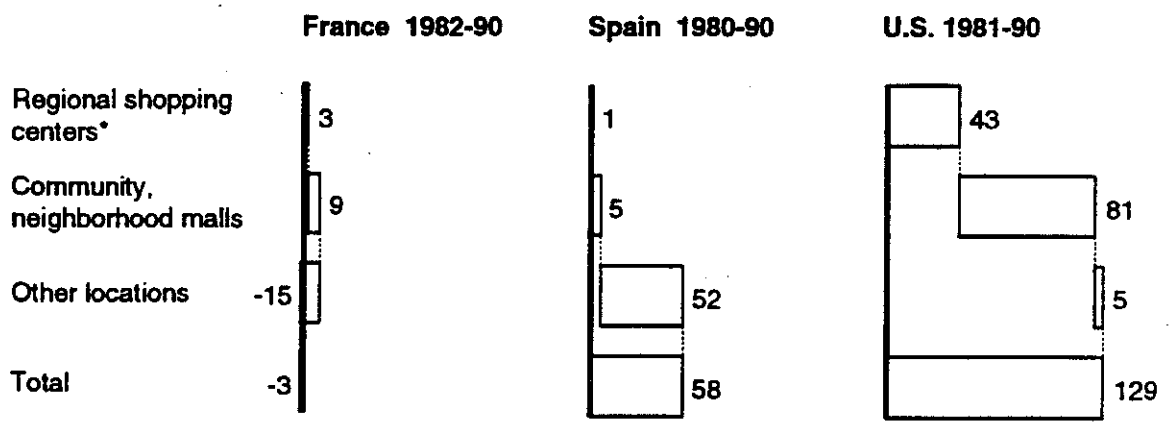
  Zoning laws are tougher in Europe and Japan partly because of this concern, but existing store owners also use the zoning process to limit potential entrants. The "loi Royer" in France gives a committee of local politicians and existing store owners the power to block the creation of

Exhibit 15

EVOLUTION OF THE LOCATION OF GENERAL MERCHANDISE STORES

ESTIMATE

Thousands of stores



* More than 300,000 sq. ft., in Spain more than 430,000 sq. ft.

Source: Dollars and Cents Shopping Centers 1993; Panorama point de vente; Statistical Year Abstract 1993; Shopping Center World; Shopping Center Report; DHI 1991; Anuario de Centros Comerciales 1992; McKinsey analysis

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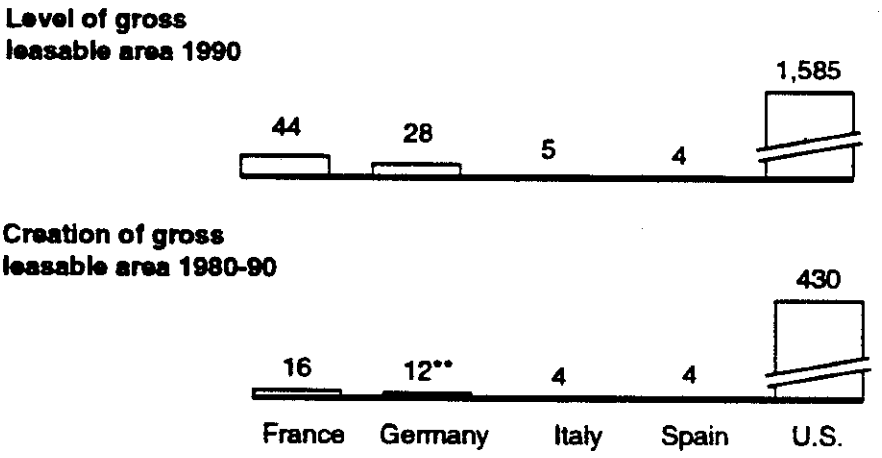
Exhibit 16

LEASABLE AREA OF REGIONAL SHOPPING CENTERS*

Millions of square feet



* More than 300,000 sq. ft; In Spain more than 430,000 sq. ft., in Italy more than 110,000 sq. ft.

** 1975-90

Source: Dollars and Cents Shopping Centers 1993; Panorama point de vente; Statistical Year Abstract 1993; Shopping Center World; Shopping Center Report; DHI 1991; Anuario de centros comerciales 1992; McKinsey analysis

large stores. This law has not been extremely effective in blocking hypermarkets, which increased employment in the 1980s (Exhibit 6), but has limited the creation of malls and shopping centers. In the U.S. 124,000 stores were created in malls and shopping centers during the 1980s, and 430 million square feet of leasable area was created in shopping centers (Exhibits 15 and 16). The figures in France were 12,000 and 16 million, respectively. Malls and shopping centers are very important to the success of smaller specialized retailers; these stores rely on "anchors" (i.e., department stores, hypermarkets) and on each other to attract customers. Malls and shopping centers are also an important source of inexpensive space. Downtown areas are expensive in all countries, but shopping center space can be five times cheaper in the U.S. (Exhibit 17). The ability of existing French retailers to influence zoning limited both the total number of stores and the number of high value formats without limiting high efficiency formats.

The 1971 Commerce Law in Italy also gives local retailers significant veto power over new entrants. Every town or village must approve any new retail store and regional authorities must also approve shopping centers, hypermarkets, and supermarkets. In practice this leads to very few new store approvals, and the stores that are approved are often denied prime locations near public transportation.

In Germany zoning laws were perhaps more restrictive, although the legislation was motivated more by environmental concerns (including a desire to preserve downtown areas) than by anticompetitive political influence. Hypermarkets and discounters grew, in part because they were often classified as wholesalers and exempted from the law, but shopping centers and malls (and thus many specialized individual stores) were precluded.

In Japan the "Large Scale Store Law" requires stores over 500 square meters (recently relaxed to 1,000 square meters) and all shopping centers to be approved by local retailers and the local MITI office. This approval process has historically taken 5 to 10 years, and the stores that survive it are typically large scale merchandisers rather than smaller, stage three specialists. The long approval process endured by Toys R Us (and the scarcity of other U.S. entrants) is evidence of the difficulty of entry. The effect of this law is similar to that of "loi Royer." Rezoning agricultural land for either residential or commercial use is made difficult by the political strength of Japan's farmers and its policy of maintaining agricultural self sufficiency.

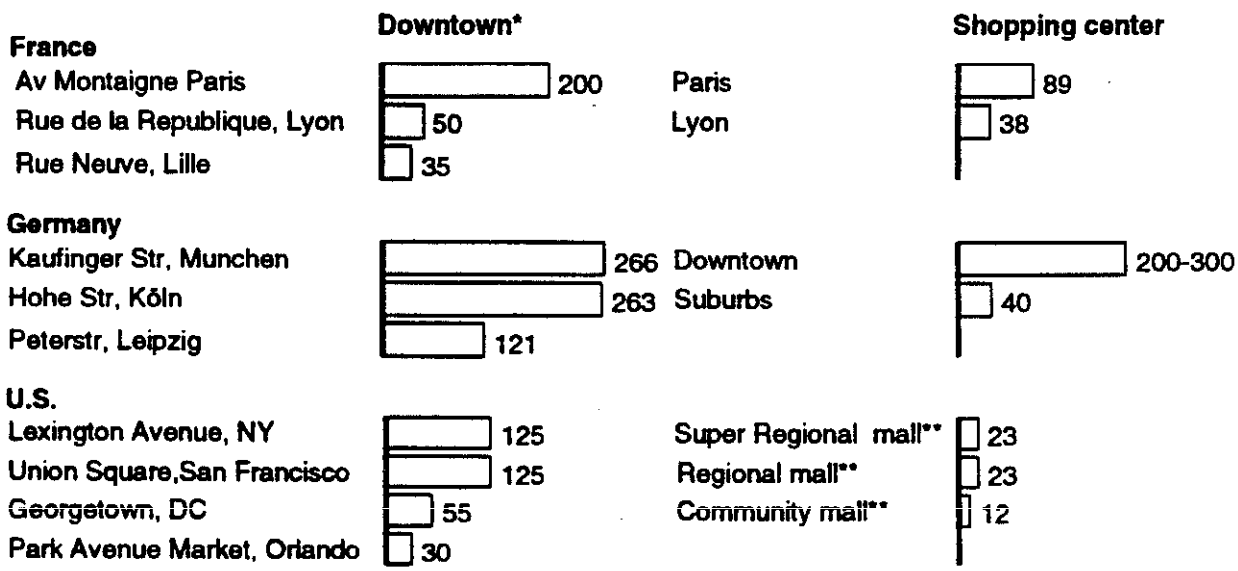
Zoning laws and approval processes in Spain vary considerably by region. Catalonia has recently decided to freeze the development of large stores. In other regions the approval process is so lengthy, complicated and costly that it has deterred entrants, especially foreign companies. The remaining regions are less restrictive, however, and the

Exhibit 17

REAL ESTATE MARKET 1992

ILLUSTRATIVE

Dollars/square feet per year at GDP PPP



* Standard unit in prime location, approximately 1,600 sq. ft. and 800 sq. ft. ancillary space and 20 ft. frontage

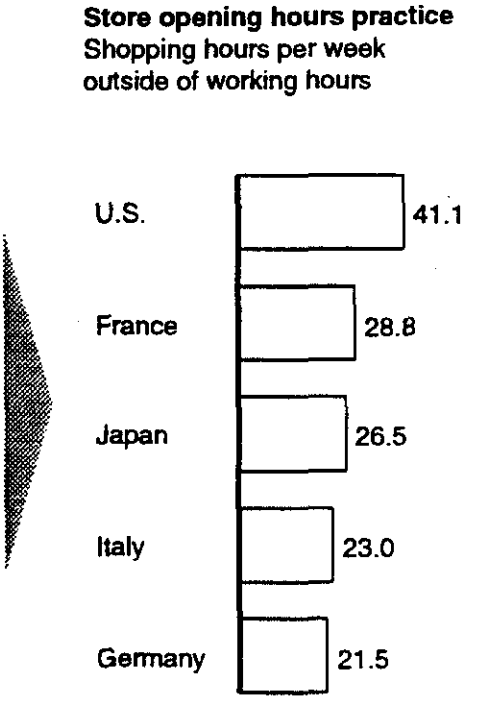
** Average rent in U.S. malls for women's specialty stores

Source: Healey & Baker; Dollars and Cents of Shopping Centers 1993; Statistical Year Abstract 1993; Panorama 1991; Journal de l'Enterprise; McKinsey analysis

Exhibit 18

OPENING HOURS AND DAYS REGULATIONS

Country	Regulations
France	No Sunday trading except some tourist activities or small food stores
Germany	Stores close at 6:30 pm No Sunday trading 1 Saturday per month until 6 pm otherwise, 2 pm
Italy	Maximum of 44 hours per week No Sunday trading
Japan	No legal restrictions Recommendation (general practice) of closing at 7 pm each day and 44 days a year
Spain	No regulations in most of the regions after deregulation in 1985 Since 1994 a maximum of 8 Sundays a year in most regions
U.S.	No restrictions in hours Some county restrictions on days and hours



Source: Standortfragen des Handels BAG Köln 1992; SECODIP; McKinsey analysis

main cause of slower format evolution is these areas may be related to low income levels.

- **Opening hours and days** are restricted significantly in France, Germany, Italy and Japan (Exhibit 18). In France, Germany and Italy there are legal restrictions; in Japan MITI strongly "recommends" that larger stores close at 7 p.m. each night. These regulations decrease customer value by limiting possible shopping times and directly reduce employment by eliminating the need for employees to cover the extra hours. The restrictions especially harm more advanced retailing formats, and in fact are often motivated by a desire to protect small, stage one stores. Owner-managed stores are not well equipped to stay open later, since the owner would either have to work the extra hours or hire more employees. Employees are expensive because of social and other nonwage costs, while owners usually take their wages in the form of profits and thus avoid this problem. Larger stores and specialty chains use mostly employees anyway, and can use flexible scheduling and their larger scale to more efficiently staff a longer day.

- **Competitive behavior** in Japan, in particular the retail price maintenance system described above, has slowed the shift to more advanced formats by preventing larger stores from competing on price. In Japan the net effect has probably been to maintain employment by limiting the shift from stage one to stage two. The system enforced by the wholesalers would be illegal in the U.S.; especially in retail, U.S. regulation attempts to protect the consumer and increase consumer surplus by preventing price discrimination and increasing the bargaining power of retailers with their wholesalers. The competitive system in Japan evolved after World War II, when the government favored manufacturers at the expense of retailers. Manufacturers and wholesalers were also more powerful in the U.S. in the 1950s, but a more strict application of antitrust laws allowed retailers to shift the balance of power and develop stage two formats.

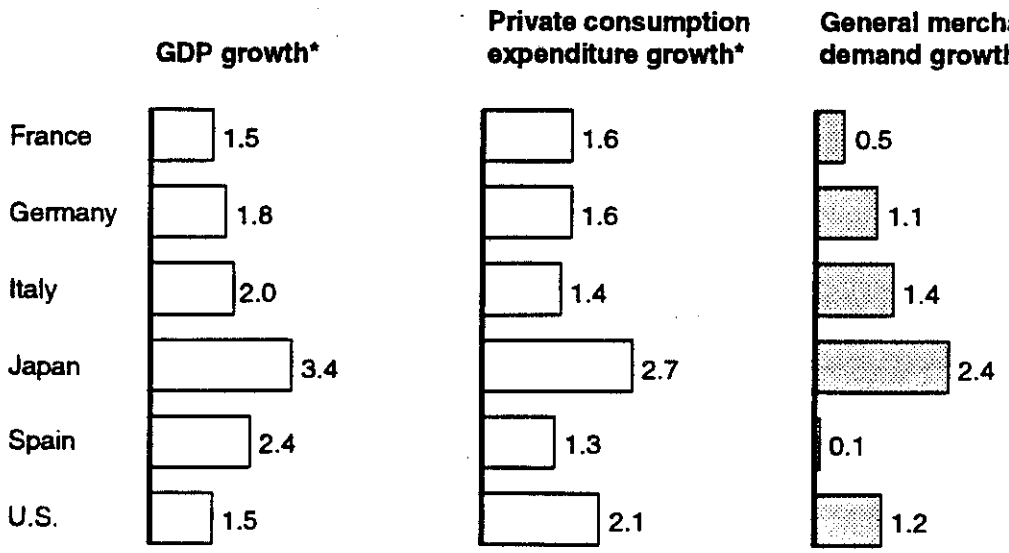
  In France controls on minimum retail margins were maintained until 1986, and sale periods are limited in France and Germany. These regulations do not limit competition as much as the competitive practices in Japan, but their effect is also to slow the development of advanced formats. Any employment sustaining effect is probably quite minimal, given that hypermarkets developed in significant numbers despite the regulations.

- **Lower income levels** in Spain and to a lesser extent France, Germany Italy and Japan somewhat limit the viability of more advanced formats. Specialized formats can only add customer value if customers can afford (and are willing) to pay for at least some of the extra value. The concentration in the U.S. of specialized retailers (and to some extent discounters) in higher income areas and the remaining stage one stores in low income areas suggests that higher incomes make stage three

Exhibit 19

GROWTH IN GDP, CONSUMPTION, AND GENERAL MERCHANDISE DEMAND PER CAPITA 1980-90

Percent p.a.



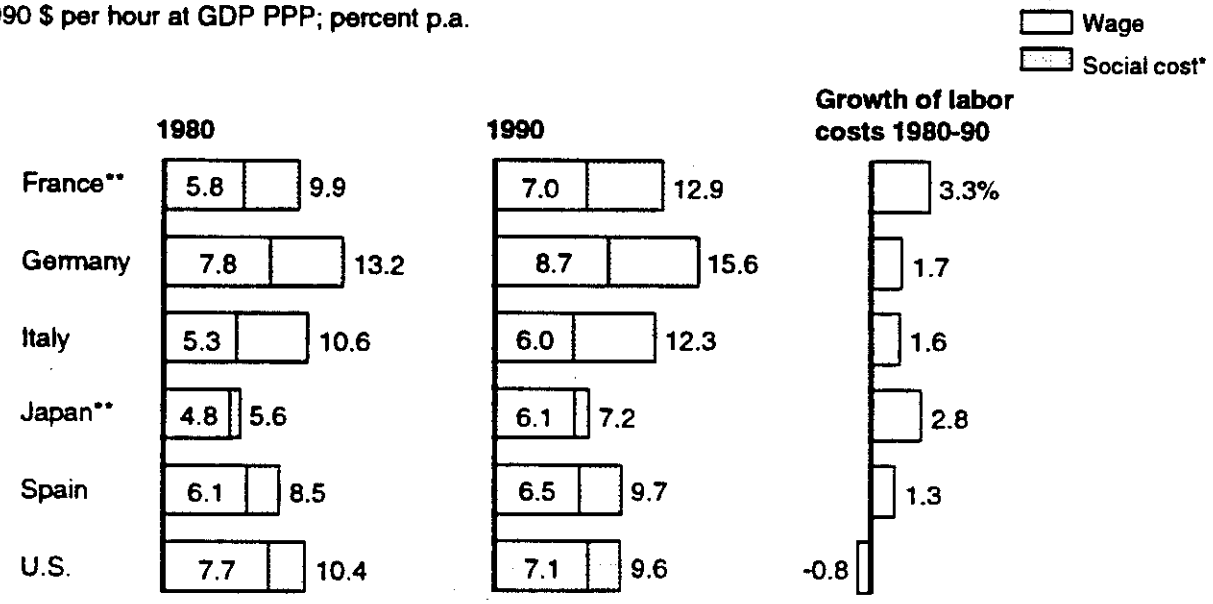
* Per capita in 1990 $ using final expenditure PPPs

Source: OECD National Accounts; McKinsey analysis

Exhibit 20

NONSUPERVISORY LABOR COSTS IN GENERAL MERCHANDISE RETAIL

1990 $ per hour at GDP PPP; percent p.a.



* Social costs include mandatory vacation, holidays, extra compensation, health, social insurance, and other benefits

** France 1982-90; Japan 1981-90

Source: Les Entreprises du Commerce; BLS Employment, Hours, and Earnings; Statistisches Bundesamt; General Survey on Wages and Working Hours System; McKinsey analysis

more viable. Faster emergence of stage three formats in the U.S. may be due to higher income levels.

A certain per capita income is also necessary for stage two retail, as customers must have easy transportation and a high enough demand to make the economies of scale in larger stores realizable. The U.S. developed stage two only in the late 1950s, when second family cars became quite common. Spain and Japan are well past that income threshold, however, and the high levels of stage one in those countries are more likely caused by other factors.

- **Demand for general merchandise** grew slower than GDP per capita in the six countries we studied (Exhibit 19). In Germany, Italy and Japan, demand growth was nearly as rapid as GDP growth because the share of household consumption devoted to general merchandise fell only slightly. This share fell more rapidly in the U.S., but the decline was compensated for an increase in household consumption. In France and Spain, the general merchandise share of consumption fell rapidly, and GDP growth led to minimal increases in demand.

Labor market factors

Like product market factors, aspects of a country's labor market can influence both the level of employment in all formats and the mix of formats. High labor cost and a lack of flexibility both in deploying labor efficiently and in hiring and firing have limited employment in France and Germany. They reduced the total number of jobs that are viable in all formats and limited the emergence of higher value, higher employment formats.

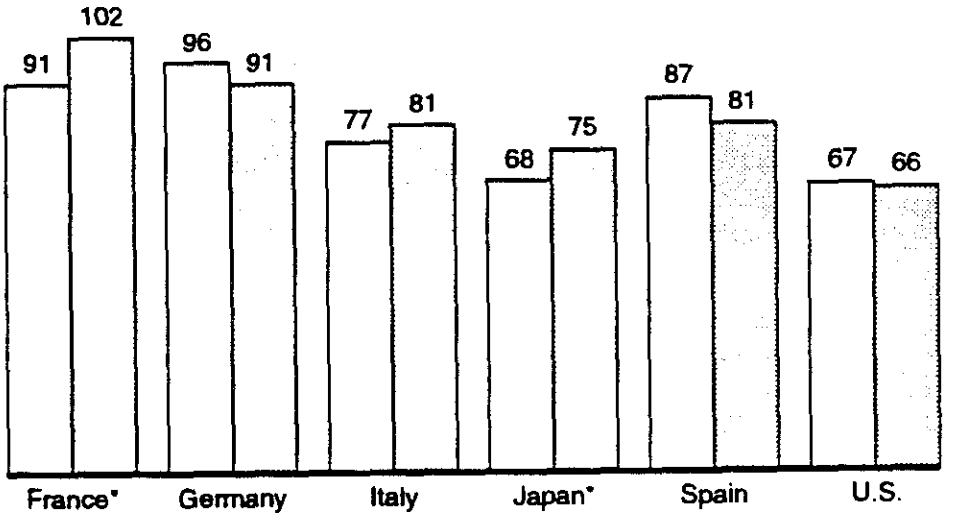
- **Labor costs**. Average wages in retailing are not very different across countries (Exhibit 20), but high social costs in France, Germany, and Italy cause total labor costs to be 30 to 60 percent higher per hour worked. Retailing is a unionized industry in Europe, and agreements between the unions and employer associations are legally binding across the entire sector. Wages have also grown more rapidly in Europe than in the U.S., and retail wages are higher relative to the average for manufacturing, especially in France and Germany (Exhibit 21). In France, retail wages were even higher than manufacturing wages in 1990.

  Higher wages reduce the viability of marginal stores in the same way that higher rents do. In France, Germany and the U.S. rent averages 8 percent of sales and labor about 12 percent. As a result, labor costs which are 30 to 60 percent higher in France and Germany and rents which are 50 to 100 percent higher are almost equally important in reducing the viability of marginal stores. Data from the apparel industry suggests that stores respond to higher rents and labor cost by

Exhibit 21

RETAIL WAGES RELATIVE TO MANUFACTURING WAGES

Index: Manufacturing = 100



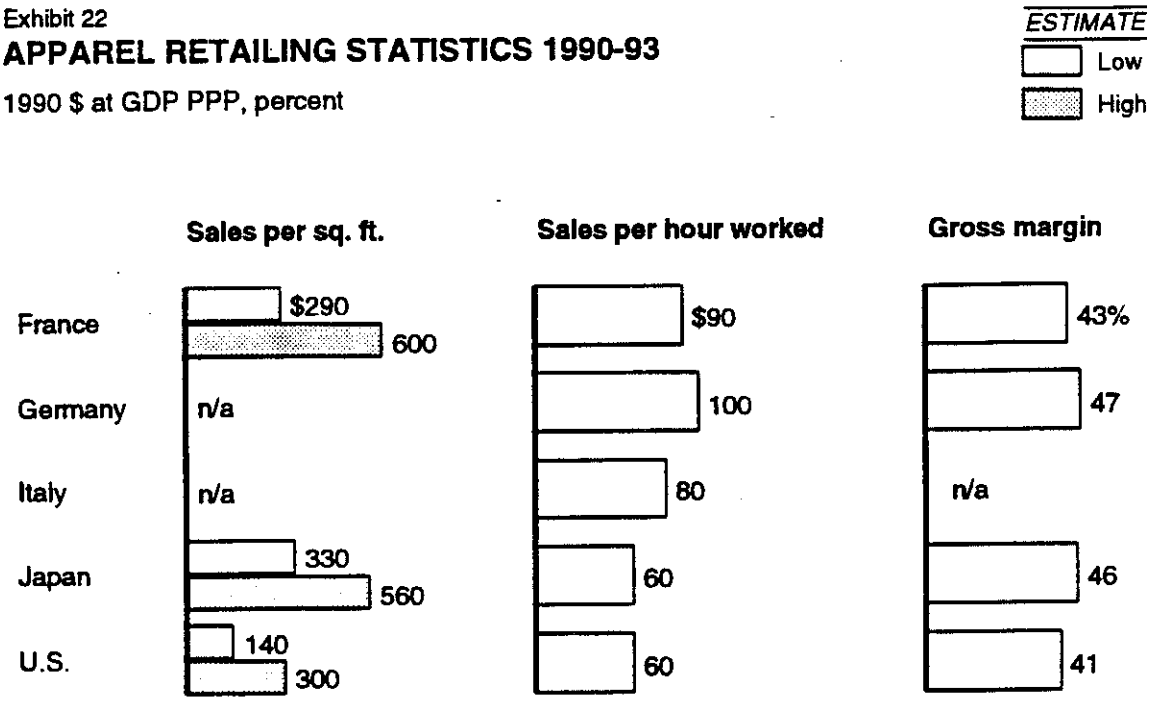
* 1982-90 for France, 1981-90 for Japan

Source: BLS Hourly Compensation Costs in Manufacturing; McKinsey analysis

Exhibit 22

APPAREL RETAILING STATISTICS 1990-93

1990 $ at GDP PPP, percent



Source: Annual reports; Dollars and Cents of Shopping Centers; McKinsey analysis

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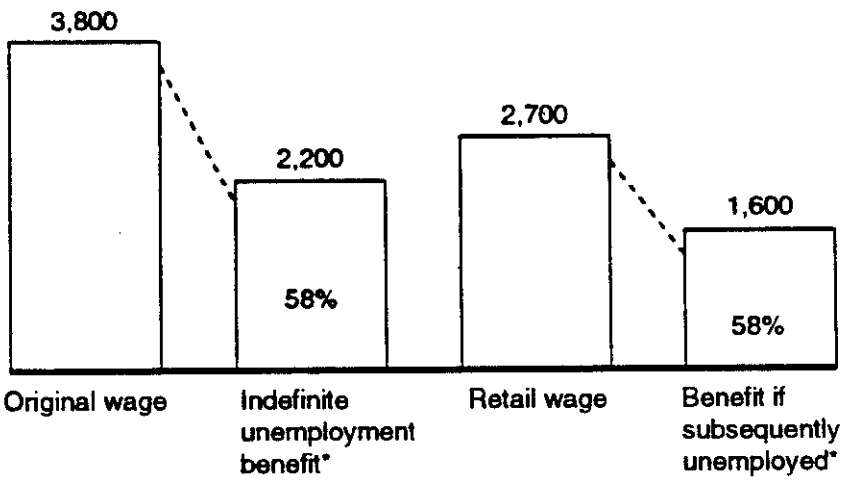
Exhibit 23

INDEFINITE EARNINGS-BASED BENEFITS AND REEMPLOYMENT INCENTIVES IN GERMANY

Unemployed autoworker considering job in retail

DM per month, pretax



* Based on the indefinite benefit rate of 58% paid to married unemployed without kids

Source: Interviews; BLS; Statistisches Bundesamt; McKinsey analysis

economizing on space and labor rather than by raising margins (Exhibit 22).

Not only are labor costs higher in France, Germany, and Italy, but there is also less variation. The legal minimum wage ($4.75 at GDP PPP) in France was 70 percent of the average retail wage in 1990, in the U.S. it was 60 percent of retail wages after having been raised from less than 50 percent in 1989. In Germany and Italy the collectively bargained minimum wages for the sector were about 80 percent of the average. In the U.S., part of the success formula for many specialty chains is to develop a sophisticated retailing "system" (often involving IT) that allows the use of lower skilled, cheaper workers. Minimum wages constrained the bottom part of the wage distribution in France, Germany and Italy, and therefore limited the advantage of more sophisticated retailers.

Larger retailers were also at a relative disadvantage in Italy and Spain because small stores were able to take relative advantage of informal labor and family members. Since these types of labor (in practice if not legally) are not subject to wage minimums and social costs, their use offers a significant advantage to independent retailers and has helped prevent the consolidation of the industry.

Specialized retailers are also differentially affected by the extra expenses associated with part-time workers in Europe. Independent retailers can use informal labor and family members to staff peak periods, and large scale retailers have the flexibility that arises from having a larger staff, but chains of smaller specialized stores can do neither. Benefits and social costs in Europe are often not proportional to time worked, making part-time labor more expensive. *Aushilfen*, a type of part-time employee for which employers pay lower taxes and no social security contributions, reduced this problem in Germany by providing retailers with low cost part-time labor. *Aushilfen* can often also be paid less than the negotiated wage minimums. Unions have sought to limit the penetration of *Aushilfen*; strict earnings and working time maximums are imposed on them. Between 5 and 10 percent of retail employees are *Aushilfen* (out of a total of 32 percent that are some form of part time), as compared with 3 percent in the entire economy.

¶ **Labor availability**. While most retailers we interviewed could find workers at the wages they offered, the effect of unemployment benefits on the search efforts of the long-term unemployed probably contributed to high wages in France and Germany. Retailers in France and Germany reported very few long-term unemployed among their applicants. This is understandable given the structure of benefits, which provide significant disincentives for former, high wage manufacturing workers to seek jobs in retail (Exhibit 23). One of the reasons that retailing unions were able to win wage increases in France and Germany is that the long-term unemployed did not provide

significant downward pressure on wages. Benefits paid to the unemployed were financed by social taxes on labor, further contributing to high labor costs.

- **Labor flexibility**. Labor flexibility usually refers mainly to flexibility in hiring, firing, and moving workers between locations and/or functions. It is very difficult to resolve the net employment effect of firing or mobility barriers. On the one hand, firing barriers obviously help preserve the jobs of existing employees, on the other hand, they discourage employers from expanding by increasing the associated risks.

  The European countries we studied have less flexible labor markets than the U.S. or Japan. The development of specialized retailers in the U.S. appears to be very dependent on the ease of exit. Many retail stores, especially those with specialized formats, fail within a few months of opening. Specialty chains often experiment with store locations, closing those which are not profitable. Labor rigidity would especially limit the development of chains; experimentation is more expensive if severance payments have to be paid to dismissed workers. Specialized chains grew and stage one stores declined in France and Germany; so if labor rigidity had an effect, it was to slow but not stop completely, the shift in formats.

Capital market factors

The capital market is less important in retailing than in other industries. Pressure from "shareholders" is not very different across countries. Many retail stores or chains are owned by single families or small partnerships, and these owners exert just as much pressure on management in Europe and Japan as in the U.S. Competition is intense enough among the companies that are publicly traded that they do not have the luxury of not maximizing profits. Government ownership is also virtually nonexistent.

Most initial financing for retail stores and shopping centers comes from bank loans, and the availability of this capital does not appear to differ across countries. Initial public offerings are easier to implement in the U.S., and many large specialty chains are publicly traded. It may, therefore, be easier to finance the transition from a medium to a large chain in the U.S., although the lower startup costs (and thus lower capital requirements) in the U.S. caused by less rigid product and labor markets are probably more important to new store creation.

Most of the questionable loans that caused the S&L crisis in the U.S. were commercial real estate loans, and though the majority of these loans financed office space, a significant number financed shopping center development. This expansion was largely over by 1990, but surplus retail space still existed in some areas (most notably in oil-producing states), and the resulting low rents probably

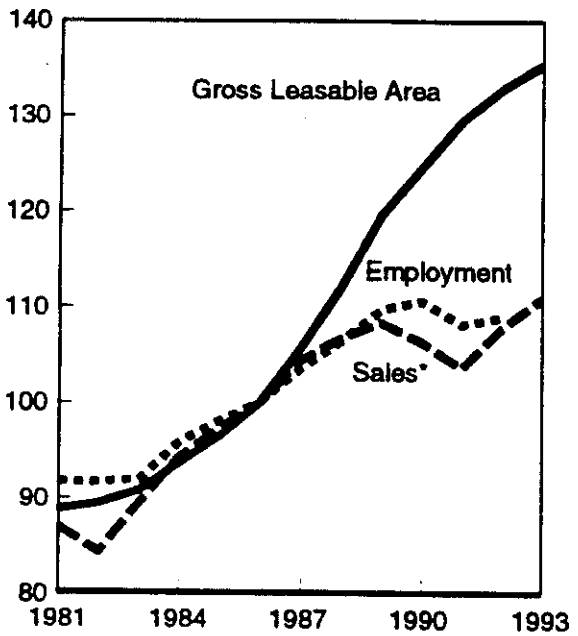
Exhibit 24

U.S. SHOPPING CENTER SALES, RENT AND LEASABLE SPACE 1981-93

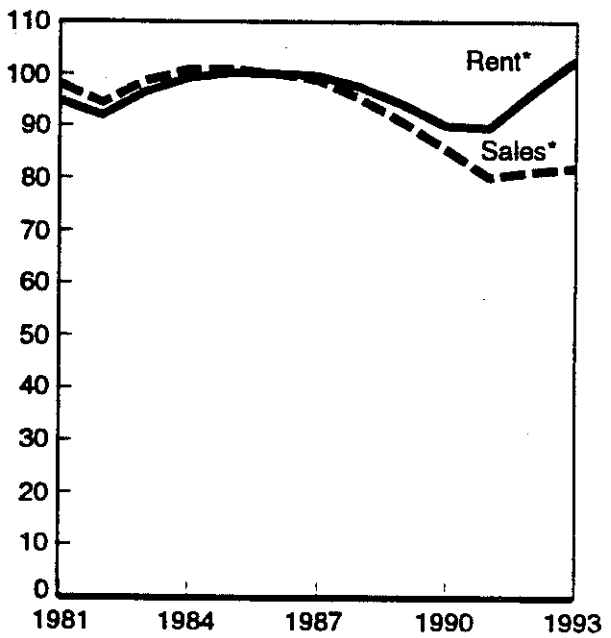
ESTIMATE

Index: 1986 = 100, in 1993 $ per square foot

Retail space, sales, and employment



Rent and sales per square foot



* Deflated with the CPI

Note: Pre-1986 data is estimated

Source: Dollars and Cents of Shopping Centers 1981-93; Shopping Center Historical Census; McKinsey analysis

encouraged some employment that would not otherwise have been economically viable. On average, however, we found that although gross leasable area in shopping centers expanded much faster than sales in the late 1980s, rents did not decrease significantly (Exhibit 24). Rents increased as a percent of sales throughout the decade, and though they fell back to their real 1982 levels during the 1990 recession, they recovered strongly by 1993. The S&L crisis does not appear to have caused a structural change in retail rents and therefore does not appear to have subsidized retail employment.

SUMMARY AND IMPLICATIONS

The product market restrictions represent the most obvious and easily correctable barriers to increased employment. Restrictions on opening hours, excessive zoning restrictions, and the veto power given existing retailers have both limited the creation of higher value, higher employment retailing formats and restricted the shopping opportunities available to consumers. These restrictions have not saved the existing retailers they were designed to protect, as the rapid decline in individual stores in France, Germany and Japan indicates (Exhibit 6). All they have done is limit the creation of new jobs, leading to lower employment, lower national income, and lower value to the customer.

In France and Germany employment has also been constrained by high labor costs and inflexible labor. High labor costs are caused by a combination of high wages due to the unionization of the sector and high social costs. Retail provides an example of the vicious cycle between labor costs, job growth, and unemployment benefits. High social costs limit job growth, slower job growth increases the number of unemployed, and if more unemployed are to be supported by fewer employed workers, even higher social costs are required. This vicious cycle is helped by the incentives provided by long-term benefits, as unemployed workers that are not actively seeking employment put little downward pressure on union wage settlements. Lowering unemployment benefits and limiting their duration, although obviously hurting recipients in the short run, would help break the vicious cycle and encourage job growth. More flexibility to hire and fire, especially in the first few years a store is open, would also encourage more experimentation.

- ¶ France has the most restrictive product market barriers, and that has resulted in the worst employment performance. France should abolish the "loi Royer" restrictions and allow stores to be open on Sunday if consumers want to shop then. A reduction in social costs, perhaps targeted at low income or part-time workers like the *Aushilfen* program in Germany, would also be beneficial by lowering labor costs and differentially helping high value formats.

- ¶ Germany created more employment in high value formats and had a slightly better overall employment performance than France, but it is well short of its potential. Germany should allow stores to open later in

the evening and on Saturday afternoon and Sunday, which will increase both consumer convenience and employment. The *Aushilfen* program has been positive for retail employment; Germany should expand it.

Relaxing zoning laws is a more difficult issue, since job creation in retailing must be balanced by concern for the environment and for maintaining the viability of city centers. The employment and consumer convenience costs of these zoning laws are considerable, however. If tradeoffs are to be made between jobs and the environment, it is important that the jobs impact be fully understood.

- Japan will likely experience a decrease in employment as discounters continue to develop. The decline in stage one stores is more or less inevitable, and it is probably better that it occur now while Japan does not have a significant unemployment problem. The decline in employment can be mitigated by changing zoning laws to encourage the development of shopping centers and high value formats. The recent expansion of opening hours from 7 p.m. to 9 p.m. will also help. Higher consumer spending on general merchandise, which is lower in Japan than in similarly wealthy countries, would also help employment.

- Spain and Italy both increased retailing employment mainly by postponing the transition to higher productivity formats. The good employment performance was largely due to a poor productivity performance, which raises questions about its long term sustainability. In each country, preliminary data suggest that employment performance has worsened since 1990.

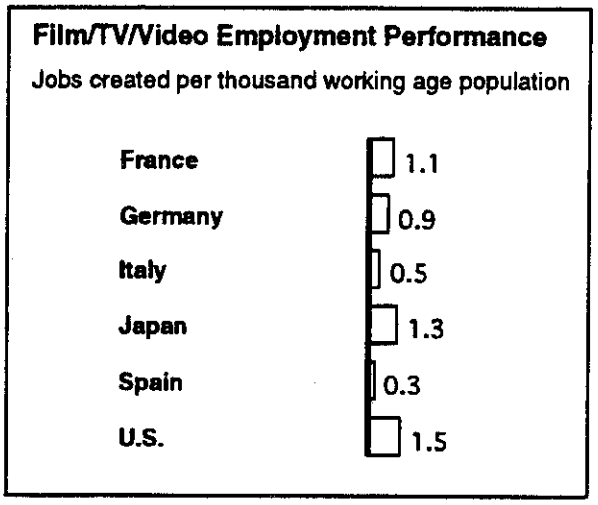
  Spain and Italy will thus probably experience an employment decrease associated with a format shift, but since they currently have much lower employment levels, the decline will likely be less severe than in Japan. General economic growth will help retailing in Spain, as higher incomes will increase general merchandise spending and make high value formats more viable. Italy is already a wealthy country with a high demand for general merchandise; it needs deregulation in the product market to allow the retailing sector to create more customer value.

- The U.S. had both the best employment performance and the highest productivity at the end of the decade. It accomplished this by not limiting the development of new formats and new stores in the product market and by providing the stores with flexible and low cost labor. Although the U.S. has the highest retailing employment level, that employment is associated with high productivity and customer value. There is little reason to believe it is unsustainable in the near term.

The employment and productivity performance of the U.S. is due largely to its flexibility in better meeting and adapting to changes in customer demand. This explains not only the growth of the entire U.S. industry, but also the growth of the most successful U.S. companies. The Gap, The Limited, and Home Depot

owe their success to locating a targeted customer and product segment and using new technologies and best practices to meet this demand in the most productive way possible. Barriers in continental Europe and Japan keep the industry from doing that to the same degree, but individual European and Japanese companies that have overcome the barriers have been quite successful. Examples include general merchandising stores like Daiei and Ito Yokado in Japan, specialized retailers like Darty (home appliances) and Conforama (furniture) in France, and department stores like El Corte Inglés in Spain. Foreign firms that have overcome European and Japanese entry barriers have also been quite successful – the best examples are Toys R Us (U.S.) and Benetton (Italy). The key lesson of the retailing case for policymakers is that removing rigidities in the product and labor markets can cause innovators to contribute to net job creation rather than destruction. The key lesson for companies is that developing innovative ways of overcoming these rigidities can be both profitable and beneficial to society.

FILM/TV/VIDEO INDUSTRY CASE SUMMARY



In the high visibility film/TV/video industry, innovation is the driving force in both the creation and destruction of jobs. Slower employment growth in Europe can be explained by regulations which inhibited the emergence of new, labor-intensive segments.

Employment growth in the industry which creates and distributes television programs and feature films was high in the U.S., Japan, France and Germany, but low in Spain and Italy. Any similarity in aggregate performance belies significant differences in the expansion of various segments.

Innovation had a radical effect on "how" people watch this industry's products. Latent demand for TV and filmed entertainment manifested itself wherever allowed: in private broadcast television which blossomed after European state monopolies were ended; and in new outlets such as videocassettes and cable/satellite where few barriers blocked their emergence.

Employment reducing blockages occurred in French video retailing and private TV. These segments grew slowly in part because of regulations intended to preserve cinemas. Similarly negative effects can be seen in Spain and Italy where government delays in deploying cable and defining rules for the cable/satellite market slowed output and employment growth. Absent many of these types of impediments, U.S. employment increased.

U.S. employment also benefited from an increasing trade surplus in film/TV production, the "what" people watch. Most other countries were found to be net importers of this "software." Restrictions on advertising limited European television channels' ability to pay for expensive domestic production.

This study of the film/TV/video industry illustrates that governments that tried to actively manage the industry's evolution may have retained more employment in existing forms of entertainment, but at the expense of better net job performance.

Employment in the film/TV/video industry

Media is considered one of the most important industries in many of the world's leading economies. It plays a significant role in the dissemination of information and entertainment, and affects how people live, communicate, socialize and interact. Media's visibility is high at present, as policymakers and managers attempt to understand and anticipate the far-reaching effects of the possible convergence of the telephone, computer and media industries into "multimedia" or the "information superhighway."

The film, TV and video segments of media together make up a particularly interesting service industry. This "industry" is growing rapidly in nearly all countries, but in very different ways across segments. It highlights the effects of regulation, since many segments of film/TV/video are heavily but differentially regulated in the six countries we examined. As decision makers endeavor to formulate policies and regulations which help to increase productive employment and their population's standard of living, it is crucial that they understand the impact these policies have on the job creation process.

We chose to study film/TV/video in order to further our understanding of innovation and its impact on employment. The industry has undergone significant changes in industry structure and technological innovation. Its rapid pace of change forces companies to be flexible or exit, which places certain requirements on the labor market. This industry reveals some of the effects of policymakers' attempts to either facilitate or hamper this process of "creative destruction."

The case is organized in four sections. The first section briefly defines the industry and provides some background for the reader. The second section describes the employment performance in film/TV/video from 1980 to 1992 in France, Germany, Italy, Spain, Japan and the U.S. The third section analyzes the primary causes of employment performance differences, and the final section summarizes our findings and draws implications for job creation.

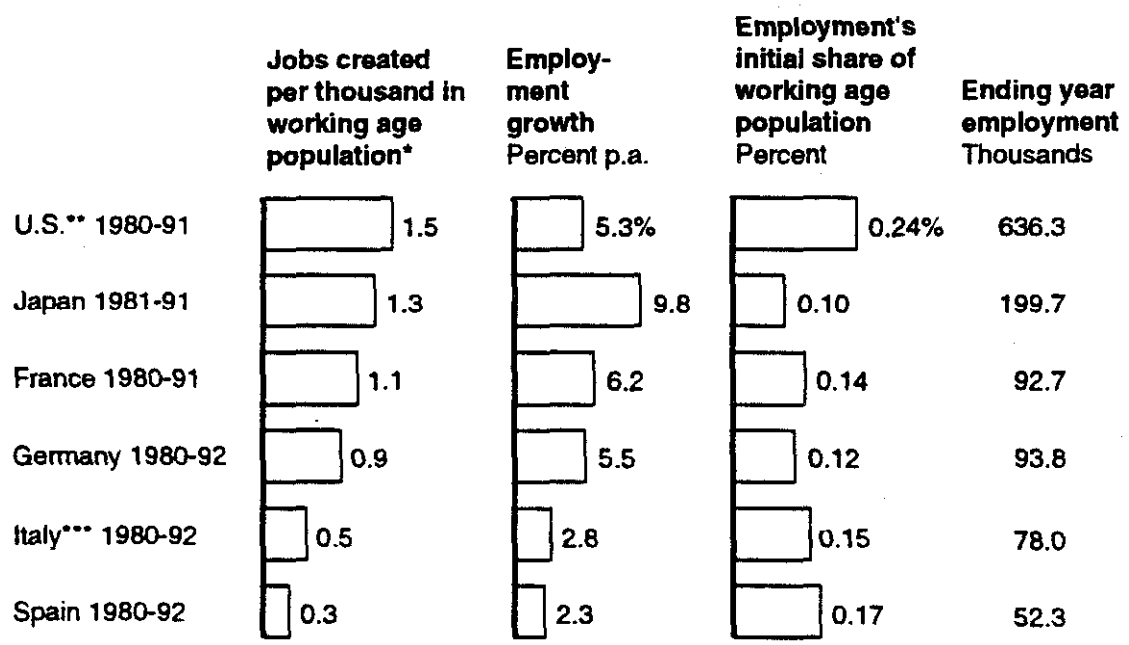
THE FILM/TV/VIDEO INDUSTRY

In this study, the film/TV/video "industry" is defined as those enterprises which create and distribute television programs and feature films. These include cinema theaters, specialized video stores, television stations, cable and satellite operators, broadcast and cable networks, and movie and TV producers and

Exhibit 1

FILM/TV/VIDEO EMPLOYMENT

ESTIMATE



* Adjusted for growth in the working age population

** TV growth based on 1982-91

*** Theater growth based on 1981-91, TV/movie production estimated 1980-90

Source: BLS, MPAA (U.S.); INSEE; Ecran Total (France); Confindustria, ISTAT, annual reports (Italy); Media Perspektiven (Germany); industry associations; interviews; McKinsey analysis

distributors. In order to narrow the scope of our study, our industry definition does not include related industries such as newspapers, magazines, radio broadcasting, video games, on-line information services, live theater or recorded music. Although some of these excluded industries share distribution channels or have synergies with film/TV/video, they have not been major factors in stimulating the evolution of employment in our definition of the industry in the past dozen years.

During the 1980s, there have been changes in both technology and government regulations which have generally had the effect of increasing the number and type of distribution outlets for television programs and movies. In some countries this increase in distribution channels has caused partial cannibalization of the more mature segments of the industry, such as movie exhibition, but employment gains in the newer outlets have usually more than offset these job losses.

Countries differ considerably in the growth and evolution of two primary new distribution outlets: cable/satellite and video retailers. Although cable and satellite technology are not new innovations, the emergence of these distribution channels has only occurred during the past decade in all countries except the U.S. The introduction of the VHS format videocassette recorder in 1979 created another type of outlet for filmed entertainment: specialized video retailers.

The other major change in industry structure happened in Europe, where France, Germany, Italy and Spain moved away from state-owned monopolies in traditional broadcast television. These governments allowed private companies to enter the market, resulting in new television channels, an increase in program volume (and variety) and new jobs. Historically, the U.S. and Japan have had a more market-oriented television industry; therefore changes in broadcast TV in these two countries were less pronounced during our period of analysis.

These new distribution outlets and the deregulation of television generated additional demand for "software." Therefore, the television part of the motion picture production industry generally grew over this time frame. However, employment in the feature film production subsegment, which is not directly linked to the growth of television, varied significantly as it is tied to performance at home and abroad.

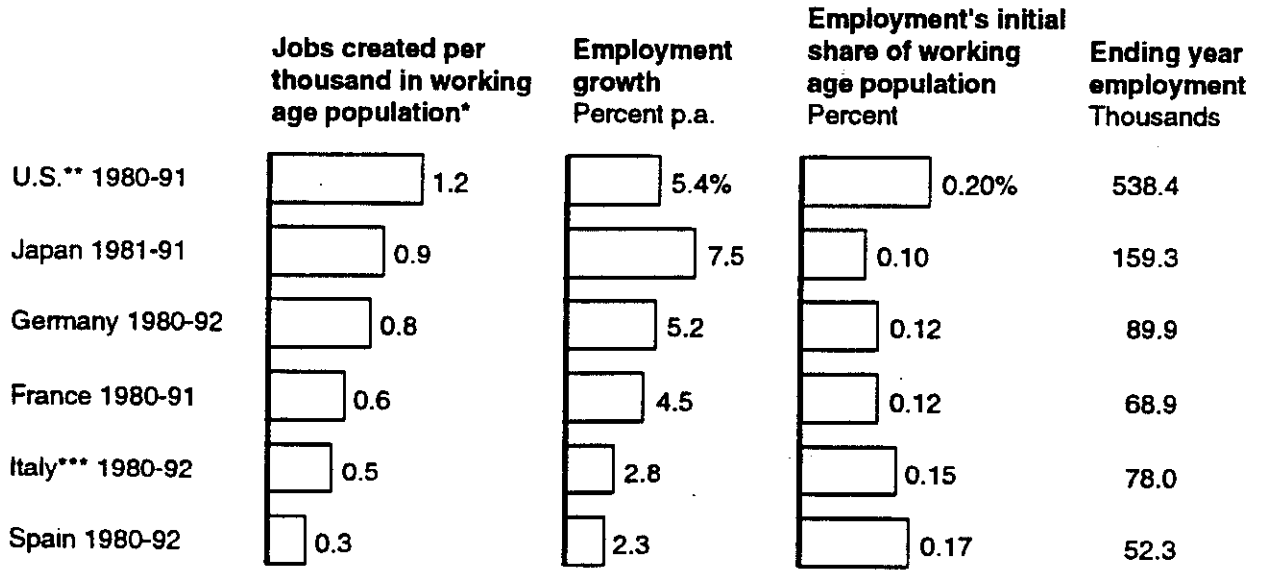
EMPLOYMENT PERFORMANCE

Although important, film/TV/video is a relatively small industry, accounting for between 0.10 and 0.24 percent of the working age population in the six countries analyzed in Exhibit 1. Employment growth as measured in jobs created per thousand population of working age varied widely across the countries over the past decade. It was highest in the U.S.; fairly high in Japan, France and Germany; and low in Italy and Spain. These rankings in job creation hold true even after

Exhibit 2

FILM/TV/VIDEO FULL-TIME EQUIVALENT EMPLOYMENT

ESTIMATE



* Adjusted for growth in the working age population

** TV growth based on 1982-91

*** Theater growth based on 1981-91, TV/movie production 1980-90

Source: BLS, MPAA (U.S.); INSEE; Ecran Total (France); Confindustria; ISTAT; annual reports (Italy); Media Perspektiven (Germany); industry associations; interviews; McKinsey analysis

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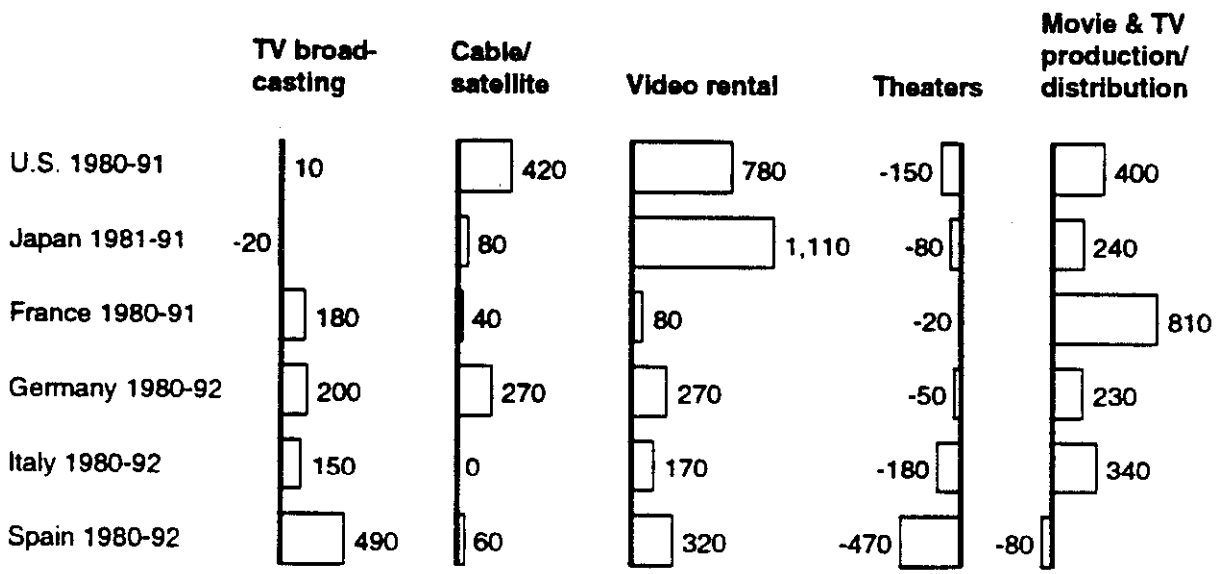
Exhibit 3

FILM/TV/VIDEO EMPLOYMENT GROWTH BY SEGMENT

ESTIMATE

Jobs created per million working age population*



* Adjusted for growth in the working age population

Source: National statistics; industry associations; expert estimations; McKinsey analysis

adjusting for full-time-equivalent (FTE) employment, except that France then falls below Germany (Exhibit 2).

Although Japan clearly led in the growth rate of jobs at 9.8 percent per year, the U.S. created the most jobs per person in the working age population due to its large base of initial employment in film/TV/video. Therefore, in our measure of employment performance which takes both growth and level into account, the U.S. is used as the "benchmark" country for analyzing the reasons for differences across countries.

Exhibit 3 shows that aggregate employment growth masks significant differences in growth in the various segments of this industry. The four European countries experienced strong net job growth in television broadcasting, while only the U.S. and Germany notably increased employment in cable/satellite. Video rental employment grew in all countries, but surged in the U.S. and particularly in Japan.[1]

Employment in the most "mature" distribution segment, theaters, declined in all of the countries, but fell the most in the U.S., Italy and especially Spain. Lastly, the movie and television production and distribution industry grew in all of the countries except Spain. Exhibit 4 presents the resulting 1992 employment levels by segment.

Data in the film/TV/video industry are very fragmented and scattered at both the aggregate and segment levels. Employment figures in the various industry segments were derived from national statistics, industry associations, unions, market research publications, press articles, annual reports and interviews. Unless otherwise stated, data for Germany represents the former West Germany only. Employment has been measured only by the number of employed persons, including conservative estimates of the number of free-lance workers in Europe who are not otherwise included in the national statistics. Data on hours worked per year and per employee were not available for several countries and segments, although estimates of the proportion of part-time workers were made by industry associations in those segments where they were significant. Full-time-equivalent employment was estimated assuming part-time employees work half time, except in the U.S. where average hours worked were available. Part of television production employment may be included in the television broadcasting segment with the remainder in the movie production category. Similar problems may exist for the allocation of employment between cable operators and networks. Furthermore, it is possible that a modest number of administrative jobs were excluded from the employment data in the large utility companies that are cable operators in France or in state-owned Télécom in Germany.

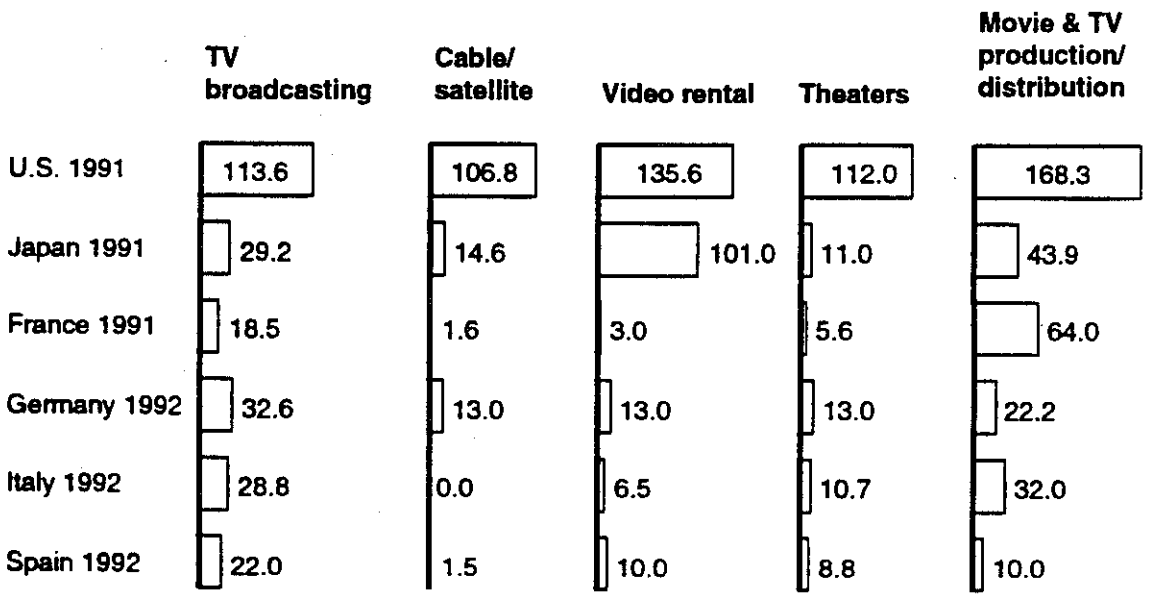
[1] Japan has also benefited from VCR manufacturing employment growth during this timeframe, though this has not been included in this case; the upper limit on manufacturing jobs created in Japan from this innovation is about 45,000 (compared to over 100,000 for the film/TV/video industry).

Exhibit 4

FILM/TV/VIDEO EMPLOYMENT BY SEGMENT 1992

ESTIMATE

Thousands of jobs

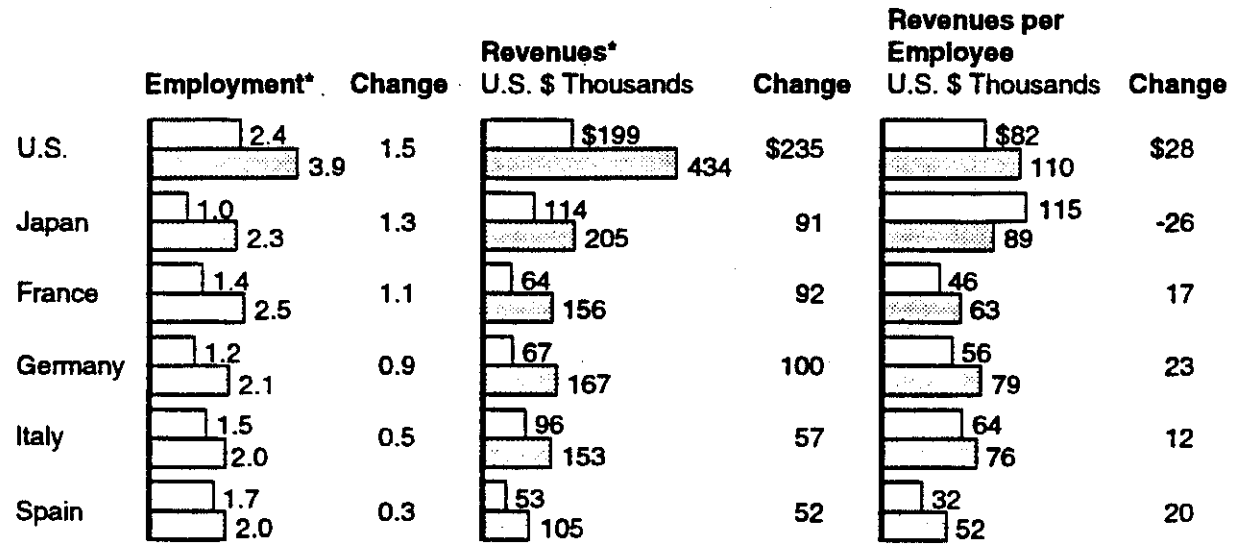


Source: National statistics; industry associations; expert estimations; McKinsey analysis

Exhibit 5

FILM/TV/VIDEO REVENUES, PRODUCTIVITY AND EMPLOYMENT 1980 AND 1992

1992 U.S. $ converted with GDP PPPs



* Per thousand working age population

Source: National statistics; industry associations; interviews; market research publications; McKinsey analysis

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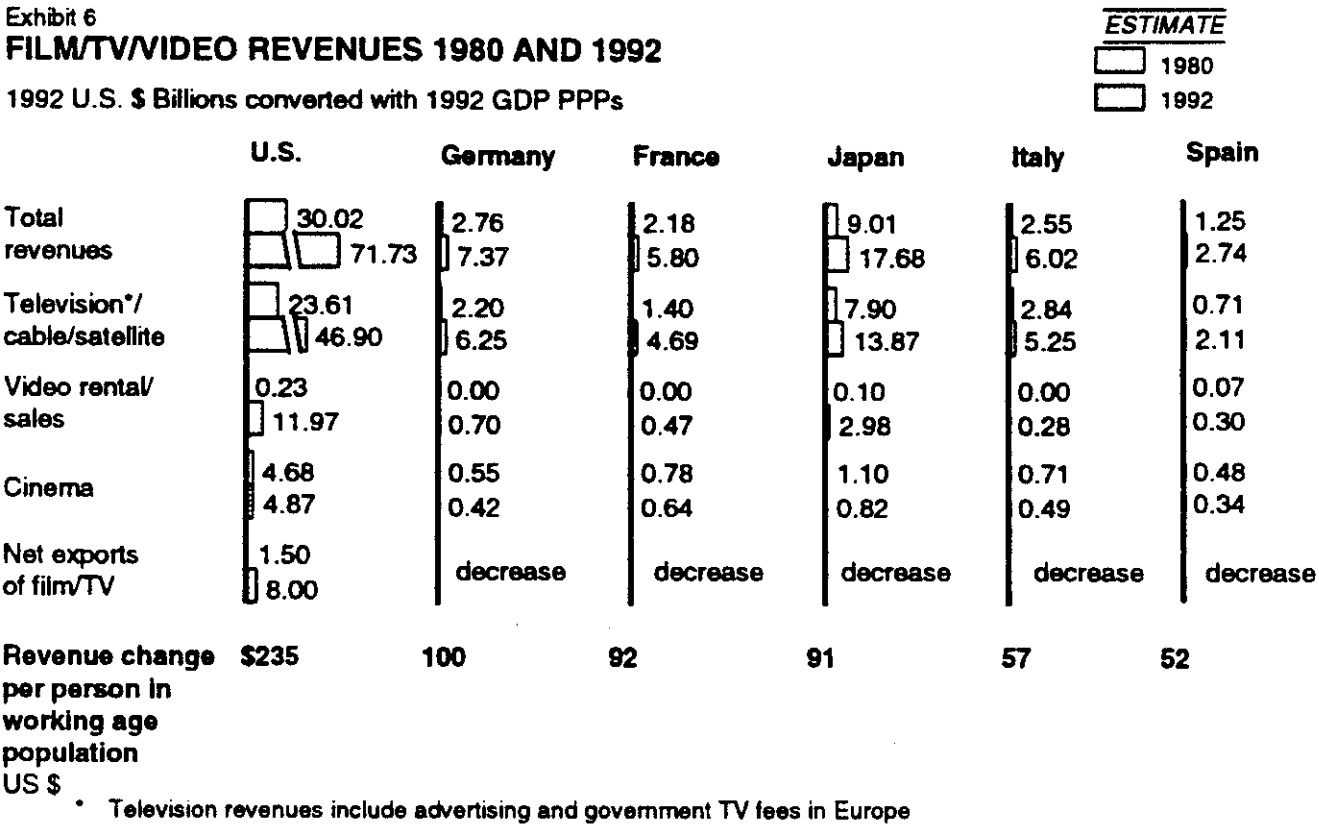
Exhibit 6

FILM/TV/VIDEO REVENUES 1980 AND 1992

1992 U.S. $ Billions converted with 1992 GDP PPPs



* Television revenues include advertising and government TV fees in Europe

Source: National statistics; industry associations; interviews; trade publications; McKinsey analysis

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CAUSES FOR EMPLOYMENT DIFFERENCES

Changes in technology and industry structure coupled with latent demand for video entertainment resulted in aggregate consumption growth in all of the countries we studied except Japan. The form this consumption took (i.e., the distribution outlets that were used to deliver the entertainment to viewers), however, varied greatly by country. The demand for filmed entertainment manifested itself in whatever outlet was allowed – much like a balloon that is squeezed in one place but pops out in another. In general, new outlets for distributing television and filmed entertainment to homes grew significantly where few barriers existed or where they were removed, and did not grow where barriers were high. Some of these barriers were exogenous to the industry, while others resulted from regulations and policies which governments effectively created. Outright blockages, limits on competition, and upward pressure on costs and prices helped skew demand toward one outlet or another. Due to substantial differences in labor intensity, the pattern of consumption growth by segment greatly affected overall employment performance.

Greater output growth in the U.S.

As expected for an industry with emerging (or new) segments, film/TV/video revenues have been growing rapidly in real terms across all of the countries (Exhibit 5). The U.S. began the decade with a significantly higher level of revenue in the film/TV/video industry than the other five countries, but it also experienced a far higher increase in revenue per working age population: $235 per working age person. Germany, France and Japan had adjusted increases of $90 to $100 and Italy and Spain had notably lower revenue growth during this period. Output growth differences as measured by revenues has been the most significant factor explaining bilateral differences in employment growth in every country.

Productivity, the other factor directly affecting employment performance, has been estimated using revenues per employee rather than a more pure measure due to the inherent difficulty in measuring productivity in film/TV/video. "Productivity" increases have not been a major contributor to the lower employment performance of the nonbenchmark countries. In fact, the U.S. had the highest increase in dollars per employee though it was only average in percent growth. Japan's employment performance, however, benefited from a real decrease in revenues per employee.

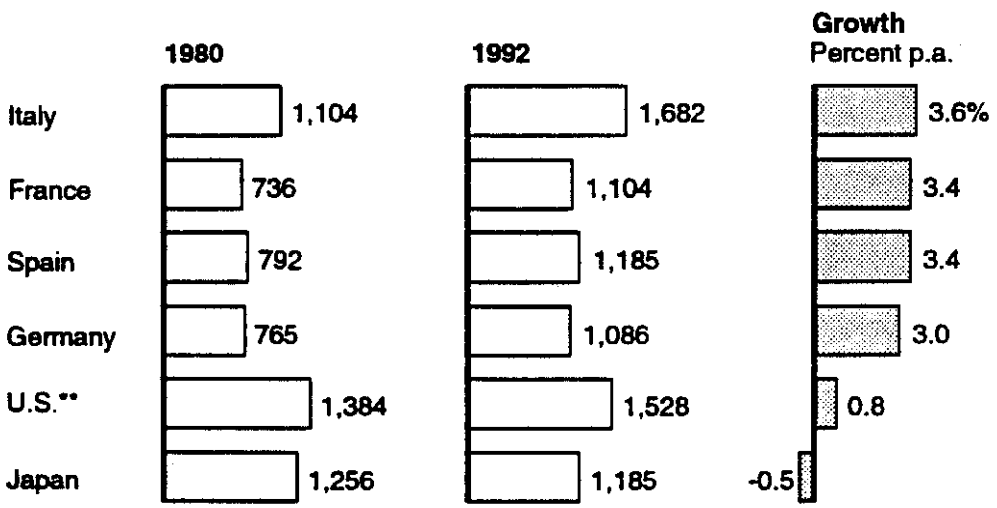
Exhibit 6 presents the distribution of revenues across distribution outlets in each country. Growth in industry revenues was largely due to changes in television revenues (mainly advertising), which accounts for the majority of total revenues in all six countries. Growth in aggregate film, TV and video consumption is only tenuously related to revenue growth, however (Exhibit 7). Viewing hours grew fastest in Italy, which ended the period with an even higher level of viewing hours per capita than the U.S. France, Germany and Spain also exhibited high

Exhibit 7

FILM/TV/VIDEO CONSUMPTION* 1980 AND 1992

ESTIMATE

Hours viewed per person per year



* Television, videos and cinema attendance; assumed number of videos rented or sold last 2 hours, viewed by 2 people; assumed movies last 2 hours

** Television viewing 1980, 1991

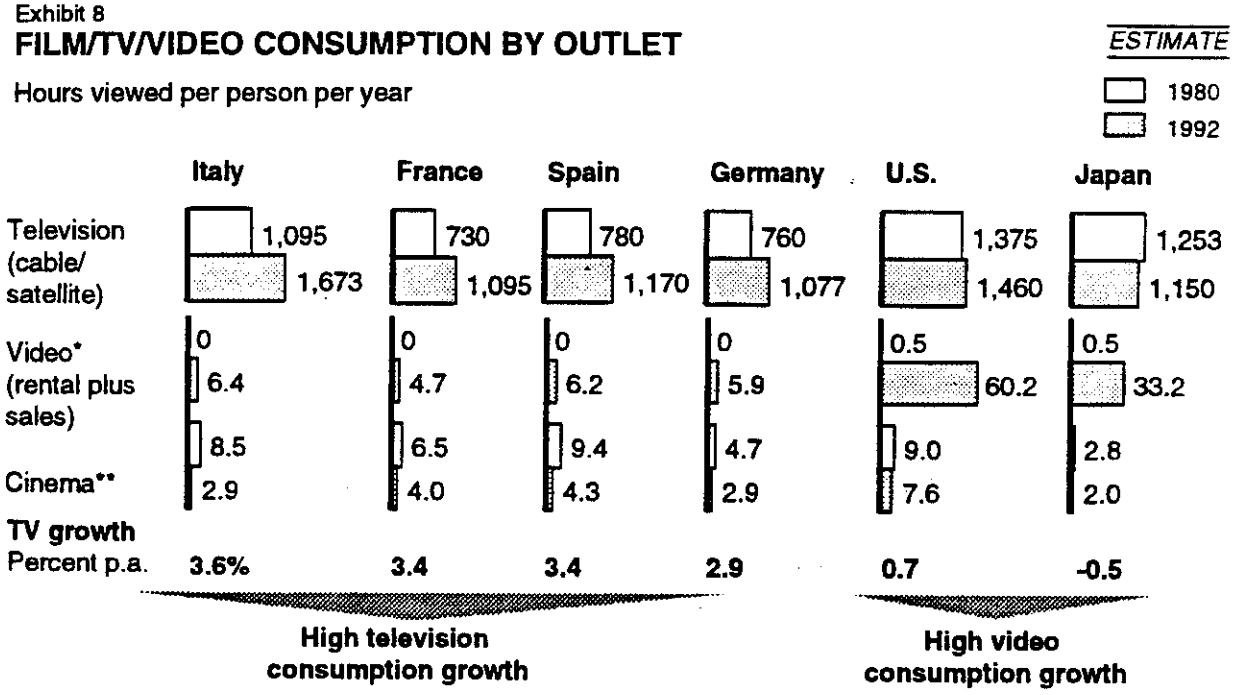
Source: Screen Digest 1993; Trends in Television 1992; Media Perspektiven; Auditel; Ministère de la Culture; Mediaspourvoirs; NHK; Fundesco; Veronis, Shuler & Associates; MPAA; industry associations; McKinsey analysis

Exhibit 8

FILM/TV/VIDEO CONSUMPTION BY OUTLET

ESTIMATE

Hours viewed per person per year



* Assuming each video rented or sold lasts 2 hours and is viewed by 2 people

** Assuming each movie lasts 2 hours

Source: Screen Digest 1993; Trends in Television 1992; Media Perspektiven; Auditel; Ministère de la Culture; Mediaspourvoirs; NHK; Fundesco; Veronis, Shuler & Associates; MPAA; Trends in Television; industry associations; McKinsey analysis

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Exhibit 9

EMPLOYMENT PER MILLION VIEWING HOURS OF FILM/TV/VIDEO OUTLETS 1992

Index: 1 = Television

	Television	Video rental	Cinema
U.S.	1	16	98
Japan	1	81	141
France	1	73	75
Germany	1	58	105
Spain	1	80	103
Italy	1	66	97

Source: Screen Digest 1993; Trends in Television 1992; Media Perspektiven; Auditel; Ministère de la Culture; Mediaspourvoirs; NHK; Fundesco; Veronis, Shuler & Associates; MPAA; Trends in Television; industry associations; McKinsey analysis

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growth, but from low initial levels. The significantly higher consumption growth in the European countries came in the form of television viewing, stimulated by alternative programming offered after private companies were allowed to enter this segment (Exhibit 8). Unlike the European countries, consumers in the U.S. and Japan increased consumption in the newer – and higher revenue per hour – distribution outlet of video rentals, which partially substituted for traditional television in Japan.

The type of distribution outlet chosen by consumers is largely determined by price and relative value of the entertainment provided. Advertisement-supported television is only indirectly paid by the viewer, and therefore is "free" whereas direct payment is required to view filmed entertainment through specialized video stores or theaters. Even after television fees (taxes levied to support public channels) and advertisement revenues are factored into the price, the average "price" per viewing hour through video rental/sales is nearly 20 times greater than through television, and theaters are over 30 times more expensive. Some consumers are willing to pay this premium because they receive greater benefits (quality of entertainment, convenience, etc.) from the experience of renting a videocassette, or going to a movie theater, than from watching television.

Due to differences in labor intensity, the effect of increased consumption on employment varied significantly by distribution outlet. Theater exhibition required the most labor to distribute 2 hours of entertainment, home video rental was somewhat less labor-intensive and television demanded far and away the least amount of labor (Exhibit 9). The small labor component of television made it possible for countries with extremely high growth in television viewing to only have a modest impact on employment growth, whereas smaller differences in cinema attendance or video rental had a significant employment effect.

Broadcast television expanded rapidly in Europe

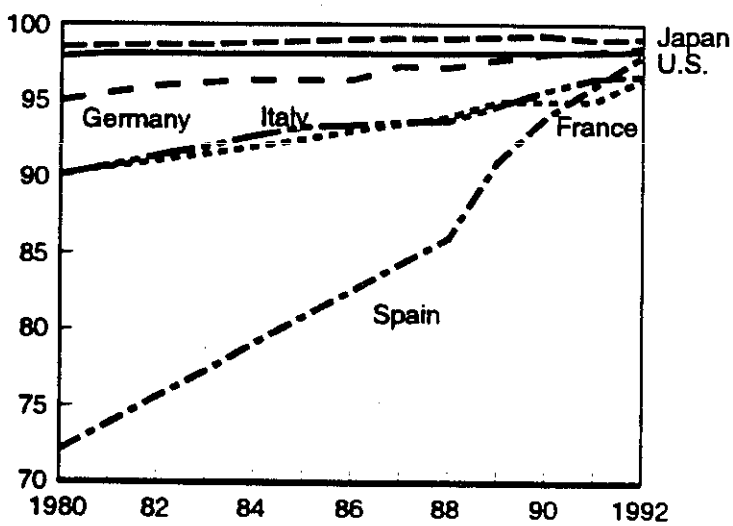
Broadcast television appeared to be a relatively mature industry in 1980. Over 90 percent of households had television sets in all of the countries examined except Spain (Exhibit 10). But even in this country the penetration rose from 72 percent in 1980 to 98 percent in 1992 as household incomes moved upward. Viewing habits were well established with U.S. citizens watching significantly more hours of TV than those in Europe; this gap was often attributed to a variety of cultural differences.

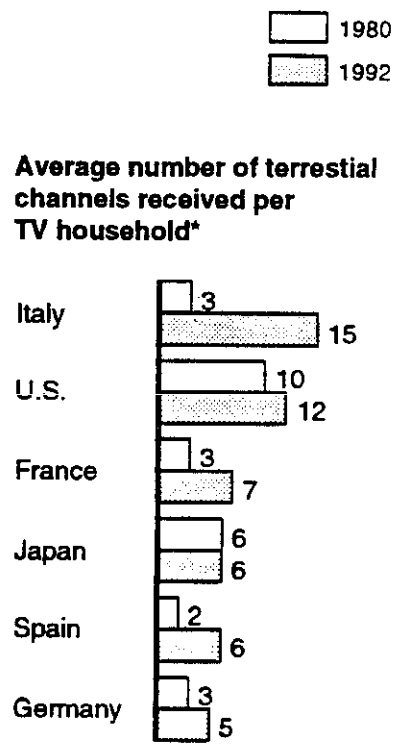
However, the 1980s illustrated that this gap was less inherent than people initially imagined. Television consumption grew rapidly in Europe as programming diversified and better matched consumer preferences. European governments freed the industry from state control during this period, resulting in the emergence of a number of new "free" (advertisement-supported) channels which supplement the few government-owned channels in Italy, France and Germany. Spain's rapid growth in broadcast employment occurred as a result of

Exhibit 10

TELEVISION PENETRATION 1980-92

Percent of households





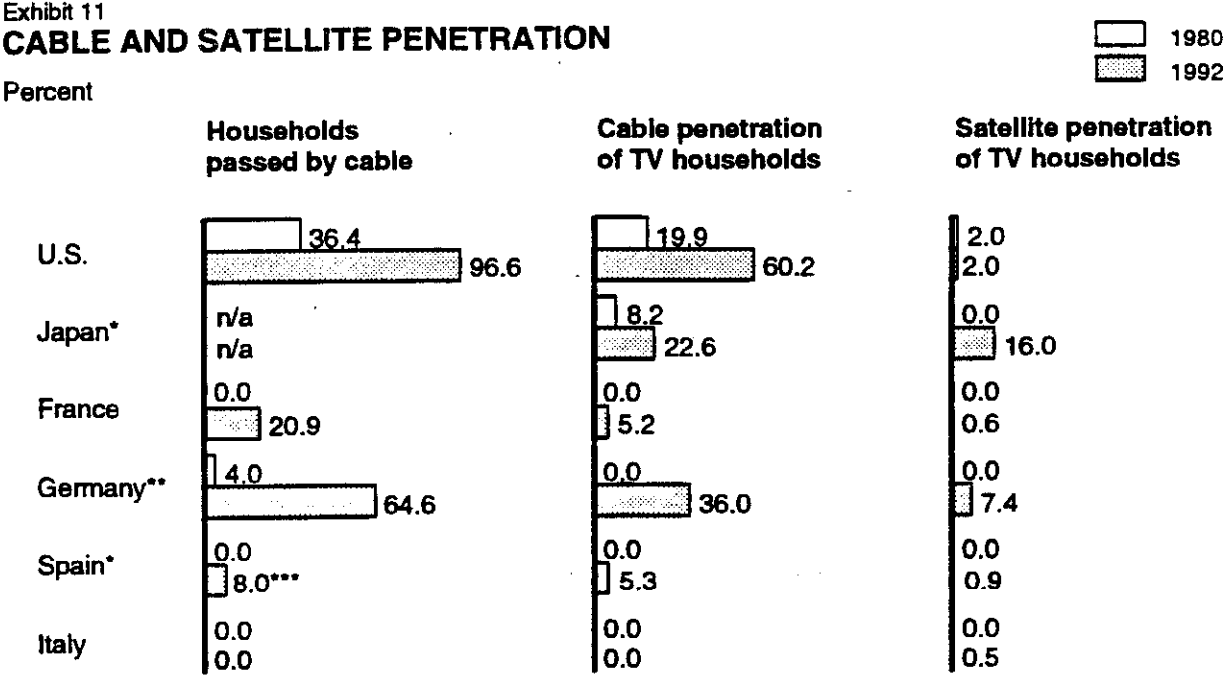
* Estimates

Source: Interviews; industry associations; national statistics; McKinsey analysis

Exhibit 11

CABLE AND SATELLITE PENETRATION

Percent



* Cable penetration is overwhelmingly community antenna TV

** 1991 figures with cable penetration including former East Germany; estimated 1980 homes passed by cable

*** Estimates

Source: Veronis, Shuler & Associates; Zenith Media Worldwide 1993; International Financial Statistics; Media Perspektiven; 1993 Communication White Paper by MPT in Japan; McKinsey analysis

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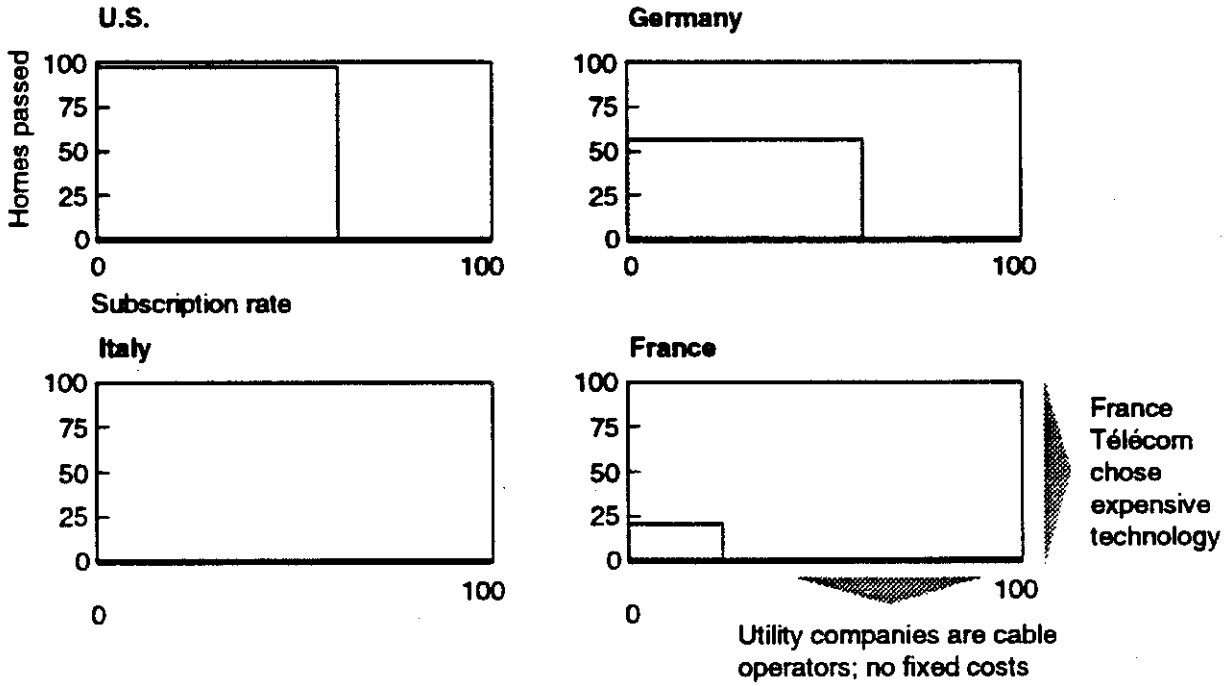
Exhibit 12

CABLE PENETRATION AND SUBSCRIPTION RATES OF TV HOMES PASSED 1992

Percent



Source: Agence Cable; Media Perspektiven; TBI Yearbook 93; Veronis, Shuler & Associates 1993; McKinsey analysis

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the legalization of both regional government television channels in 1983 and a limited number of private ones in 1989.

The number of broadcast channels available to a typical television household grew most rapidly in Italy where the average viewer could choose between 15 stations in 1992, while in Germany the availability was much lower. Even in the U.S., the number of available channels grew, albeit slowly. Japan experienced a decline in viewership at least, in part, because it had no growth in terrestrial channels due to stringent regulations. However, the number of regional broadcast stations, which relay signals from one of the national channels, has increased.

The explosion in viewership and variety led to rapid employment increases in broadcast television in each of the four European countries. The U.S. and Japan experienced almost no change in employment relative to the working age population during this decade.

Cable/satellite's slow growth in Japan, France, Spain and Italy

Television consumption was also stimulated by increased access to newer forms of signal transmission. Cable television began in the U.S. during the 1950s as a rural phenomenon which merely relayed broadcast signals to homes with poor or no television reception (Community Antenna TV, CATV). It rapidly expanded to other households over the 1970s and 1980s because operators offered new services and programming through advances in technology (such as satellites) and changes in regulations.

Cable and satellite television were virtually nonexistent in all of the other countries at the beginning of the 1980s (Exhibit 11), except for 8.2 percent CATV penetration in Japan. Penetration of both forms of television grew significantly in Germany, but government regulations and inaction slowed cable and satellite access in the other countries, inhibiting employment growth in this emerging industry segment.

¶ Less than 5 percent of French homes subscribed to cable for expanded television channels in 1992, largely due to government actions which blocked both access to cable and subscription rates (Exhibit 12).

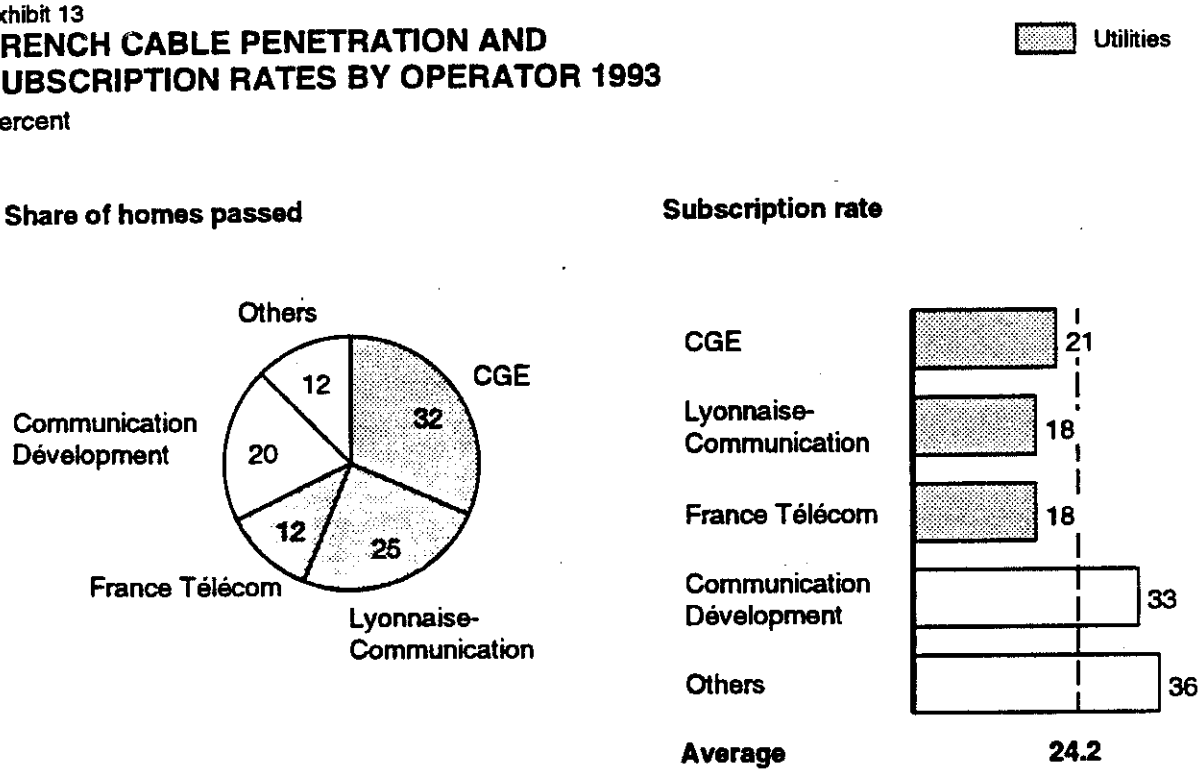
- Before 1986, France Télécom had sole control over installing and operating the country's cable network. Rather than coaxial cable, managers chose to install expensive fiber optics because of greater channel capacity; however, the higher expense slowed cable deployment. This monopoly was ended in 1986, when regulations allowed private companies to build and operate cable systems.

- Regulations before 1986 also slowed the rate at which households passed by cable subscribed for the service. French city officials had only three choices for the cable operator franchise: a private firm and

Exhibit 13

FRENCH CABLE PENETRATION AND SUBSCRIPTION RATES BY OPERATOR 1993

Percent



Source: Agence Cable

Exhibit 14

REGULATIONS IN CABLE/SATELLITE TV IN JAPAN DURING THE 1980s

Cable

- Installation required time-consuming permit process with at least 3 organizations
- Regulators hesitant to update obsolete regulatory framework for networks (local vs. long distance, broadcast vs. communication)
- Restricted service area prevented companies from reaching economies of scale
- Local capital ownership required
- Restrictions on foreign ownership

Satellite

- International satellites were barred
- Advertising on satellite channels was illegal
- Broadcasters must use two transponders per channel
- Communications satellite broadcasters were not allowed to put channels together into a single package

Source: Literature search; interviews

two utility companies. The two utilities got many of the most attractive markets, but they were slow to develop them since they lacked the skills and pressure to actively sign up cable subscribers (Exhibit 13).

- Penetration of cable was further slowed by the pricing method used by France Télécom, who charged operators for each subscriber rather than for each home passed. This increased variable costs and eliminated much of the potential fixed costs for the operator, decreasing incentives to be aggressive in gaining subscribers and boosting prices charged.

¶ Like the early development of cable television in the U.S., nearly all of cable in Japan is CATV. It has not expanded much beyond this point, however, with only 2.7 percent of TV households subscribing to "city type" CATV (cable with greater than 5 channels of original programming, two-way transit and at least 10,000 ports) by the end of 1992. The barriers to cable and satellite adoption were comprised of geographic factors and regulations, increasing the cost and time required to install the hardware for both cable and satellite.

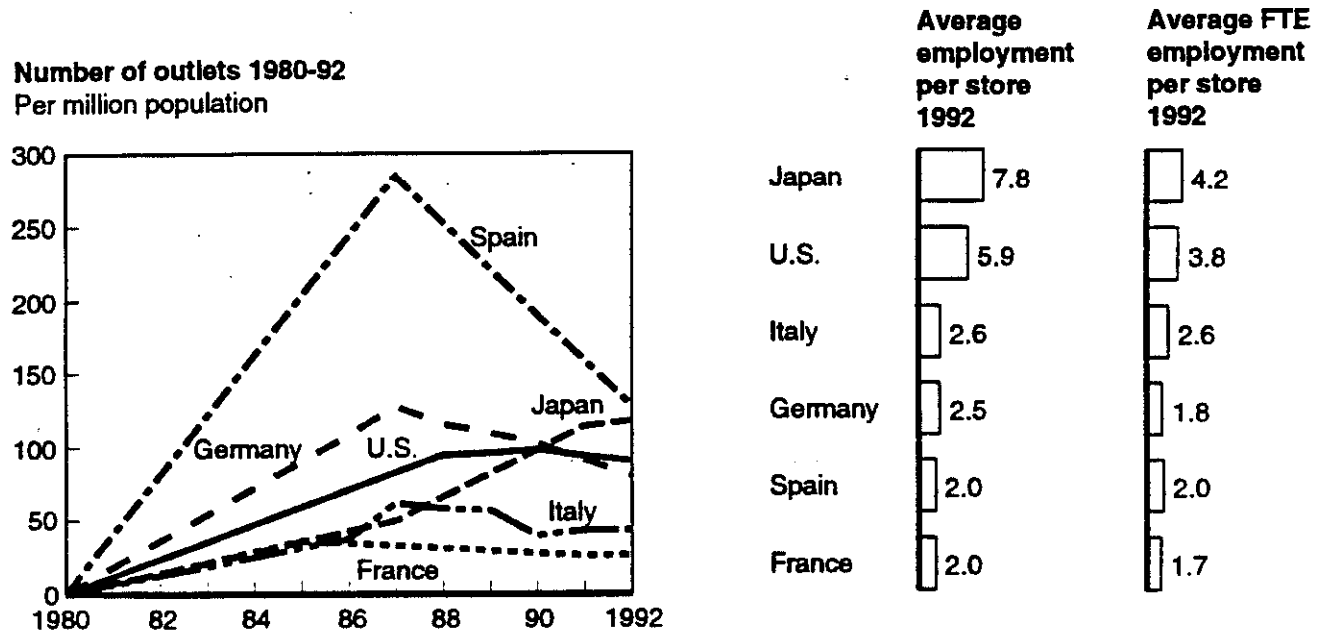
- The most important exogenous factor which influenced the cost and speed of the installation of cable in Japan was the country's mountainous topography and dense, urban population. Private companies in Japan lacked the funds and government approval to lay coaxial cable. As a result, the percent of homes passed by cable has only reached 14.4 percent in Japan. This experience parallels that of the large urban cities in the U.S., where cable deployment lagged the rest of the nation.

- Regulations further hampered the growth of cable and satellite television, raising costs and time for would-be operators (Exhibit 14).[2] A particularly important restriction is on the number of homes an operator can serve with one license. This prevented operators from reaching the minimum efficient scale necessary to be profitable or to support more original and higher quality programming. Operators average only 148 subscribers per system in Japan, while their U.S. counterparts average 5,000.

¶ Italy and Spain suffered from a lack of government action which could have facilitated the emergence of these segments of film/TV/video. During the past decade, cable penetration was directly blocked by the governmental agency authorized to install cable in Italy. SIP held a monopoly in the country but did not begin construction of a cable network. Legislators also failed to define the rules delimiting

[2] In 1994 many of these restrictions and their effects on the development of cable and satellite television have been recognized; plans to relax them are already under discussion.

Exhibit 15
VIDEO STORE DENSITY



Source: Interviews; industry associations; national statistics; McKinsey analysis

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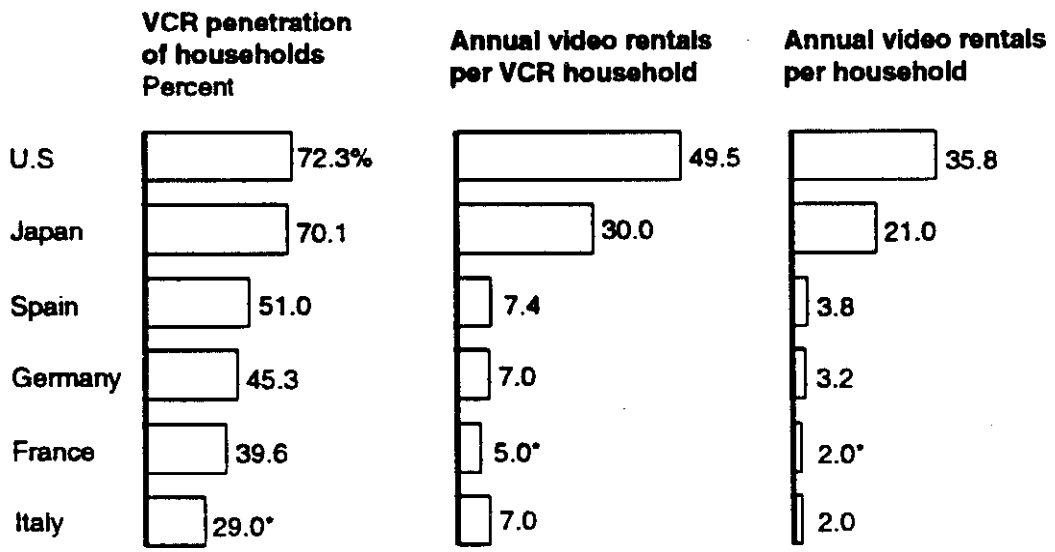
Exhibit 16
VCR PENETRATION AND VIDEO RENTALS PER HOUSEHOLD 1992



* Estimates

Source: Veronis, Shuler & Associates 1993; UNIVIDEO; CSEA; Media Perspektiven; Japan Economic Planning Agency; Japan Video Association; Datamonitor; Spain Video Association; McKinsey analysis

competition for satellite television. This created a great deal of uncertainty among potential entrants and investors, causing hesitation because of the large sums of initial capital involved.

Cable and satellite television development has been hampered by a similar legal void in Spain. Cable penetration is solely CATV, with localized regulatory oversight but ambiguous legal status. Like Italy, the lack of an adequate regulatory framework prevented the full emergence of these innovative outlets, although Spanish decision makers are presently attempting to fashion legislation defining competition for satellite and cable.

Low levels of sustained video employment in Europe

The VCR innovation produced a new distribution industry for video entertainment which grew at vastly different rates across countries. The striking rise in video rental consumption in the U.S. and Japan was matched by a remarkable growth in jobs, due to this outlet's high labor intensity. Employment in this industry segment grew significantly less in the European countries, particularly France. This lower growth can be partially attributed to differences in VCR penetration rates, although lower demand given VCR penetration appears more important. Higher prices, closer substitutes and differences in consumer preferences together dampened demand in France, Italy, Spain and Germany.

From Exhibit 15 it is clear that the relative number of specialized video retail outlets created was not the differentiating factor between Japan and the U.S. and most European countries. In fact, in nearly all European countries (particularly Germany and Spain) more stores were created than the market could sustain. The significant difference across countries was VCR penetration rates as well as videocassette rental consumption per VCR household (Exhibit 16).

With most of the costs (rent, labor and inventory) of video rental retailing fixed with respect to the number of tapes rented, high consumption levels greatly determine profitability (Exhibit 17). Video stores in the three countries with higher revenues, the U.S., Italy and Japan, were profitable while those with lower revenues were not.

Video rental demand appears to be somewhat responsive to prices (Exhibit 18), although the U.S. experience from 1982 to 1992 suggests only a low price elasticity. Countries' respective 1992 video rental demand levels corresponded closely to the price levels that prevailed at the time.

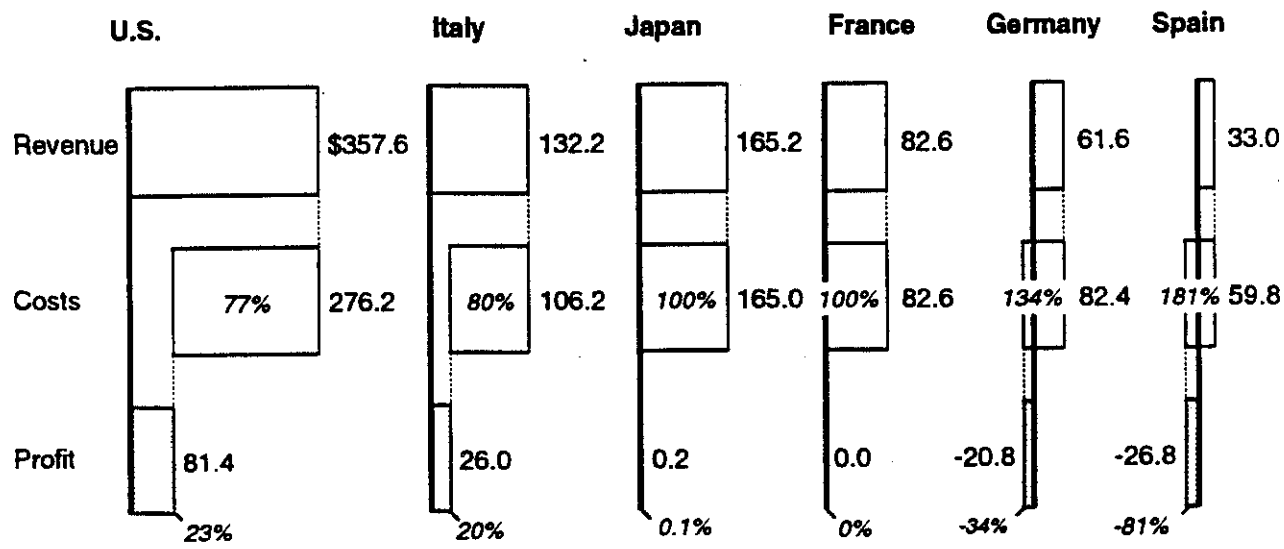
These rental price differences relative to the U.S. can be attributed to factor cost differences in labor and rent (tape costs do not vary significantly across countries), differential tax rates (European VATs are 14 percent to 19 percent versus 3 percent to 6 percent sales taxes in Japan and the U.S.), and to managers' choices of the best way to maximize revenue. From Exhibit 19 it appears that the

Exhibit 17

VIDEO STORE ECONOMICS* 1992

ESTIMATE

U.S. $ Thousands converted with 1992 GDP PPPs, percent



* Videocassette and ancillary product sales are not included

Source: Interviews; industry associations; national statistics; McKinsey analysis

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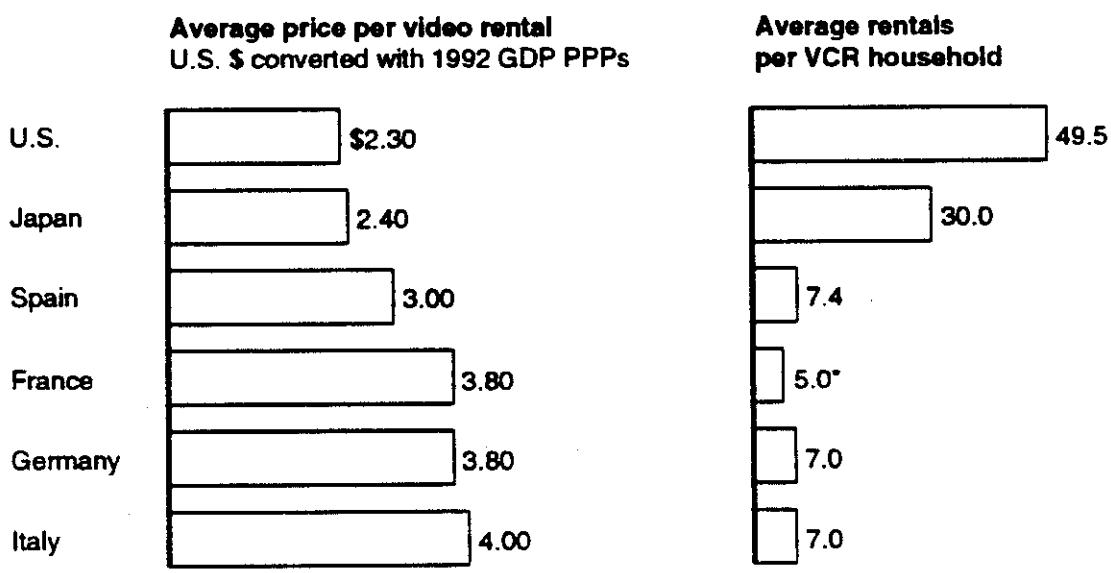
Exhibit 18

VIDEO RENTAL PRICES AND RENTAL DEMAND 1992



* Estimates

Source: Interviews; industry associations; Veronis, Shuler & Associates; McKinsey analysis

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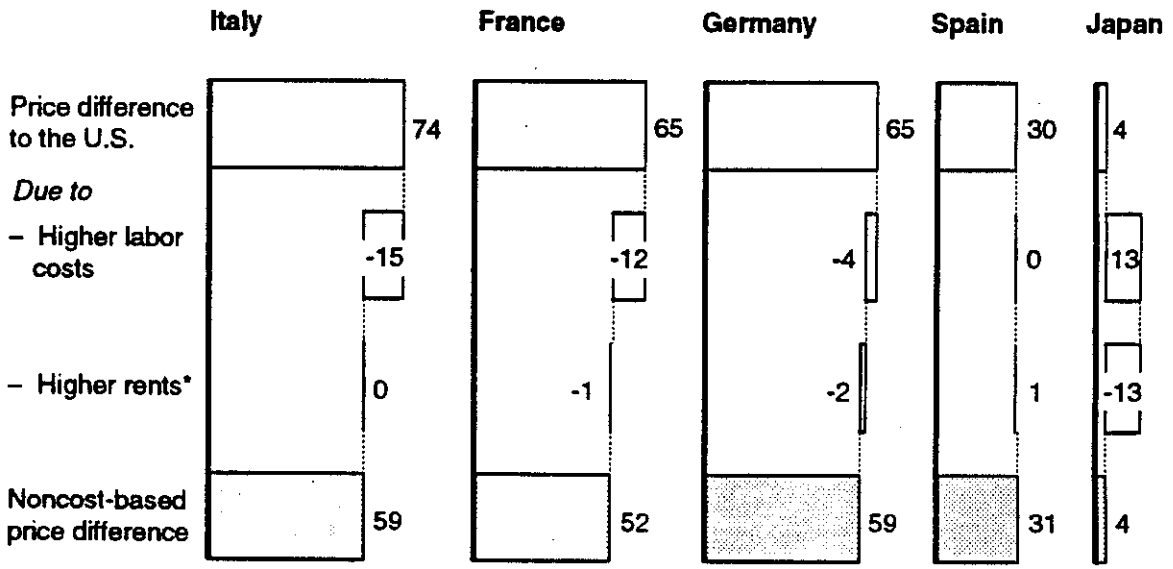
Exhibit 19

VIDEO RENTAL PRICE AND COST DIFFERENCES USING U.S. FACTOR PRICES 1992

Percent



* Estimated average national retail rent

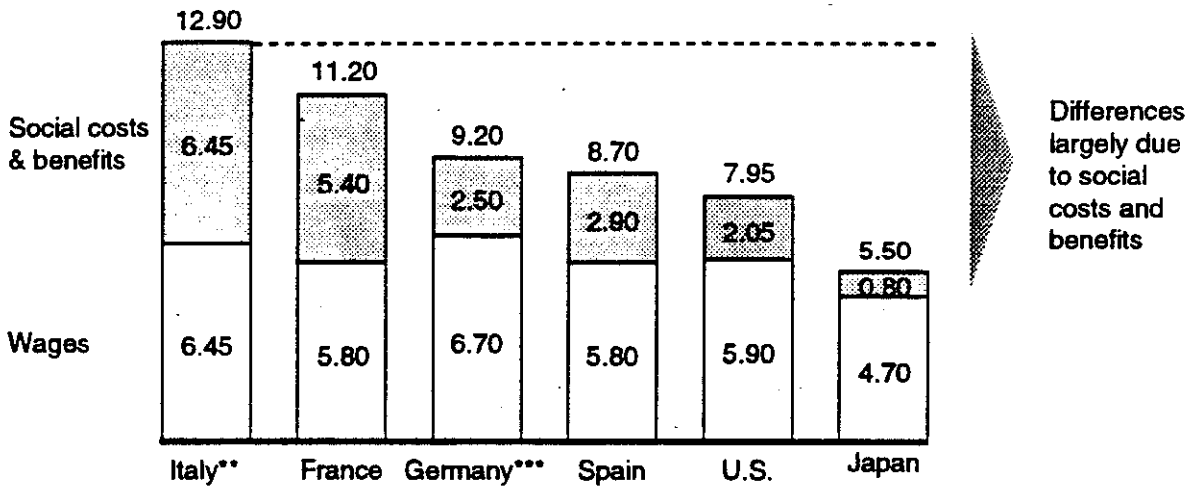
Source: Interviews; industry associations; Veronis, Shuler & Associates; Media Perspektiven; McKinsey analysis

Exhibit 20

VIDEO RETAILING LABOR COSTS PER HOUR WORKED* 1992

ESTIMATE

U.S. $ converted with 1992 GDP PPPs



* Average retail wage in 1990 used for all manager-equivalent workers

** 1991 retail worker wages used

*** Figures represent mix of *Aushilfen* (part-time workers) and manager-equivalent workers

Source: National statistics; interviews; industry associations; small samples of metropolitan area stores in Japan and Spain; McKinsey analysis

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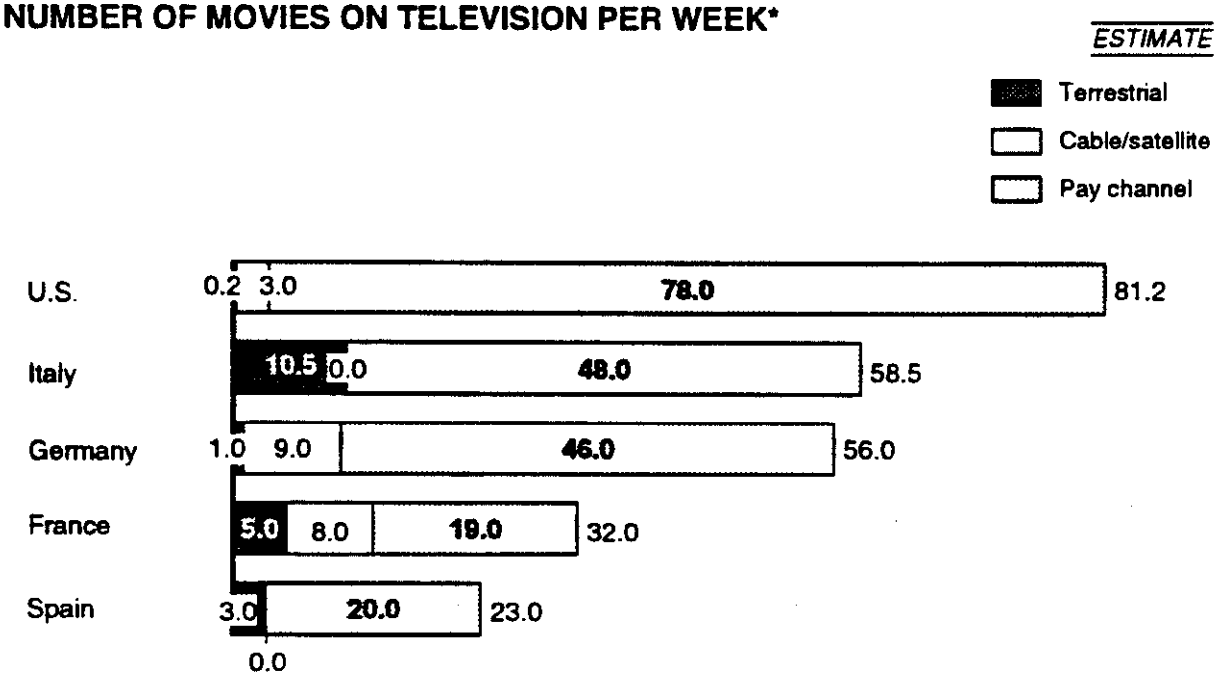
Exhibit 21

NUMBER OF MOVIES ON TELEVISION PER WEEK*

ESTIMATE



* Movies released in 1990 or later

Source: Various television and cable guide magazines, 1994; McKinsey analysis

noncost-based differences account for the majority of the price differences in video rental in each of the European countries. Only in Italy and France are higher labor costs notable. Exhibit 20 shows that average video store labor costs in these two countries are significantly higher than in the others, due mainly to high social costs and benefits. Managers' decisions to keep prices high even when demand is low and costs are reasonable suggest that they believe there is less underlying demand in their country than in the U.S. or Japan.

The availability of close substitutes on television may also be a partial explanation for depressed video rental demand in Europe.

- This new outlet for video entertainment had less perfect substitutes in the U.S. and Japan. Differences in program content on broadcast and basic cable TV, the large number of advertising breaks, and the high value placed on the convenience of starting/stopping a movie when you wish, are a few reasons for less cannibalization in the U.S. Rentals per VCR household are high in Japan due to few recent (U.S.) movies on broadcast, cable or satellite television and the fact that young teenagers do not typically go to the movies alone.

- Although the total number of recent movies available on television per week is highest in the U.S., there are a greater number of close alternatives to video rentals for "free" in Europe (Exhibit 21). Furthermore, cable prices are higher in the U.S. than in Europe (Exhibit 22). Monthly cable costs a U.S. consumer the equivalent of eight video rentals, whereas in France it costs the equivalent of only three video rentals. The price difference between renting a video and watching movies on cable is even greater in the U.S. when the additional cost of a premium cable movie channel is included in the price paid by customers; the price difference is even smaller than indicated in France and Spain since terrestrial pay television eliminates the cable operator fee.

But there still remains residual video demand differences between Europe and the U.S. which cannot be explained by closer feature film substitutes. It appears that many of the 40 percent of U.S. households that subscribe to at least one pay television channel still rent videos at rates above the European norm. Exogenous factors such as image have also affected demand in France and Germany; unlike in the U.S., the association of video retail stores with pornography still lingers.

Although this industry segment is largely unregulated in most of these nations, the development of French video retailers was restricted by regulations intended to preserve theater employment. Regulations in the early 1980s slowed VCR penetration as well as video rental consumption.

- Annual taxes on VCRs equal to the fees paid by French households for public television were imposed in 1983, and eliminated in 1987. This slowed VCR penetration rates during the early stages of the retail rental industry, as well as over the longer term; penetration levels reached

Exhibit 22

AVERAGE FILM/TV/VIDEO PRICES

1992 U.S. $ converted with GDP PPPs

	Video rental	Monthly cable subscription	Monthly satellite subscription	Cinema tickets	Monthly TV fees for public channels
U.S.	2.30	19.00	n/a	5.05	0.0
Japan*	2.40	15.80	10.00/channel	6.30**	7.20
France	3.80	13.00	n/a	5.20	7.40
Germany	3.80	7.10	0.0	4.50	7.40
Spain	3.00	29.90***	n/a	4.10	0.0
Italy	4.00	n/a	n/a	4.40	8.30

* Installation prices are high: $800 for satellite, $260 for cable

** 1991

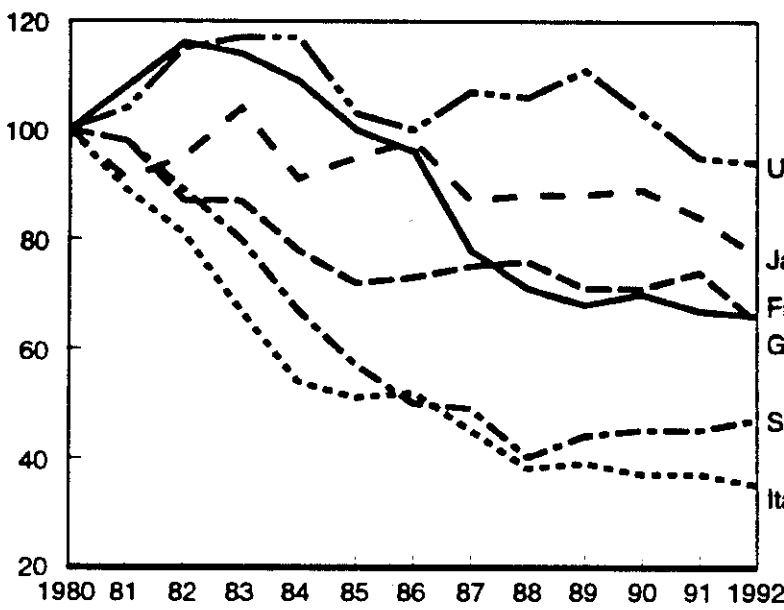
*** Canal Plus subscription price

Source: International Motion Pictures Almanac; national sources; McKinsey analysis

Exhibit 23

MOVIE THEATER ADMISSIONS 1980-92

Index: 1980 = 100



Admissions Millions of viewers	1980	1992
U.S.	1,021.5	964.2
Japan	164.0	126.0
France	174.8	115.9
Germany	143.8	93.4
Spain	176.0	83.3
Italy	241.9	83.6

Source: Information CNC; Cinema d'oggi; MPAA; Screen Digest; McKinsey analysis

41 percent of households in France in 1991 versus 70 percent or more in both the U.S. and Japan.

- Targeted taxes and regulations also slowed French video rental consumption directly. A special VAT of 33.3 percent was imposed on videocassette rentals in the early 1980s and was only phased out in 1992. In an attempt to protect the theater industry, feature film releases could not be made available on videocassette until at least 1 year after theater release. Finally, television advertising of feature films, a crucial stimulus to rental demand in more developed markets, was banned.

Slow growth of penetration during the early phase of industry development kept video rental stores from reaching "critical mass." Rental habits like those in the U.S. and Japan never formed and the number of stores per capita peaked at a relatively low number. Given these circumstances, the rental market quickly lost share to the much less labor intensive sell-through market as distributors began lowering sales prices significantly in the mid-1980s. A significant switch from video rentals to sales happened in all four of the European countries.

Admission declines and productivity improvements in cinema

Negative employment performance in this more mature industry segment occurred in every country over the 1980s. New forms of entertainment substituted for cinema attendance differently across the countries. All nations experienced drops in output (in numbers of admissions), however the decline in consumption of filmed entertainment through this outlet was only 4 percent in the U.S. while it was 53 percent in Spain and 65 percent in Italy (Exhibit 23).

- The greater drop in cinema attendance in Europe was influenced by the advent of commercial television during this period. Similar falls in theater visits occurred in the U.S. during the 1950s, and in Japan during the 1960s, when television penetration and broadcast hours reached relatively high levels.

- The dramatic fall in Italian and Spanish cinema consumption was also affected by a sizable black market in videos of new theater releases and a severe decline in movie screens (65 percent in Italy and 56 percent in Spain). The lack of air-conditioning during hot summer months, limited movie choices per theater and more movies on television are additional reasons cited in large consumer sample surveys for not attending the cinema in Italy.

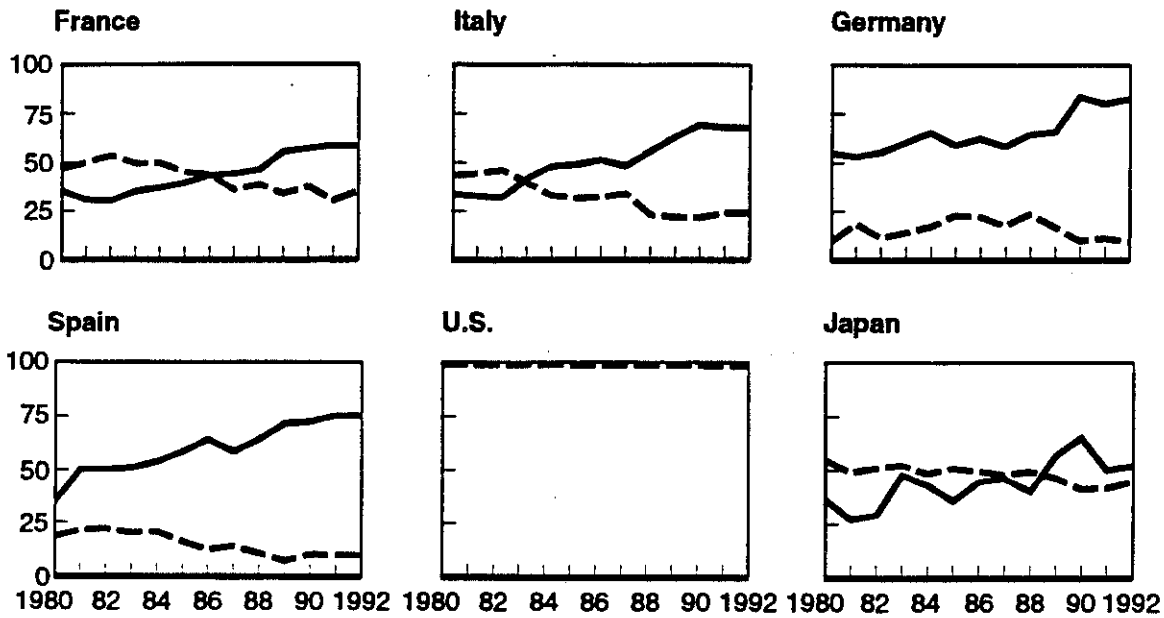
Differences in employment evolution in theaters over this period correspond roughly to output changes, although differential productivity growth also had an important effect in this segment.

- Improvements in projector technology and scale economies stemming from large multiplexes resulted in fewer employees per showing. All of

Exhibit 24

BOX OFFICE MARKET SHARE OF U.S. AND DOMESTICALLY PRODUCED MOVIES

Percent



Source: ANICA; Screen Digest 1993; MPPA Japan; McKinsey analysis

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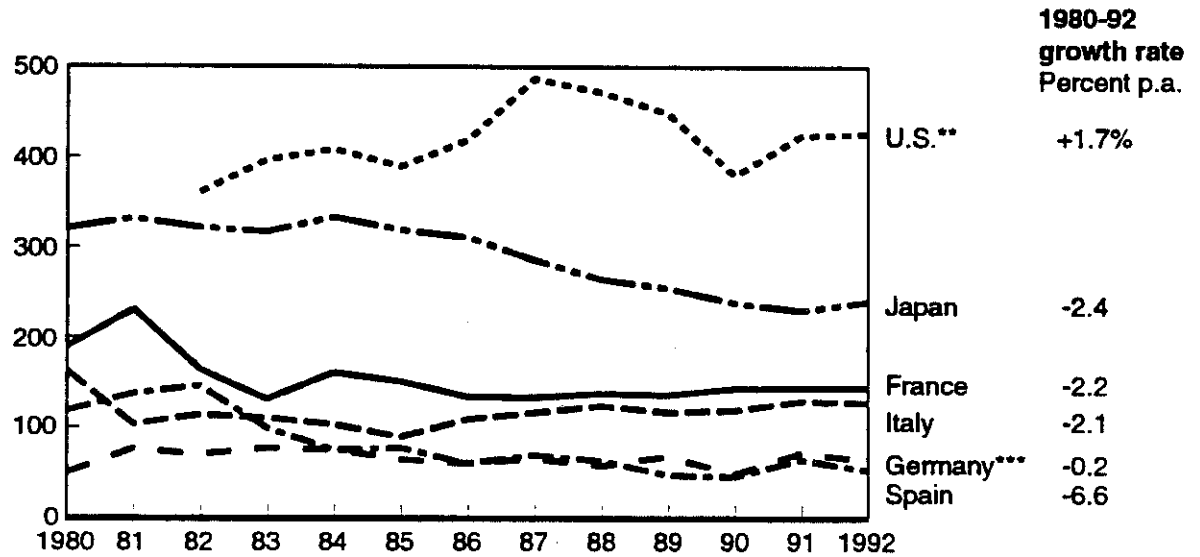
Exhibit 25

NUMBER OF FEATURE FILMS PRODUCED*

Number per year



* Includes co-productions

** U.S. figures are for new releases; percent p.a. 1982-92

*** Growth in percent p.a. from 1979 (65 films produced) to 1992, 1980 output was an anomaly

Source: MPAA; Cinema d'oggi; CNC Info; National Producers' Associations; Media Perspektiven

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the countries adopted these best practices, but beginning from very different initial productivity levels. Therefore, productivity growth varied significantly.

- Spain's industry had a more severe employment decrease due to very low initial labor productivity levels – the country had half the number of screens but about the same employment as Italy in 1980. The industry also experienced the construction of new multiplex theaters and the conversion of old single screen theaters into multiple screen cinemas. In Italy this modernization process has evolved more slowly.

- Some of these efficiency gains were offset by other factors. The German industry increased food concessions, adding more value per employee. Government subsidies to theaters in France provided funds for renovation and strict operations. French regulations on movie distribution through video retailers and on television programming (no movies in the evenings 3 days of the week, limit on movies broadcast per year) appear to have been partially successful at preventing decreases in attendance.

Movie and television production employment significantly influenced by trade

All of the increases in distribution outlets led to greater demand for filmed entertainment. The U.S. was a major beneficiary of the increased demand for "software" in the domestic market as well as abroad. It was the only country in our study which grew in both feature film and television program production output.

U.S. feature film export growth was due to Hollywood's large cluster of companies which specialize in the varied tasks required to produce a movie. The development of this industry structure occurred in the U.S. because of its historic advantages: a large domestic population that speaks one language and of a commercial orientation borne out of necessity. Motion picture production is characterized by high fixed costs with substantial economies of scale. The U.S. film industry improved its share of all of the other countries' box offices, overtaking domestic producers in France, Italy and Japan during the 1980s (Exhibit 24). Furthermore, the industry's success at the box office also translated into increased exports to video and television outlets in other countries.

These changes in box office share, plus a decline in real export revenues for all of the European countries, resulted in decline in the number of feature films produced (Exhibit 25). Correspondingly, movie production employment declined in all of the nonbenchmark countries except Germany. Spain experienced a particularly sharp drop, in part because of a history of government subsidies provided to producers without regard to commercial appeal. Unable to market the resulting products, Spanish movie makers lost share to foreign (usually American) movies. Eventually this resulted in fewer movies being

Exhibit 26

LINKAGES BETWEEN TELEVISION PROGRAMMING DISTRIBUTION, ADVERTISING AND PRODUCTION IN EUROPE

CONCEPTUAL

	Stage 1 Emergence of new channels	Stage 2 Competition for viewers	Stage 3 Rising quality of local production
Evaluation of viewership	Cable/TV slowly gain an established viewership	Viewers become more discriminating and show a preference for local themes	Niche programming and high quality shows required to attract viewers
Advertising outlook	Preference for print and radio sources with established audience	Increase in volume with price differences growing across programs	Advertising revenue per viewer continues to rise but increasingly difficult to attract a large audience
Source of programming production	Inexpensive TV reruns from the U.S.	Foreign material supplemented by low cost domestic production	High quality co-produced material which allows cost sharing and knowledge transfer

Source: McKinsey analysis

Exhibit 27

TELEVISION ADVERTISING REGULATIONS

	Minutes per average hour	Additional important restrictions
France	5-9	Commercials at end of program only on public channels No advertising for pharmaceutical, telecommunications, publishing, movies, retailing, or other products and services
Germany	1-4	Public channels cannot advertise after 8 p.m.; maximum of two interruptions per hour
Italy	1-5	Some product restrictions; no breaks during news, concerts, children's and religious programs; advertising revenue limit for RAI
Japan	18	No limit on private channels No advertising on public channels
Spain	4	Minimum time between advertising breaks: movies – 45 minutes; news – 30 minutes; all other – 20 minutes
U.S.	22	No limit A few product restrictions: guns, tobacco

* Advertising allowed per hour: public and private channels; U.S. and Japan have industry-determined guidelines

Source: National data

made. Government subsidies in movie production – widespread in this industry segment throughout Europe – have had varying degrees of success at maintaining industry output and employment.

The other part of this industry segment, television production, increased employment with the growth in television channels across all six countries. This has more than offset the declines in movie production in each country except Spain, where purchased television programs filled most of the new channels' broadcasting hours. French employment in this segment has grown more quickly than all others (including the U.S.), due to a significant increase in part-time freelancers.

Exhibit 26 illustrates the general evolution of broadcast television and its impact on television programming production. During the early stages, an emerging channel has little advertising revenues and small audiences, and therefore purchases existing shows or movies from outside sources such as U.S. producers. However, as audiences grow and competition for advertising revenues increases, inexpensive domestic production begins to overtake imports since consumers prefer local programming. The quality and variety of domestically-produced television programs increase as competing channels attempt to provide shows which attract more discriminating viewers.

Severe restrictions on advertising in all of the European countries inhibited this evolution (Exhibit 27). These restrictions had a negative effect on the number of television channels which could operate profitably, the quality and type of programming, and the amount of unique domestic production demanded. Unnecessary advertising regulations have slowed the transition of each European industry to greater domestic television production (Exhibit 28).

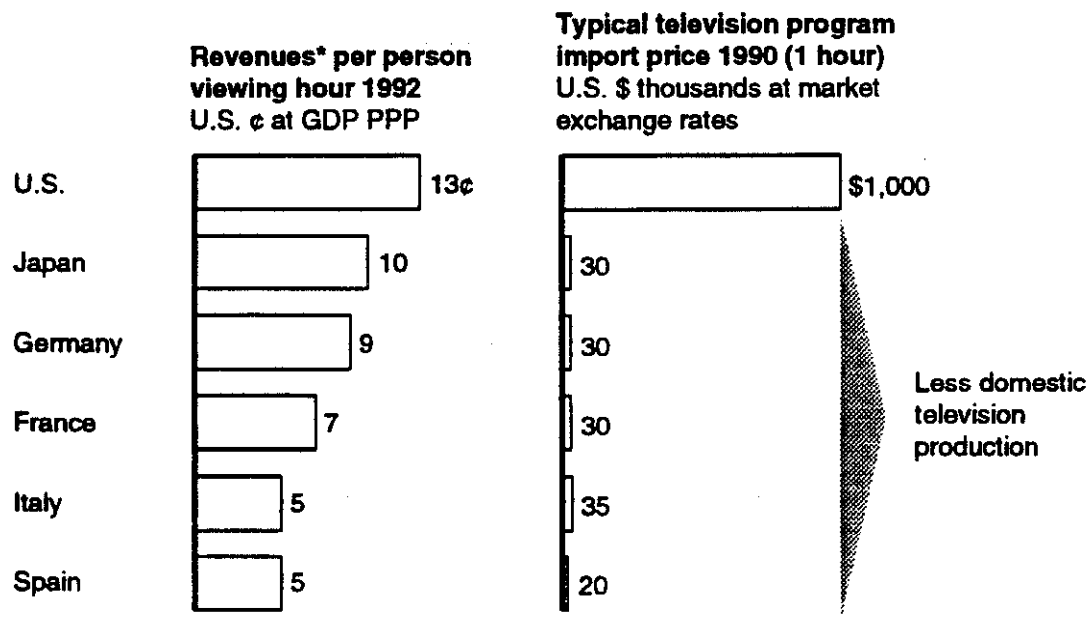
The basic evolutionary pattern can be observed in all of the countries we studied, but because of differences in the stage of evolution and various regulations, employment growth in television production differed across the European nations.

- The Spanish television production industry is in the earliest stage of development. Private broadcast channels were only allowed in 1989. They have been purchasing most of their programming because import prices are significantly lower than the costs of in-house production. Therefore, employment growth in television production was not able to fully compensate for the loss of employment in feature film production over our period of study.

- Although "freed" from state monopoly earlier than the other European television industries (private unlicensed television channels began broadcasting in the late 1970s), Italian television production has been slow to move towards domestic production. TV production employment per hour of television consumption grew more slowly in Italy than in all other countries except Spain. The pressure to produce the more expensive domestic television shows that customers prefer has

Exhibit 28

TELEVISION REVENUES AND COSTS



* Including TV fees

Source: IESE; Universidad de Navarra

Exhibit 29

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Film/TV/Video

● Important
○ Secondary
X Undifferentiating

Benchmark: U.S.

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X	X	X	X	
• Less government ownership/ support	X	X	X	X	X	○	
• Readily available capital	X	X	X	X	X	X	
Labor market							
• Low labor cost	X	○	X	○	X	X	
• High availability/low benefits	X	X	X	X	X	X	
• More flexibility	X	X	X	X	X	X	
Product market							
• Fewer restrictions on output and competition	●	●	X	●	○	○	
• More new business facilitation	○	X	X	○	X	○	
• Rapid demand growth	○	○	●	X	●	○	
Industry dynamics/competitive intensity							
• Better trade/FDI performance	○	○	○	○	○	○	
• More competitive intensity	X	X	X	○	X	X	
• More innovation/new products	●	●	●	●	X	●	
Higher output growth	●	●	●	●	●	●	
Higher productivity growth	X	X	X	X	X	X	
Lower productivity growth	X	X	X	○	X*	X	

* Opposite is true with strong influence

Source: McKinsey analysis

been suppressed through the limited competition of the duopoly structure which was allowed to develop in Italian TV. Concentration in broadcast television tends to occur because of significant economies of scale. Instead of preventing this, licenses for general entertainment national television networks were granted in 1992 to the three state-owned RAI channels and the three channels controlled by Fininvest.

- France's phenomenal growth in the number of jobs in production exaggerates the employment growth in television. The hours worked per employee has fallen significantly, as the creation of many independent television production companies has shifted the bulk of output from full-time workers in the state-owned SFP to government-supported *intermittent* persons, many of whom work only 3 months per year.

SUMMARY AND IMPLICATIONS

Exhibit 29 presents a summary of the factors which explain employment performance differences between the benchmark country, the U.S., and the other five countries in film/TV/video. These factors can be described within a hierarchical framework where factors in the capital, labor and product market influence industry dynamics, which in turn affect output, productivity and employment. It should be noted, however, that some factors at the highest level of causality can directly influence output growth. The rating for each country represents an average of the importance of the factors within the industry segments. The "overall" column explains the influence of these factors across all of the countries for the film/TV/video industry.

At the lowest level of the framework, higher output growth and the distribution outlets chosen by consumers in the U.S. were the most important differential determinants of job creation. Relative prices and the quality of entertainment determine the distribution channels used to consume movies, videos and television programs. Through regulations, particularly advertising restrictions, the growth in consumption in France, Germany, Italy and Spain was strongly directed toward less expensive television rather than higher value added, more labor-intensive movie theaters, video rental or pay TV.

The **industry dynamics** factors which have significantly affected output growth differences are trade balances and innovation.

- Changes in net trade significantly helped the performance of the benchmark relative to all of the other countries (U.S. net exports of movies and television programs grew in real terms from $1.5 to $8 billion). France, Spain and Italy had worsening net trade balances due to increased imports of movies for cinema and video as well as increased imports for expanded channels in television. Germany and Japan were able to almost maintain domestic box office share.

- Significant differences in output growth occurred in the newer, emerging distribution outlets of film/TV/video, which are captured in the "innovation/new products" line. This had a major effect on employment growth in all of the nonbenchmark countries except Japan, where the dramatic growth in video rental jobs has offset lower growth in cable/satellite.

Factors which influence the dynamics of an industry or output growth directly can be grouped under the capital, labor and product markets. We will discuss the influence of each of these in the film/TV/video industry, focusing particularly on factors which we had originally expected to be important in explaining employment differences, yet were not. We begin with the **capital market** factors.

- In this industry there was little difference in the pressure private owners placed on companies, though government ownership and capital support played a role in influencing the development of the industry. Government subsidies typically had a positive effect on employment by diminishing the pressure to restructure, increasing output or directly supporting jobs. Employment performance in France has been helped by these funds during the period of our analysis: theaters received funds for renovation, movie and television producers received subsidies for films and shows, state-owned television channels received fees from television taxes, and movie/TV production employees received substantial wage supplements. However, the Spanish experience demonstrates the negative repercussions of this kind of government action; the reputation of their movie production industry was harmed in the mid-1980s when the government subsidized all movies, including films that theater exhibitors would not show.

- Contrary to expectations, we did not find that a lack of available capital was an impediment to job creation in the motion picture production industry. In fact, there is anecdotal evidence that significant sums of capital from Europe do support movies produced in the U.S. People resist investing in major motion pictures production in Spain, France, Italy and Germany because the risk and expected returns are unfavorable, not because the capital is unavailable.

Although differences in **labor market** factors were somewhat important in a few segments in a few countries, they were generally of little importance at the aggregate level.

- In industries such as video retailing where wages and skill requirements are quite low, we did find that high wages have played some role in preventing the further expansion of video stores in France and Italy through either higher prices or lower profits. Jobs that were viable in the U.S. or Japan at $5 an hour could not be sustained at $11 an hour. Labor costs do not appear to be the major reason for the low

growth in this segment, however, as factors affecting demand are more critical in this industry characterized by fixed costs. The problem of high wages and social costs is generally avoided in this industry in Germany through the use of low benefit part-time workers called *Aushilfen*. The cost of labor was not a major factor in theater employment despite similarly low wages; this was primarily due to the lack of hiring in this declining segment.

- Worker availability problems were mentioned only by French video store retailers and Japanese television producers. High unemployment benefits may generally make hiring low-cost labor more difficult in France, but did not limit film/TV/video growth, as enough people were willing to work for the wages offered. The problem of a tight labor market in Japan in the late 1980s may have had a small effect on the lower wage positions in television production. But because these positions were considered desirable by many, and because the industry was able to expand significantly throughout this period, the constraint does not appear to have been truly binding.

- Lack of labor flexibility in German, Spanish and Italian state-owned channels helped maintain employment levels above what they would be otherwise, but at the expense of productivity. Constraints on laying off workers kept these traditional players from becoming competitive and also slowed employment expansion in some private channels such as Canal Plus, since companies feared that they might get stuck with an unnecessarily large workforce.

Most of the major factors which helped or hindered job creation in film/TV/video were **product market** factors. Each of them was found to be at least somewhat important at the aggregate level, although restrictive regulations and differences in exogenous demand were significant factors across all the segments.

- Regulations played a critical role in the evolution of film/TV/video in these countries; in some cases they have had a positive effect on employment, and in others a negative one. These regulations can be classified into three different categories: those which restricted entry, constrained firm behavior, or facilitated growth.

- Regulations which restricted entry in this industry generally hindered the emergence of new distribution outlets for film entertainment, preventing output and job growth. Examples discussed earlier were French cable restrictions, Italian inaction in deploying cable and Japanese constraints on cable network size.

- Regulations which restrict company behavior are common in film/TV/video, often with the intention of protecting existing segments from competition. Regulations to preserve French theaters have helped to maintain theater employment, but at the expense of employment in

video retail and possibly television. Regulations limiting the number of cable channels to protect traditional broadcast television has also been detrimental to the growth of cable. Strict advertising limits in all of the nonbenchmark countries hurt broadcast and production employment directly and may have reduced growth in the other distribution segments.

- Regulations which facilitate growth and delineate competition are important to foster the creation of new industries. A lack of rules in the satellite industry in Italy, and cable in Spain, increased uncertainty and risk for companies that might otherwise invest the large sums of capital necessary to launch a satellite or a cable/satellite channel. The lack of enforcement on video rights and release agreements has also negatively affected video employment in these countries. Finally, the lack of antitrust legislation in television in Italy may have dampened television production employment growth.

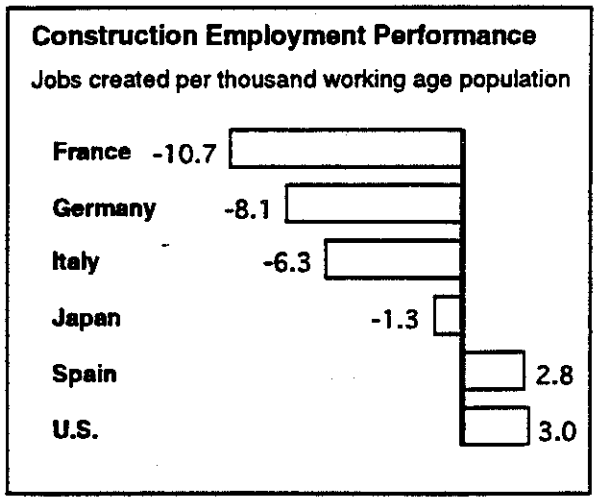
- The third significant product market factor is increased penetration or demand growth due to different customer preferences. Given the lower initial levels of consumption in Japan and Europe, higher growth in television consumption was to be expected. Penetration differences also exist in VCR ownership and cable subscription rates. However, the U.S. maintains remarkably high consumption levels in video rentals, television and theaters, which has a direct effect on output and employment growth.

* * *

The film/TV/video industry highlights the effect regulatory barriers can have on the emergence of new services. These barriers may inhibit total demand growth, and they can direct latent demand into more or less productive outlets. In an industry which is evolving rapidly, the government would best encourage job creation by confining regulations to facilitating competition, reducing uncertainty in the "rules" of competition, and enforcing private contracts.

The countries that allowed the film/TV/video industry to evolve as new technologies were commercialized had greater aggregate increases in productive employment. Those that tried to actively manage the process may have retained more employment in existing forms, but probably at the expense of better net performance.

CONSTRUCTION INDUSTRY CASE SUMMARY



The myriad rules and regulations governing the construction industry in Europe and Japan provide an excellent example of how product market restrictions stifle output. Faster output growth – together with slower gains in productivity – resulted in a better employment performance for the U.S.

The construction industry is subject to a large number of rules and regulations regarding land use, building quality, safety, rent and taxes. However desirable these regulations may be in their own right, they adversely affect construction volume and therefore employment. The effect on output of differing degrees of regulation – rather than competitive intensity or differences in industry structure – directly explains cross-country differences in employment. France, Germany, and Italy lost jobs relative to their working age population. Japan basically maintained employment while Spain and the U.S. were able to create jobs.

Construction employment depends largely on output growth. The U.S., Japan and Spain experienced growth in real construction volume which was in line with overall growth in GDP. Germany, France and Italy, in contrast, saw construction growth lag overall GDP growth. Strict zoning laws are a primary cause of this lag in that they restrict the supply of residential and commercial land. This in turn leads to high land prices and high costs of construction, both of which constrained output growth. Building codes and norms also have an adverse impact on construction volume by increasing material and labor costs. European and Japanese authorities further distort the housing markets through rent controls and tax incentives.

Japan and Spain increased output and employment despite such product market restrictions; extensive upgrading of housing and public investments in infrastructure acted as drivers of growth. Productivity levels and productivity growth rates must also be taken into account. The strong employment performance of the U.S. is partially due to its low productivity growth rate. Labor market factors such as benefit levels and wage bargaining institutions played only a secondary role in accounting for growth in output, productivity and employment.

For Japanese and European policymakers, the implication is that relaxing the regulatory environment is likely to increase construction output and employment. This raises the question of fundamental trade-offs with broader societal objectives. Policymakers should question whether restrictions serve the "public good" or whether they merely protect vested interests.

Employment in the construction industry

The construction industry is one of the largest sectors in developed economies, representing between 5.5 and 10 percent of total civilian employment and total GDP. In comparison, total manufacturing employment accounts for 18 to 32 percent of total civilian employment. Construction is among the most discussed and analyzed of industries. This is partially due to its relative size and its links to the rest of the economy through consumer expenditures for housing and business investments for plants. Construction output is highly cyclical and is often used as a leading economic indicator. Social issues also enter the discussion of the construction industry. Providing adequate housing at affordable prices and an efficient infrastructure for communication and transportation are priorities of policymakers.

We believe the construction case study contributes to the labor market discussion in two ways:

- Construction provides an example of the job creation process in a relatively mature, low skill industry. We find evidence that labor market factors such as benefit levels and wage setting institutions affect employment in this type of industry
- The construction industry is governed by a large number of rules and regulations regarding land use, building quality and safety, and social protection. Differing degrees of regulation explain in a direct way differences in output and employment. The construction case thus illustrates how regulations hinder economic flexibility and the working of equilibrating market forces.

The report is divided into four sections, the first of which describes the construction industry in all six countries analyzed. This section is followed by a description of the employment performance. The third and main section of the case explores causes for different employment performances. Finally, a short summary is provided in the last section.

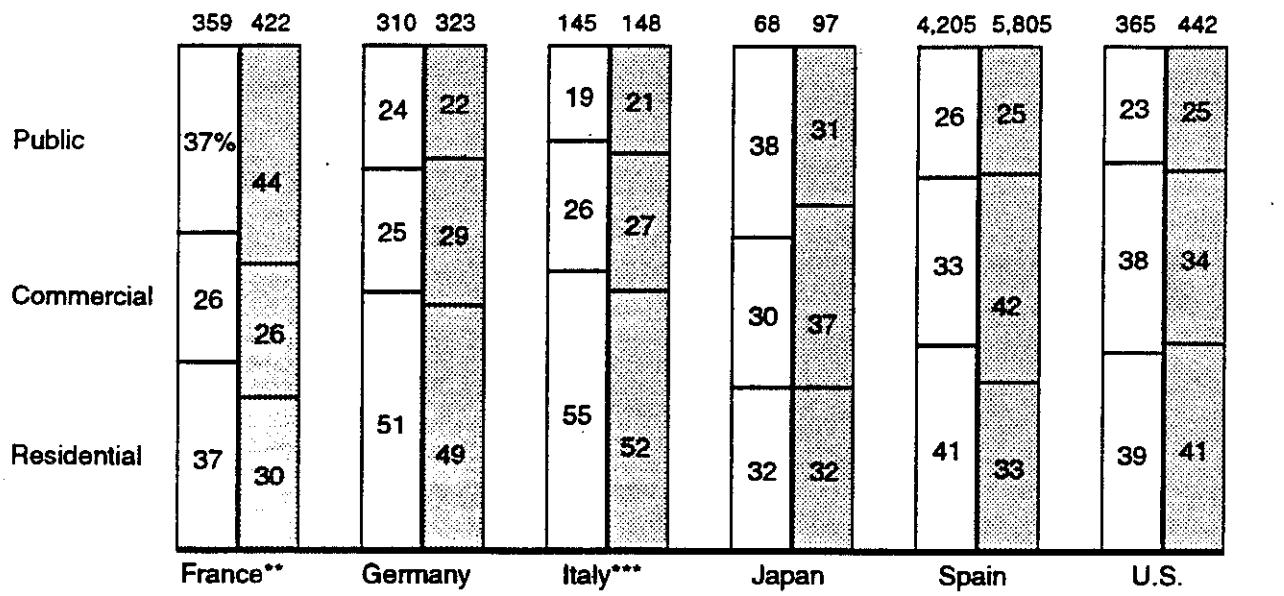
THE CONSTRUCTION INDUSTRY

Construction can be split into three main subsectors: residential, commercial and public construction (including public buildings and infrastructure). Residential construction is usually the largest subsector, accounting for 30 to 50 percent of

Exhibit 1

CONSTRUCTION VOLUME PUT IN PLACE 1980 AND 1990

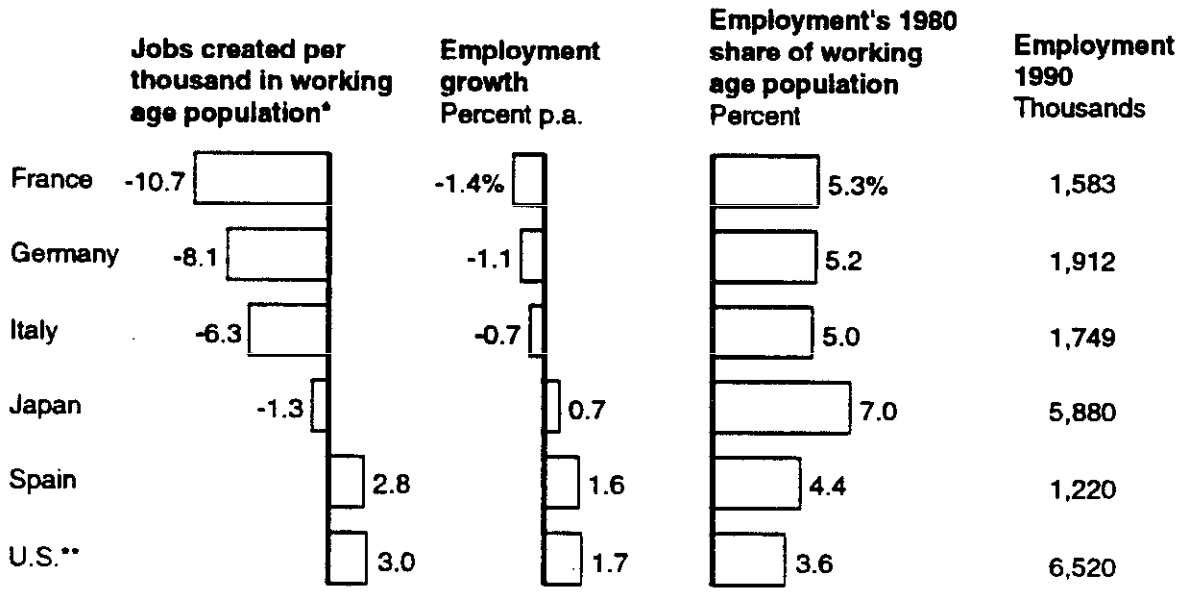
Percent and local currencies*



* Italy and Japan in trillions; all other countries in billions
** 1989 instead of 1990; "production"; excludes output of firms with <10 employees
*** 1981-91
Source: National construction surveys; McKinsey analysis

Exhibit 2

EMPLOYMENT PERFORMANCE IN CONSTRUCTION 1980-90



* Adjusted for change in the working age population
** U.S. figures based on construction census; household data show slightly higher growth rates (2.1%) and higher initial level (4.1%)

Source: Statistical yearbooks; construction surveys; McKinsey analysis

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total construction volume (Exhibit 1). Measuring output in the construction industry in itself represents a nontrivial endeavor. Output measures are based on a number of assumptions and estimates regarding new housing units, prices, renovations and additions as well as the market value of public construction.

The industry structure is characterized by a large number of small companies and self-employed people. Firms with less than 20 employees and the self-employed generally account for over 50 percent of total employment. The industry cooperates through a layered structure of contractors and subcontractors. This allows even relatively large firms to attain a high level of flexibility. In all countries, general contractors are responsible for the overall completion of a project. They are usually specialized in one type of construction, and coordinate the work of smaller subcontractors. In the U.S., a large number of craftsworkers is employed by general building contractors. In European countries and Japan, however, the major crafts (masonry, carpentry, electrical) tend to be subcontracted. Across all countries, employment of contractors specializing in heavy construction and infrastructure is relatively small.

Between 70 and 90 percent of all employees are "construction workers." Construction is largely a low skill industry, considered to be hard work and "low prestige." Construction workers usually join the trade either from school or from farm and mining jobs. Many recruits of individual companies, however, have worked in construction before. Immigrants also represent a significant source of labor. While many construction workers are unskilled laborers and helpers, craftsworkers usually undergo an apprenticeship. This is the case even in the U.S., where the apprenticeship system is, to some extent, controlled by unions. A group of three to five construction workers (usually a mix of laborers and craftsworkers) is assigned to a job. They are supervised by a foreman. A college-trained engineer oversees all the construction groups at a given site and is responsible for quality and deadlines.

EMPLOYMENT PERFORMANCE

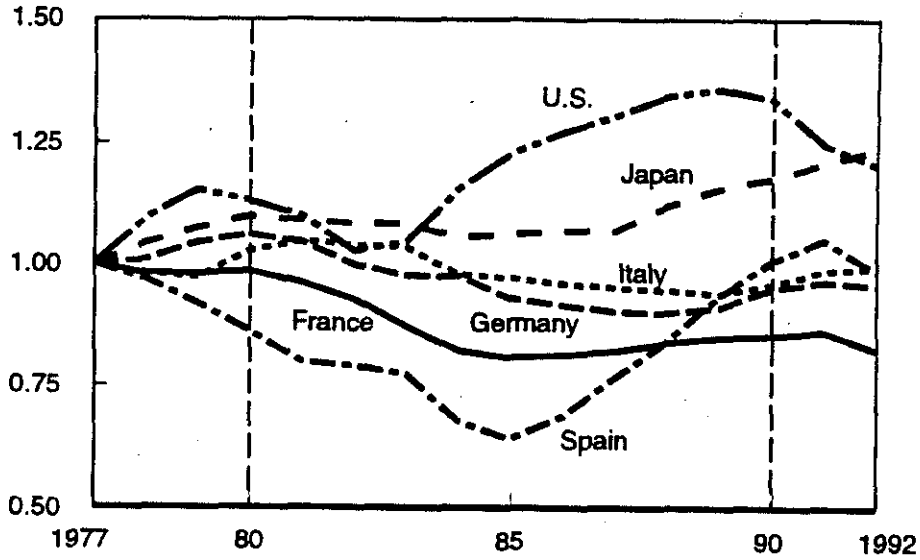
The employment performance varied strongly by country between 1980 and 1990. France, Germany and Italy all lost employment relative to working age population (-10.7, -8.1 and -6.3 jobs per thousand working age population, Exhibit 2). Japan added construction employment in absolute terms but at a rate that was slightly lower than the growth of the working age population. Only Spain and the U.S. were able to create construction jobs in relative terms (+2.8 and +3.0 jobs per thousand working age population). The U.S. is, therefore, the "benchmark" country with the best employment performance.

Our measure of employment performance includes both level and growth effects. Comparing only compound annual growth rates shows a very strong difference

Exhibit 3

EVOLUTION OF TOTAL CONSTRUCTION EMPLOYMENT 1977-92

Index 1977 = 1



Source: National construction surveys; OECD; McKinsey analysis

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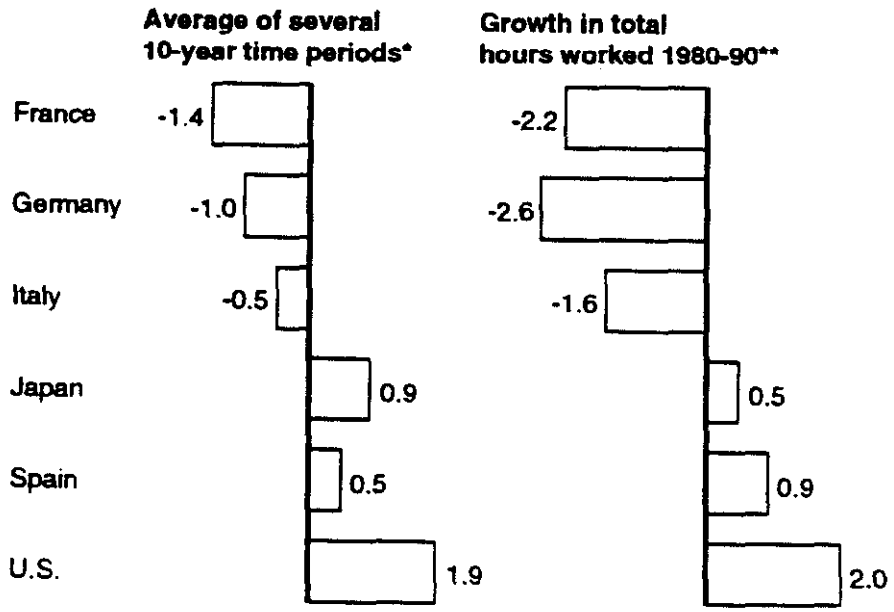
Exhibit 4

ADJUSTED EMPLOYMENT GROWTH RATES

Percent p.a.



* Average percent p.a. of 6 time periods (1977-87, 1978-88, 1979-89, 1980-90, 1981-91, 1982-92)

** Germany, Spain and U.S.: hours of construction workers; France: *salariés*; Italy: nonsupervisory workers; Japan: all employees in firms over 30 employees

Source: National construction surveys; ILO; OECD

between the U.S. on one hand and France, Germany and Italy on the other. Pure growth rates, however, overstate this performance difference. The decline in France, Germany and Italy is not too surprising given their level of construction employment. In 1980, France had 46 percent more construction jobs (adjusted for working age population) than the U.S. By 1990, that level difference of 46 percent had narrowed to 8 percent. We suspect that European countries had high levels of construction output and employment in the 1950s and 1960s due to reconstruction after the war. Since 1970, they experienced a relative decline. The convergence towards U.S. levels, however, does not explain the entire difference in growth rates. Also, Japan and Spain both had very high initial employment levels and continued to create jobs.

The employment performance discussed above refers to the period of 1980 to 1990. In all countries, construction went through a recessionary period in the early 1980s (Exhibit 3). U.S. construction employment peaked in 1979, while some European countries continued to grow until 1981. In the early 1990s there was a similar recession, again somewhat earlier in the U.S. The 10-year period therefore seems to reflect a complete economic cycle relatively well. Furthermore, 1980 and 1990 more or less represent peak years for all six countries. Experimenting with other time periods did not fundamentally affect the patterns of employment performance (Exhibit 4). Spain is the only country where cyclical effects influence our measure of employment performance. It experienced a rapid decline in the early 1980s and a strong surge after 1985. The entry into the EC, the resulting commercial real estate boom and infrastructure investments (e.g., for the Olympics or the Expo) partially explain this.

Adjusting employment for the number of hours worked also does not fundamentally affect the patterns observed (Exhibit 4). In the U.S., annual hours per worker actually increased. In all other countries, especially Germany, hours declined. Differences in employment performance measured in millions of hours are thus somewhat more pronounced than in number of employees. We were unable to adjust for the underground market in construction. Individual studies have tried to estimate its impact, but no clear consensus which would allow time series and cross-country comparisons emerges. In several countries, most notably Germany and Italy but also Japan, the underground economy represents a major factor in construction and could have negatively affected the growth rates of "legal" employment. Even if we have not attempted to quantify its impact, we will point out causal factors that we believe had an impact on underground construction activities.

Taking this employment performance as a starting point, the key issue for the case is to explain why construction employment in the U.S. continued to increase while in other countries it did not. Also, we need to explain why Japan and Spain did not follow the relative employment decline that other European countries experienced over the 1980s.

Exhibit 5

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Causality framework – Construction

Benchmark: U.S.

● Important
○ Secondary
X Undifferentiating

	Overall	France	Germany	Italy	Japan	Spain	U.S.
Capital market							
• More pressure from owners	X	X	X	X	X	X	
• Less government ownership/support	X	X	X	X	X	X	
• Readily available capital	○	○	X	○	○	○	
Labor market							
• Low labor cost	○	○	X	○	X	○	
• High availability/low benefits	○	○	○	○	X	X	
• More flexibility	X	X	X	○	X	X	
Product market							
• Fewer restrictions on output & competition	●	●	●	●	●	○	
• More new business facilitation	X	X	X	X	X	X	
• Rapid demand growth	○	X	○	○	X*	X*	
Industry dynamics/competitive intensity							
• Better trade/FDI performance	X	X	X	X	X	X	
• More price competition/restructuring	X	X	X	X	X	X	
• More innovation/new products	X	X	X	X	X	X	
Higher output growth	●	○	●	●	X*	X*	
Higher productivity growth	X	X	X	X	X	X	
Lower productivity growth	●	●	○	○	●	●	

* Opposite is true with strong influence

Source: McKinsey analysis

CAUSES FOR EMPLOYMENT DIFFERENCES

The general framework used for analyzing causal factors is divided into three levels. At the first level, employment can be explained by the relationship between output and productivity. Differences in output are generally more important for explaining employment differences. We then proceed to explain output and productivity differences by looking at the second (industry dynamics) and third level of causal factors (product, labor and capital markets). In the case of construction, competitive intensity and differences in the industry structure are not important causal factors. However, regulations, demand growth and labor costs play an important role in explaining why the U.S. had a better employment performance than other countries (Exhibit 5).

Output, productivity and employment

Differences in construction employment depend largely on differences in output growth and output levels. The U.S., Japan and Spain all experienced strong growth in real construction volume of 2 to 4 percent per annum (p.a.) (Exhibit 6). Construction output grew in line with overall GDP. In Germany, Italy and France, however, output essentially did not grow, while GDP growth exceeded 2 percent p.a.

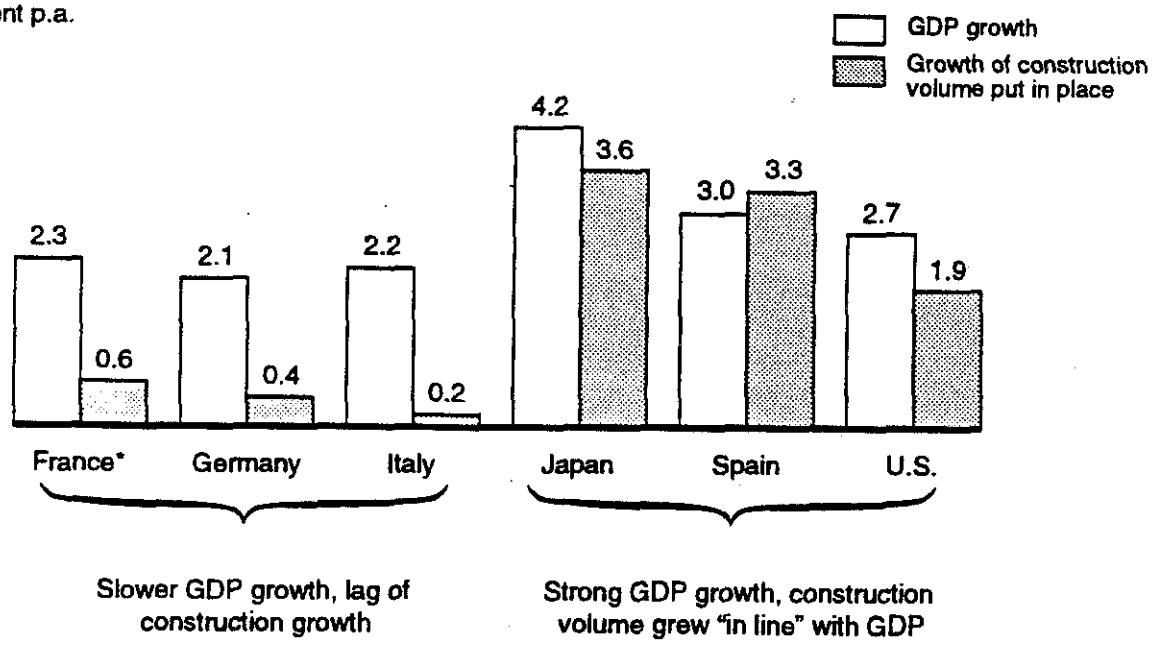
Differences across countries are most pronounced in residential construction. In France, Germany and Italy, output declined in real terms over the 1980s, while in Japan, Spain and the U.S. it grew significantly (Exhibit 7). Output differences in residential construction explain up to two-thirds of the gap between the U.S. and Europe. In some countries, other subsectors of construction are also important for explaining total output growth. Japan's strong growth in commercial construction reflects the bubble economy which only peaked after 1990. By comparison, the peak in commercial real estate in the U.S. took place earlier in the 1980s. Also, France and Spain experienced significant growth in public construction. In many countries, though, public construction is used implicitly to counteract the business cycle. The figures for output include in each category the value of renovations and small additions. In many countries, this represents a significant share of total output (e.g., Spain in residential construction).

In order to understand differences in employment performance, productivity levels and productivity growth rates also have to be taken into account. The official, published figures show the U.S. with the highest value added per hour across all six countries (using construction PPPs) (Exhibit 8). European countries all follow relatively closely at 80 to 90 percent of U.S. levels. Japan, however, has a comparatively low level of productivity. Changes in productivity are important in explaining the employment evolution in France, Japan and Spain. In Japan and Spain, however, faster productivity growth compared to the U.S. is

Exhibit 6

REAL GROWTH OF GDP AND CONSTRUCTION VOLUME 1980-90

Percent p.a.



* France: construction volume growth based on real growth in construction investments 1982-92

Source: OECD National Accounts; Baustatistisches Jahrbuch; national statistical yearbooks and construction surveys; McKinsey analysis

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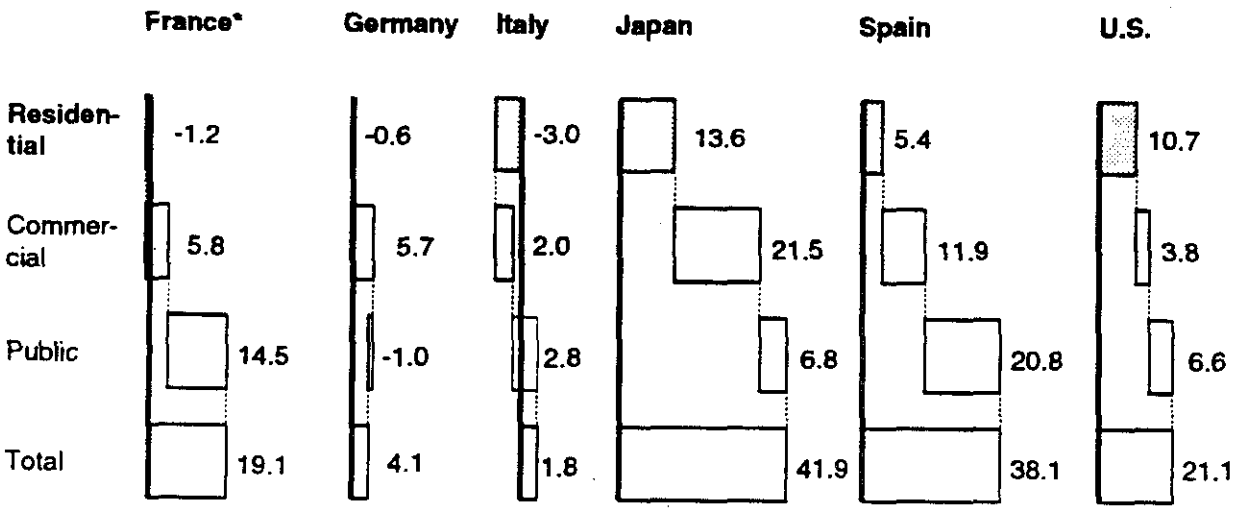
Exhibit 7

REAL GROWTH IN CONSTRUCTION VOLUME BY SUBSECTOR 1980-90

Percent of total 1980 construction volume



* Construction volume put in place by firms with 10 or more employees

Source: Department of Commerce (U.S.); Department of Construction (J); Baustatistisches Jahrbuch (D); ANCE (I); INSEE (F); SEOPAN (E); McKinsey analysis

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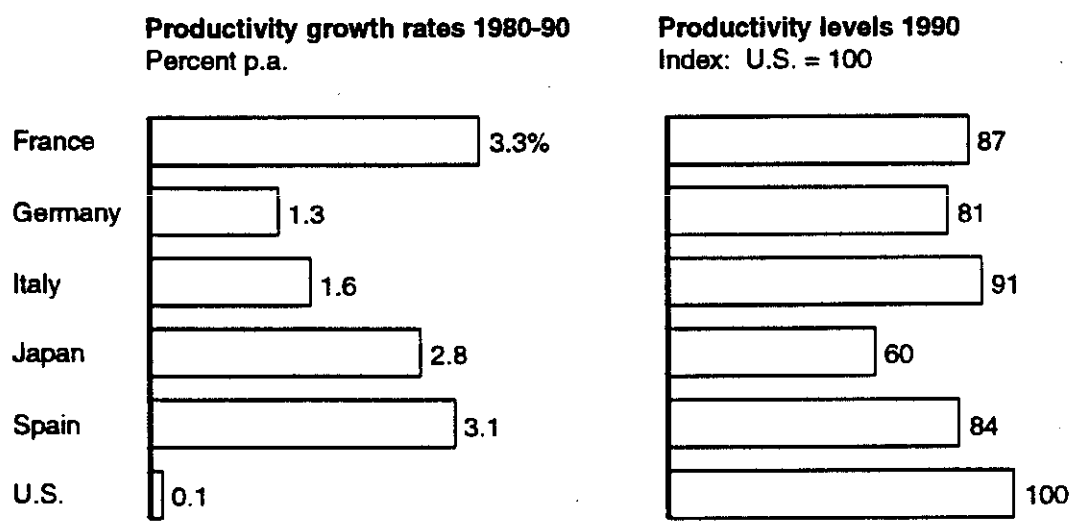
Exhibit 8

PRODUCTIVITY LEVELS AND GROWTH

BASED ON OFFICIAL STATISTICS

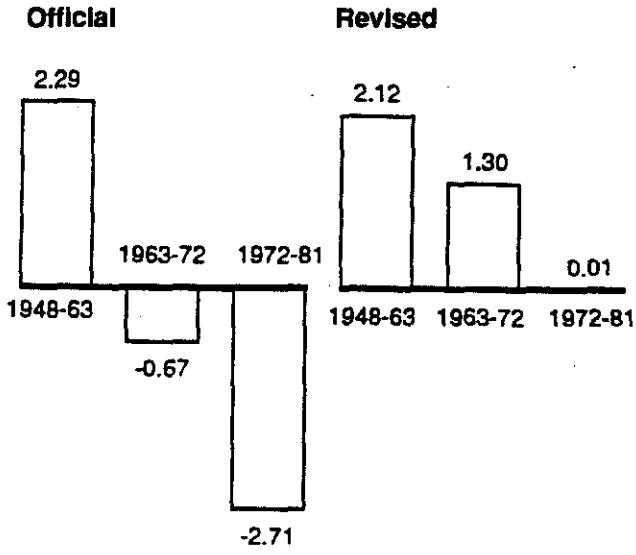


Source: OECD National Accounts; national construction surveys; McKinsey analysis

Exhibit 9

OFFICIAL AND REVISED U.S. CONSTRUCTION PRODUCTIVITY FIGURES

Percent p.a.



Conventional explanations

- Labor quality
- Capital-labor ratio
- Regulations
- Other sources

Measurement problems

- Overestimation of materials inputs
- Underestimation of nominal construction output
- Overdeflation, overstatement of construction prices

Source: Paul Pieper, "The measurement of real investments in structures and the construction productivity decline," 1984; BEA (NIPA Tables); BLS Employment, Hours and Earnings

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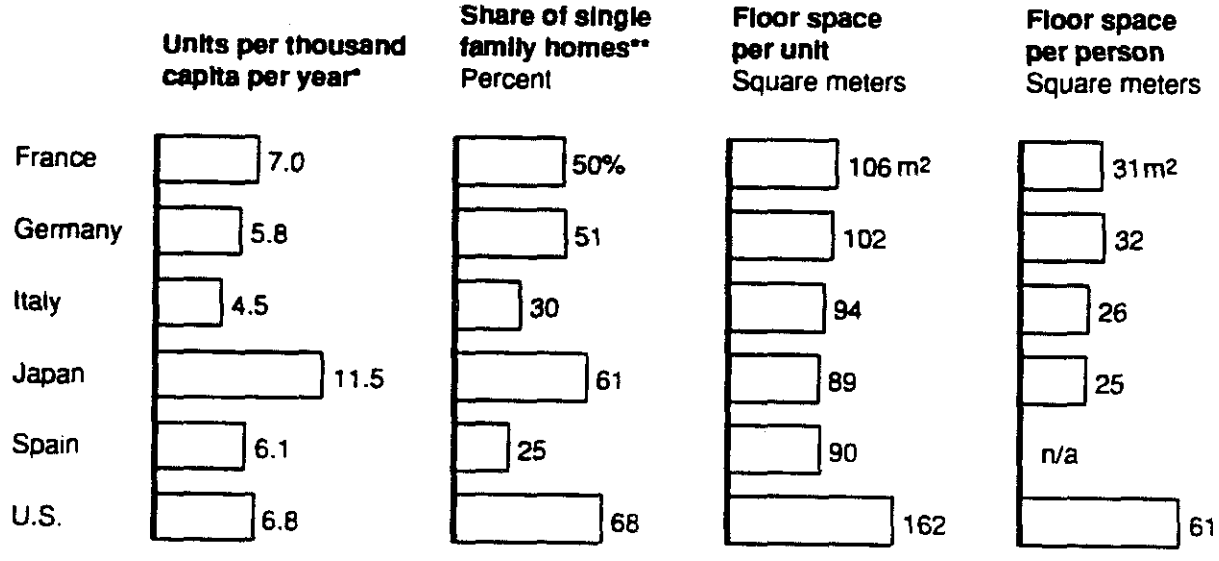
Exhibit 10

NUMBER AND CHARACTERISTICS OF NEW HOUSING UNITS BUILT 1990



* Average of 3 years (1980, 1990, 1992) for France, Italy, Spain; average of 1974-88 for all others

** SFH for U.S. and Japan; 1- and 2-family dwellings for Europe

Source: Statistical yearbooks; EUROCONSTRUCT; Baustatistisches Jahrbuch; Börsch-Supan; McKinsey analysis

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more than offset by even faster output growth. Official figures show no real growth of U.S. productivity in the 1980s. Between 1963 and 1981, productivity even declined in real terms. Several studies have tried to explain this phenomenon and generally attribute it to underestimated nominal outputs and to overdeflation (Exhibit 9). Experts believe that some of these measurement problems have been addressed but that the figures for the 1980s still underestimate U.S. productivity growth by 1.0 to 1.5 percent.

In the following paragraphs, we explain causal factors affecting output growth differences and productivity growth differences separately.

Differences in output growth are largely due to product market regulations

In many other case studies, we found that output, and thus employment, are affected by trade flows, innovation and the nature of competition. In construction, however, industry dynamics were not a strong differentiating factor. Innovation and trade, two causal factors often affecting industry structure, are not important causal factors in construction. Much of the innovation in construction – new materials, prefabricated parts, the use of machinery – has occurred in the 1960s and 1970s. With industry structures being relatively comparable across countries, much of the output growth differentials are explained by barriers in the product, labor and capital markets.

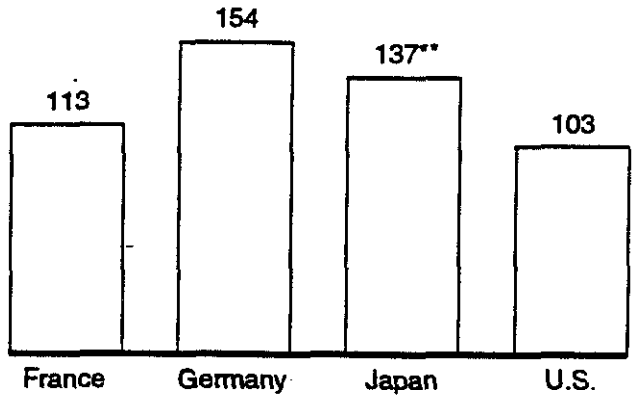
1. Regulations in the product market . Product market barriers have an important influence on construction output in that they influence the price, the number, and the characteristics of housing units being built (Exhibit 10). In the U.S., residential construction grew despite the low number of units per capita. Its output is characterized by a high share of single family homes (SFH), which further increased over the decade from 65 to 75 percent. Consequently, the U.S. has by far the highest surface per unit and the highest surface per person. This high value added leads to high employment. Output growth is aided by relatively low and declining real prices for construction (Exhibits 11 and 12). Germany, Japan (and to some extent Italy), on the other hand, have relatively high construction prices, even if comparisons are made using GDP PPPs. Germany and Japan were affected more than other countries since their prices continued to increase during the 1980s. This resulted in a low (and often decreasing) number of housing units being built, and in a lower share of SFH.

How can we explain these differences in prices and numbers of housing units? Given the strong differences in land prices and materials costs as well as their relative importance in total construction costs, we attribute a strong weight to regulations such as zoning laws, building codes, tenant protection and tax rules. Exogenous demand factors, on the other hand, seemed to be less important in

Exhibit 11

CONSTRUCTION COSTS* FOR SINGLE FAMILY HOMES 1991

U.S. $ thousands, using OECD GDP PPPs



* Excluding land costs; the differences result from different average houses as well as from different relative prices

** Excluding land costs; if exchange rates are used, Japanese construction costs represent U.S. $214,000

Source: Statistisches Jahrbuch; INSEE; Japan Housing Center; Housing Backgrounder; OECD; McKinsey analysis

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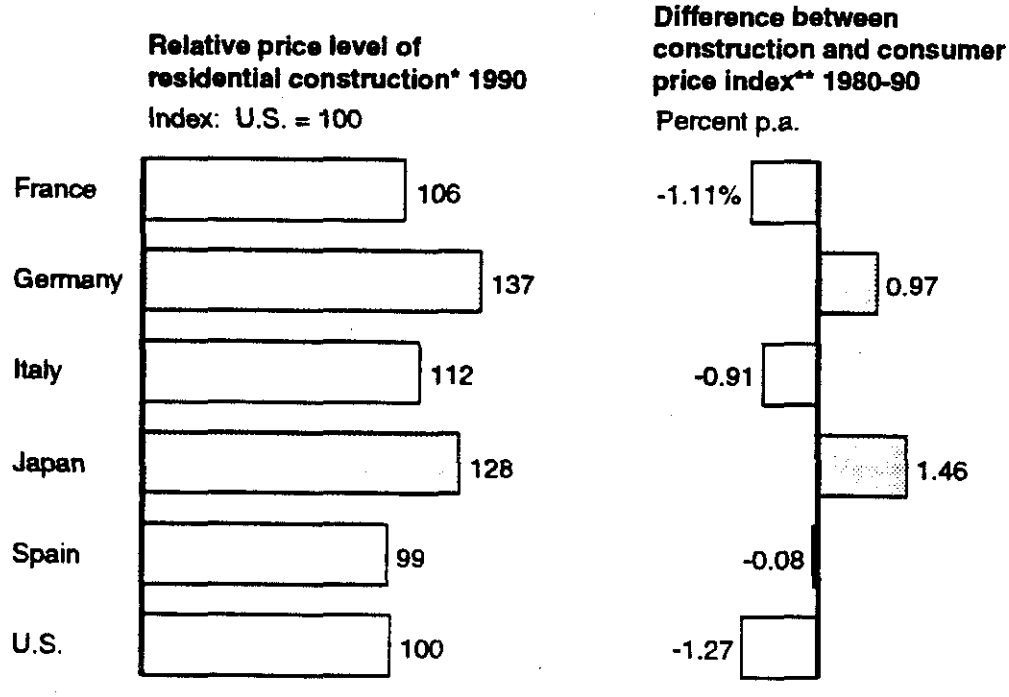
Exhibit 12

CONSTRUCTION PRICES



* Residential construction PPP/GDP PPP

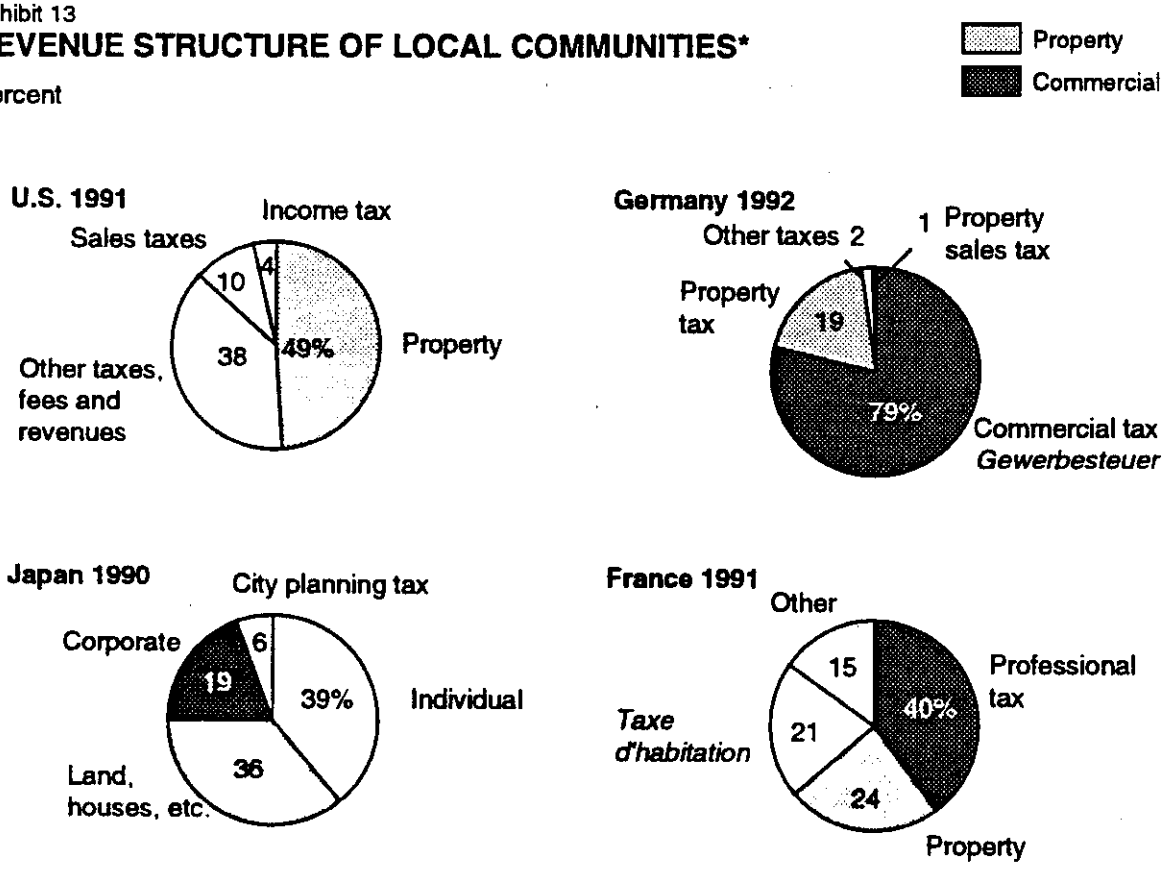
** Positive figure: construction prices rose faster than overall consumer price index

Source: OECD; INSEE; Baustatistisches Jahrbuch; Gabetti; Japanese statistical yearbook; SEOPAN; Department of Commerce; McKinsey analysis

Exhibit 13

REVENUE STRUCTURE OF LOCAL COMMUNITIES*

Percent



* Excluding transfer of payments from regional and central governments

Source: Statistical yearbooks 1993 (U.S., Germany, Japan); statistical yearbooks 1991-92 (France)

explaining output growth differences. Household growth rates, for example, were relatively similar across countries. We start this overview of product market barriers by discussing the regulatory environment grouped into three categories: zoning laws, building codes, as well as tenant protection and tax rules.

¶ **Zoning laws.** All countries analyzed have zoning laws governing the use of land for residential, commercial, industrial or agricultural purposes. Individual zoning plans of local communities or districts are generally based on a law setting guidelines at the national level. These national laws as well as the resulting local zoning plans usually date back to the late 1960s and the 1970s. Zoning laws have been introduced due to concerns about agriculture, the environment and population density. The goal of at least partial independence in agricultural production leads to the maintenance of farmland at the expense of other uses. Farmers are generally strong defenders of this process. In recent years, concerns about the environment in many countries have also led to a strengthening of zoning laws.

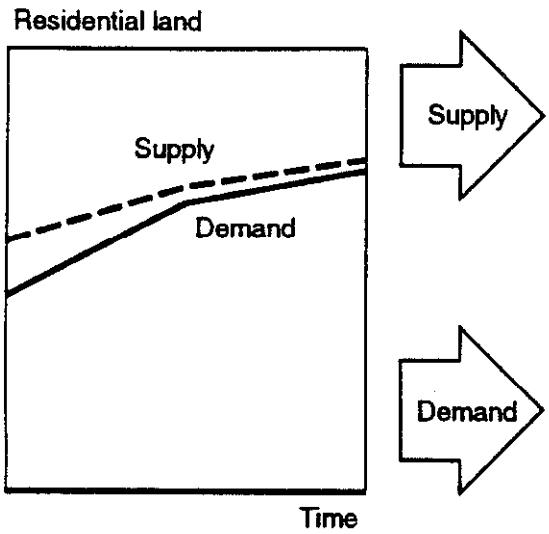
The approval process is governed in most countries by a commission of elected local officials. In the U.S., public hearings are often required before zoning changes are approved. In Germany, town officials review zoning applications, which then have to be approved by the *Land*. A number of extensive legal recourse opportunities are used frequently, lengthening the approval process. In France, the mayor usually decides on minor zoning changes. However, local parliaments, environmental organizations and chambers of commerce provide input in the establishment of *Plans d'Occupation des Sols*. Between 1975 and 1991, French land prices appreciated by 45 percent in real terms, even in small towns. In Japan, farmers have a strong influence on the rezoning of farmland through commissions at the local level. As a result, even in the five central Tokyo prefectures (comparable to the New York metropolitan area comprising seven counties), around 300 square kilometers of land remains zoned for agricultural use. Vested interests of farmers, existing homeowners and town officials thus play an important role in explaining restrictive zoning laws.

The influence of local authorities in zoning strongly reflects the revenue structure of municipalities in different countries. In Germany, communities have an interest to zone land as commercial rather than residential, since commercial taxes (*Gewerbesteuern*) represent 80 percent of direct revenues (Exhibit 13). That interest remains even if part of that revenue then gets transferred to state and federal authorities in exchange for income based revenues. In the U.S., almost half the revenue of local communities stems from property taxes, which are to a large extent levied on residential property. Revenue structures in France and Japan seem to be more broadly based.

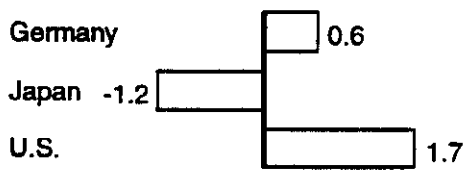
Exhibit 14

IMPACT OF ZONING LAWS

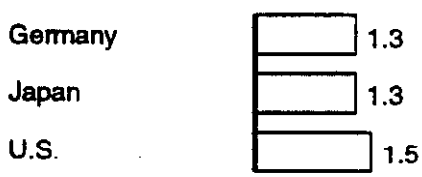
CONCEPTUAL



Growth of residential area*
Percent p.a.



Household growth 1980-90
Percent p.a.



* Germany: 1979-89, based on Niedersachsen and Nordrhein-Westfalen; Japan: 1980-89; U.S.: 1982-87, total urban and built-up area

Source: Statistical yearbooks; McKinsey analysis

As a result of all of these factors, the degree of severity of the zoning laws varies strongly, with Germany and Japan having the toughest laws. In Germany, it can take up to 10 years to get land rezoned. Individual rezoning is almost impossible; changes only happen if the town supports an overall plan for a larger development. Zoning laws in France, Italy and Spain seem to be somewhat less restrictive, especially in smaller towns. In the U.S., courts tend to uphold the rights of property owners to do what they deem adequate.

Restrictive zoning laws affect growth rates of residential construction. They result in high land prices by suppressing supply. Zoned lots are increasingly used up and new ones do not come on the market. At the same time, demand for land continues to increase due to rising population and income levels (Exhibit 14). Also, zoning laws result in higher construction costs, again rising prices and suppressing output. With smaller lots, construction becomes more expensive, e.g., due to fire protection, noise reduction or basement space. Thus, the mere *existence* of zoning laws limits the rate of expansion in residential construction. In addition, interviews and anecdotal evidence also suggest that in all countries, but especially in Europe, the stringency of zoning laws has *increased* during the 1980s. This happened not through new laws but through a stricter application of existing rules.

¶ **Building codes and norms.** Building codes also have an adverse impact on construction volume, increasing both material and labor costs. Some experts estimate that up to one quarter of construction costs in Europe are due to specific norms on structural soundness, heating efficiency, noise reduction and exterior appearance. By raising construction costs, output and employment in construction are suppressed: some people cannot afford to build houses and stay in apartments, others build smaller houses than they otherwise would.

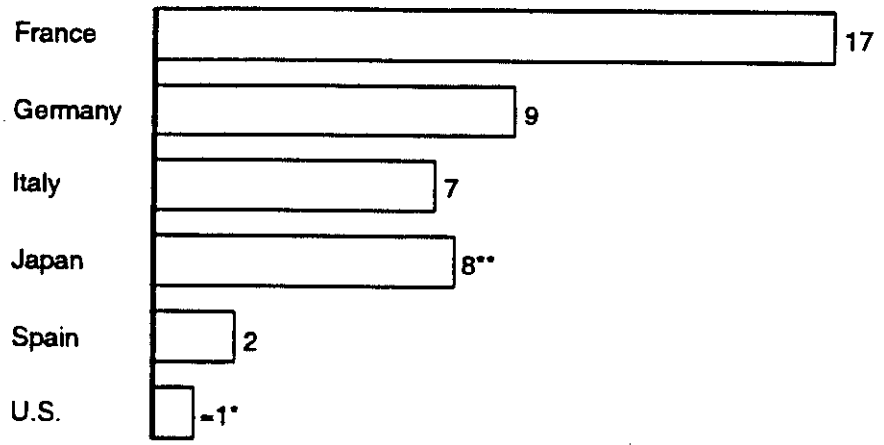
Building codes are especially stringent in Germany and Japan. While the U.S. has moved to performance-based codes in the late 1970s, Europe and Japan have maintained their largely materials-based codes. In Germany, the DIN Institute issues basic norms for material standards. In addition, over 1,000 codes regulate specific requirements in residential construction. These codes are usually specific to each *Land*. The commissions issuing norms include builders, architects, housing authorities as well as suppliers of materials, again often representing vested interests. In Japan, a General Building Standards law, issued by the Ministry of Construction, regulates residential construction in much detail. In addition, the Japanese Industrial Standard (JIS) and Japanese Agricultural Standard (JAS) establish detailed requirements for materials used, which often result in strong restrictions against imports. Recently, standards have been relaxed to some extent and Japan is beginning to accept foreign standards.

Exhibit 15

SOCIAL HOUSING 1988-90

Share of public and nonprofit housing in total housing stock

Percent



* Excluding THA/VA subsidized mortgages

** Excluding employer provided (about 4%)

Source: Housing Finance International, March 1993; Noguchi & Poterba

¶ **Tenant protection, housing support and tax rules.** A number of government programs directly affect housing markets: public housing, housing allowance programs, tenants' protection legislation, and tax rules. Some of them have a positive impact on output, but most restrict construction volumes.

All six countries analyzed have **social housing** programs, supporting the construction of units for low income families. These programs are most significant in Europe, where public and nonprofit housing can represent around 10 percent of total housing stock (Exhibit 15). Over the 1980s, however, this share has been declining somewhat. While in France, the government directly builds and owns *HLM* housing, German social housing is provided by private, nonprofit organization operating under rate-of-return constraints. In the U.S., public housing is much less significant. Overall, we do not see any evidence that social housing programs have resulted in higher output and employment in residential construction.

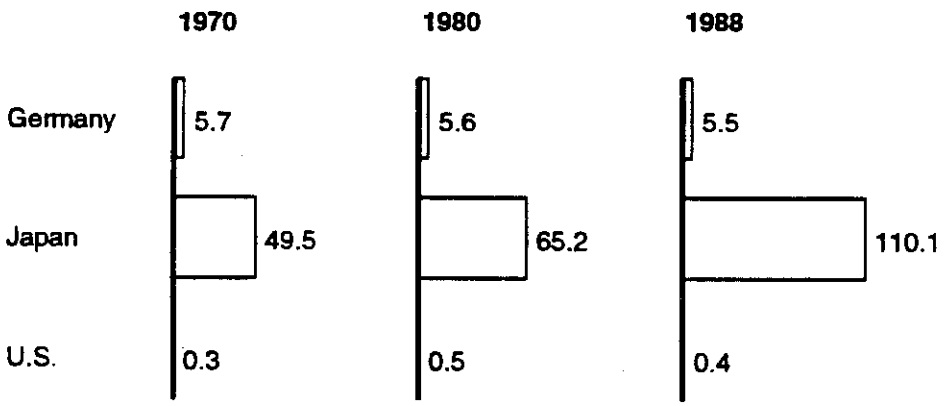
Another area in which governments influence the rental housing market is the **tenant protection laws**. Significant rent control laws or tenant protection regulations exist in Japan, Italy, Spain, France and Germany. The Italian law *Equo Canone* sets rents by apartment category and strongly limited rent increases. It was liberalized only in 1993 and represents one of the important factors for holding back construction activities during the 1980s. In Spain, rents were strictly controlled until 1985. The *Ley Boyer* then introduced a liberalization for new contracts, which encouraged new construction. German regulations strongly restrict the possibilities of evicting renters and limiting rent increases to "average rent increases in the community." In Japan, both the "Land Lease Law" as well as the "Building Lease Law" are strongly in favor of tenants and are considered to have adversely affected housing output. In the U.S., rent control laws are limited to some large cities. The evidence of Europe suggests that rent controls had a negative impact on residential construction output: potential owners of large rental properties do not invest because the strict regulations lower their return on investment. Some U.S. studies , however, question this impact. They found that rent discounts (differences between spot market rents and rents of sitting tenants) are not significantly lower in SMSAs with strong tenant protection.

Many countries encourage construction by allowing **tax deductions** for housing-related savings and for mortgage payments of home owners. In the U.S., the accelerated depreciation schedule for rental housing was abolished in the 1986 tax reform and rental property is generally subject to capital gains tax. Generous roll over provisions essentially eliminate capital gains taxes for owner-occupied units. In addition, mortgages have been made more attractive by the 1986 tax law changes reducing the deductibility of other consumer loan interest payments. The

Exhibit 16

LAND PRICES

Value per arable km²/GNP per capita



Source: Börsch-Supan

combination of these tax rules represent a significant subsidy to homeowners ($3,200 for a median income family with a $200,000 house). They have encouraged a further rise in the construction of single family homes.

In Japan, property, inheritance and capital gains taxes are all strongly skewed in favor of holding personal assets in the form of real estate. Due to low real estate assessments and low inheritance taxes for land, real estate represents 60 percent of taxable bequests in Japan versus 25 percent for the U.S. Furthermore, Japan has very high transaction taxes on real estate sales. Japan's rules thus encourage "holding real estate assets" more than "building houses." This again lowers the supply of land for construction and results in a more illiquid market.

Germany provides substantial tax credits to families with children who build new owner-occupied homes. Also, temporary tax allowances were introduced at several instances during the 1980s to encourage housing growth. In comparison to other countries, however, tax rules are less favorable towards construction of single family homes.

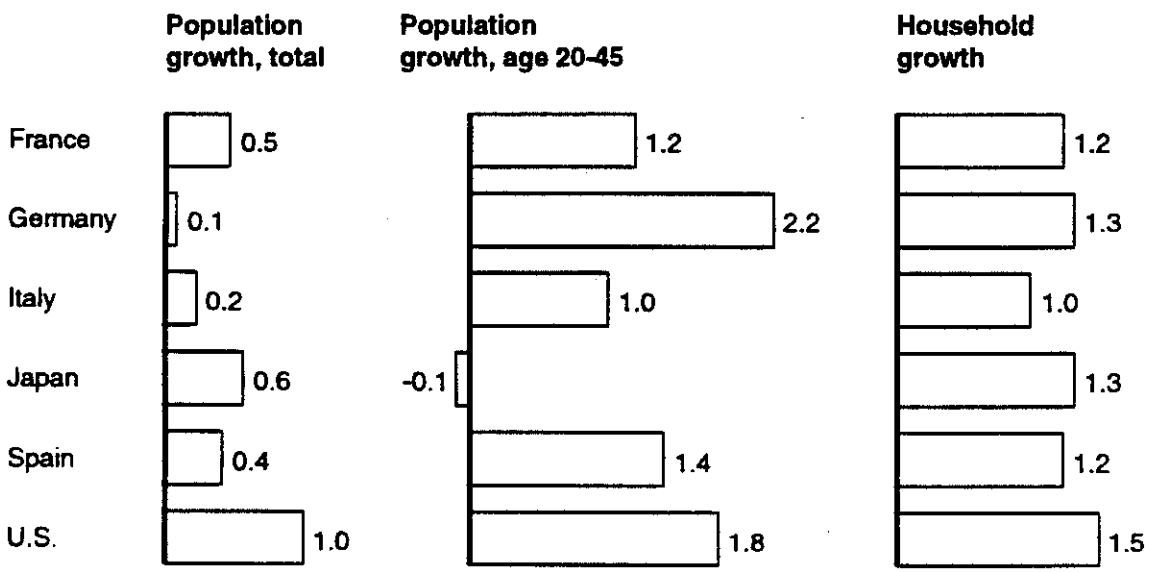
It is difficult to evaluate the relative importance of these factors. One proxy for understanding this is to look at the cost structure of single family homes. Land costs represent approximately 22 percent of the average new SFH in the U.S., but more than 30 percent in Europe and over 40 percent in Japan, even in smaller towns. Aggregate figures confirm that land is significantly more expensive in Japan and Germany than in the U.S. (Exhibit 16). Zoning laws and building codes also affect material costs, which represent another 20 to 25 percent of total housing costs. Overall, we therefore believe that a large part of the price differences and of the smaller share of SFHs is due to the regulatory environment. We conclude that zoning laws, building codes and tax rules affecting real estate assets are important causal factors for explaining output differences.

2. Exogenous demand factors. If we only looked at regulations, we would conclude that the U.S. had higher output growth than all the other countries. This is not true, however; Japan and Spain both grew faster in construction volume than the U.S. between 1980 and 1990 despite more restrictive regulations. Other causal factors therefore need to explain this apparent paradox. The second product market factor affecting output is exogenous demand. Population and household growth, land scarcity, income and savings, mobility, and government demand for infrastructure also affect construction output and employment in construction. Overall, however, we observe that either differences across countries are relatively small (e.g., in household growth) or that some of the factors offset each other. Therefore, we attribute a lower weight to these demand factors than to the regulatory environment. We do find, however, that they are important in explaining Japan and Spain's strong output performance.

Exhibit 17

GROWTH IN POPULATION AND NUMBER OF HOUSEHOLDS 1980-90

Percent p.a.



Source: Statistical yearbooks; McKinsey analysis

¶ **Population, households and land.** The U.S. population grew faster than that of most European countries during the 1980s (Exhibit 17). This is especially true if one looks at the population between 20 and 45 years of age, which is when many people buy homes or rent apartments for the first time. Thus the U.S. had an advantage in terms of higher population growth and a baby boom generation entering the housing market. Ultimately, however, it is the number of households that defines demand for housing. The growth in number of households does not necessarily reflect population growth. The number of households increased in a very similar way across all six countries. Overall, differences in household growth numbers are too small to explain much of the differences in construction output. However, since one can question whether household growth is a completely exogenous causal factor (the high cost of housing may actually restrain the formation of households), it is difficult to evaluate the relative importance of demographic factors on demand for construction.

Many people attribute differences in construction output to an absolute scarcity of land. However, as we have seen, high land prices are, to a significant degree, influenced by zoning laws, not just by absolute scarcity. Around many European cities there are significant areas of agricultural land available. In Nordrhein-Westfalen, for example, the most populous German state, residential areas represent 5.5 percent of the total surface, while agriculture accounts for over 53 percent. Zoning laws prevent the use of these properties for residential purposes. For this reason, we do not believe that absolute land scarcity was a primary factor explaining output and employment differences.

¶ **Income and savings.** Average net U.S. household incomes are 16 percent higher than those of Japan and 25 percent higher than those of Germany. This higher absolute level of household income does not result in a lower share of housing expenditures. Americans spend on average 20 percent of their income on housing, compared to 21 percent in Germany and 19 percent in Japan. These figures indicate that housing is not a good where increasing wealth results in a lower relative consumption. The combination of higher household incomes and similar shares of income spent on housing indicates that the U.S. construction industry benefited at least to some extent from the higher average wealth.

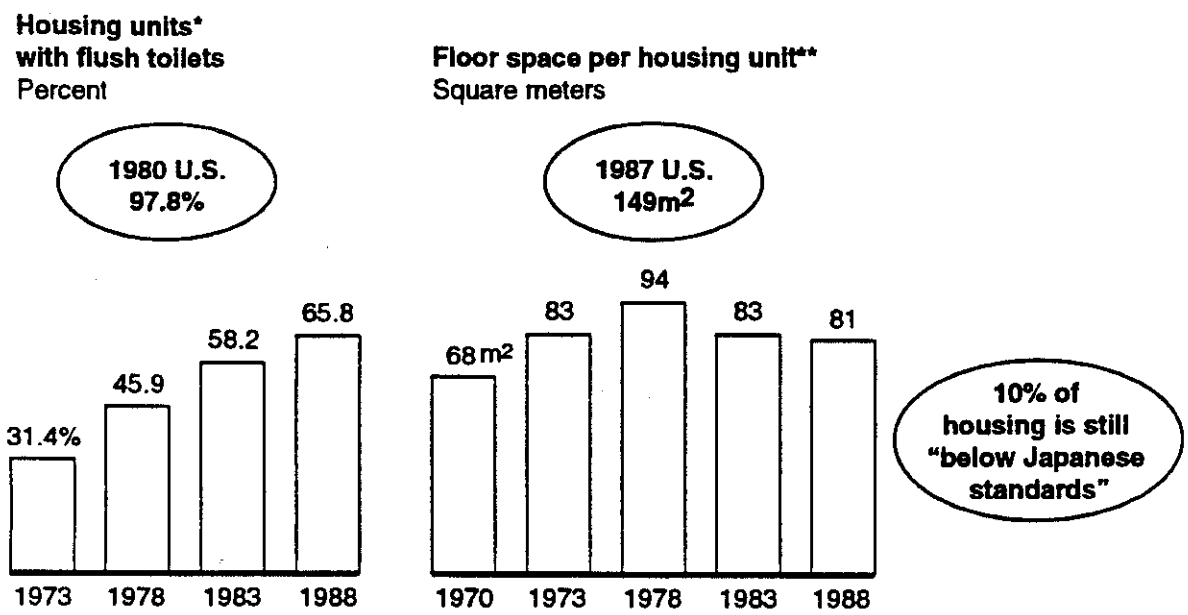
Between 1980 and 1990, construction in Japan has been aided by high aggregate savings rates (20.3 percent in 1990, compared to 12.6 percent in Germany and 2.2 percent in the U.S.). We believe that this is an important factor in explaining Japan's strong output growth, partially offsetting restrictive zoning regulations. The low savings rates were offset in the U.S. by the availability of mortgages.

¶ **Mobility.** There are significant differences in mobility rates across countries. In the U.S., 17.6 percent of all households move within a

Exhibit 18

INCREASE IN HOUSING QUALITY IN JAPAN

EXAMPLES



* Stock

** New units

Source: Housing statistical survey; statistical yearbooks; Börsch-Supan; McKinsey analysis

given 12 month period, while the corresponding figure is 6.6 percent in Germany and 9.6 percent in Japan. The high U.S. mobility rates again represent a positive factor for output growth in construction; the market becomes more liquid and people build houses with a shorter time perspective. Each year, the U.S. destroys a much larger number of houses than any other country. The relationship between new housing units built and units destroyed is approximately 2 to 1 in the U.S., while it is often 6 to 1 in other countries.

- **Government demand.** Governments not only affect construction through regulations, they also act as direct customers, commissioning public buildings (schools, hospitals and administrative offices) and infrastructure projects (roads, railways, dams, ports and sewage systems). In many countries, especially Japan, governments explicitly or implicitly time their demand to compensate for the strongly cyclical nature of residential and commercial construction. Socialist governments in France and Spain increased spending in public construction when private demand slumped during the early 1980s. By using construction as an economic policy tool, they actually may have increased the overall volume. Some of the growth in Japan and Spain was due to a "catching up" in public infrastructure, given their increasing national wealth. Spain's road network, for example, expanded by 40 percent during the 1980s. To a large extent, however, the public construction volume is simply determined by political decision making processes. Today, budgetary constraints significantly restrict the degrees of freedom of the French and Spanish authorities.

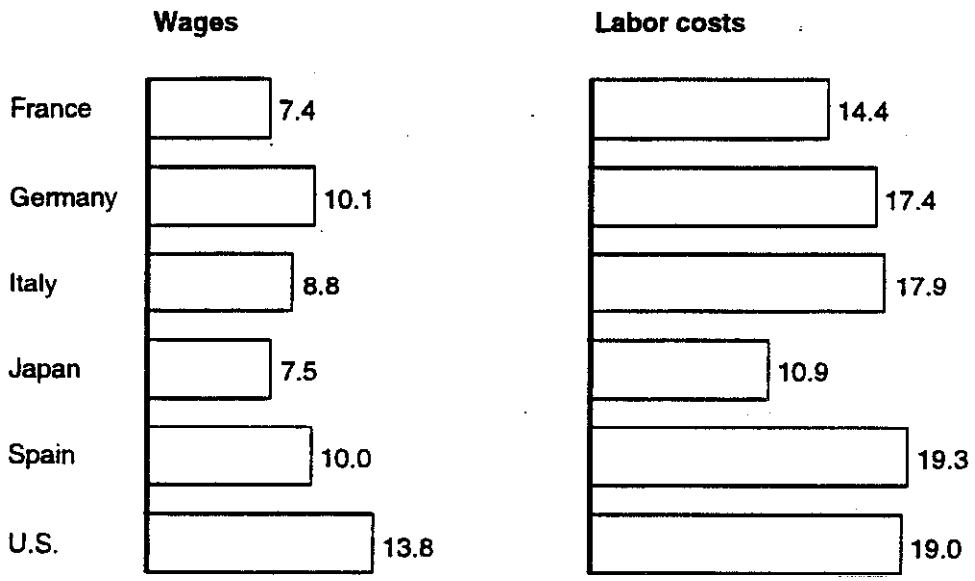
Japan has, by far, the highest number of new housing units built per capita per year and grew in construction employment. Yet it also has some of the strictest zoning laws, building codes and rent controls. Several reasons explain this apparent phenomenon. After World War II, Japan had a significant housing deficit. Even in 1988, Japan had only 42 housing units for 100 people over 20 years of age, compared with 51 in the U.S. The dramatic housing deficit was significantly reduced, partially by building apartments. Japan also had a very low quality of housing compared to other leading nations in terms of space, facilities and amenities. Many units built in the 1950s and 1960s have floor space of less than 40 square meters. In the last 30 years, the average size and quality of the housing stock has increased (Exhibit 18) but is still significantly below U.S. levels. The new SFHs being built today have more floor space on average than those in many European countries. Also, we have seen that savings rates and favorable tax rules encouraged residential construction despite tough zoning laws. In addition, the commercial real estate boom and the upgrading of roads, schools and sewage systems also were instrumental in increasing overall construction output and employment.

Exhibit 19

HOURLY EARNINGS AND TOTAL HOURLY LABOR COSTS 1990

ESTIMATE

U.S. $, using GDP PPPs



Source: National statistics; OECD; Baustatistisches Jahrbuch for nonwage costs; McKinsey analysis

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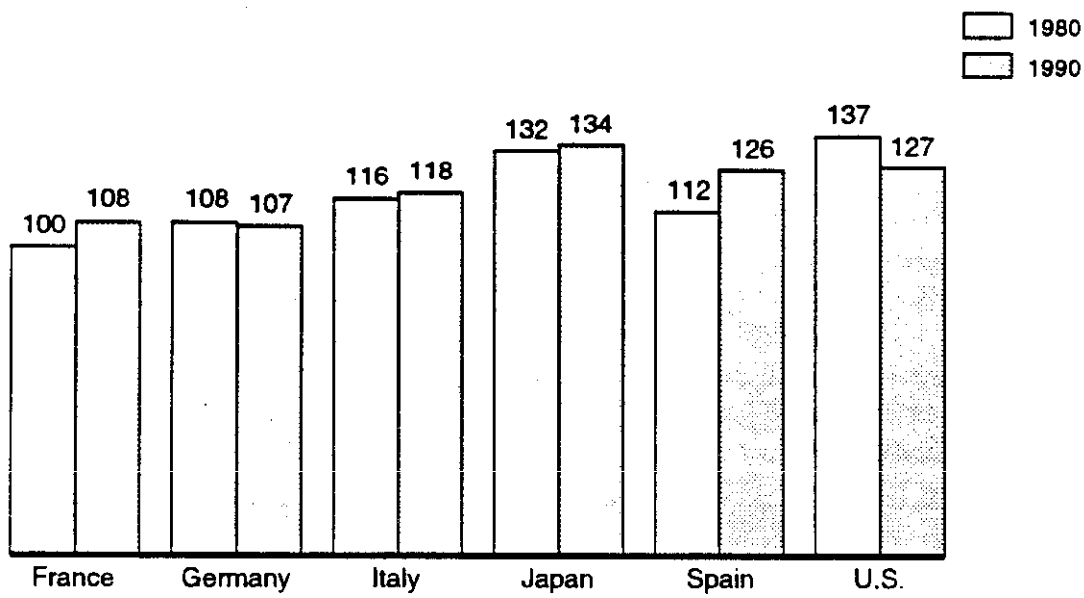
Exhibit 20

CONSTRUCTION WAGES RELATIVE TO AVERAGE MANUFACTURING WAGES

Percent



Source: BLS; national construction surveys; statistical yearbooks; McKinsey analysis

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3. **Labor market barriers.** Labor costs represent between a quarter and a third of total construction costs. This is less than the combined share of land and material, but still significant. High or increasing labor costs, thus, also play a role in explaining differences in output growth. Total labor costs are relatively similar across countries (Exhibit 19), but only due to high social costs in Europe. France is somewhat lower than Germany and Italy, while Spain's labor costs are surprisingly high. Japan, on the other hand, has very low labor costs. In this largely domestic sector, it is most relevant to compare construction wages to average wage levels. Relative wages affect the attractiveness of the sector to employees and the total demand for construction in the economy. Exhibit 20 shows that despite the low skills required, construction is not really a low wage sector. Construction workers want to be compensated for hard work. The three countries that experienced the fastest growth of construction output (Japan, Spain and the U.S.) were only able to achieve this growth by paying construction workers well. France, Germany and Italy, on the other hand, only pay slightly above the average of a manufacturing worker. Also, relative wages increased significantly in France and Spain. In these countries, the increase in labor costs may have negatively affected prices and thus output in construction. In Germany, Italy and Japan, however, relative labor costs hardly changed and, therefore, were not an important differentiating factor. In the U.S., they even declined significantly in relative terms.

We observed labor market barriers affecting construction employment in three areas: institutional factors affecting labor costs (e.g., unionization, social costs, minimum wages), factors affecting availability (e.g., benefit systems), and flexibility.

- **Labor costs**. Several institutional factors resulted in significant labor cost increases, notably in France and Spain. These include unions, national contracts, high social costs and national minimum wages. All of them result in higher wages, shorter work hours and job security. This increases construction costs and may negatively affect prices and output. Given the relatively small fraction that labor costs represent in total housing costs, and given the relative flexibility of unions in the construction industry, we believe, however, that these factors are secondary causal factors for explaining output growth differences.

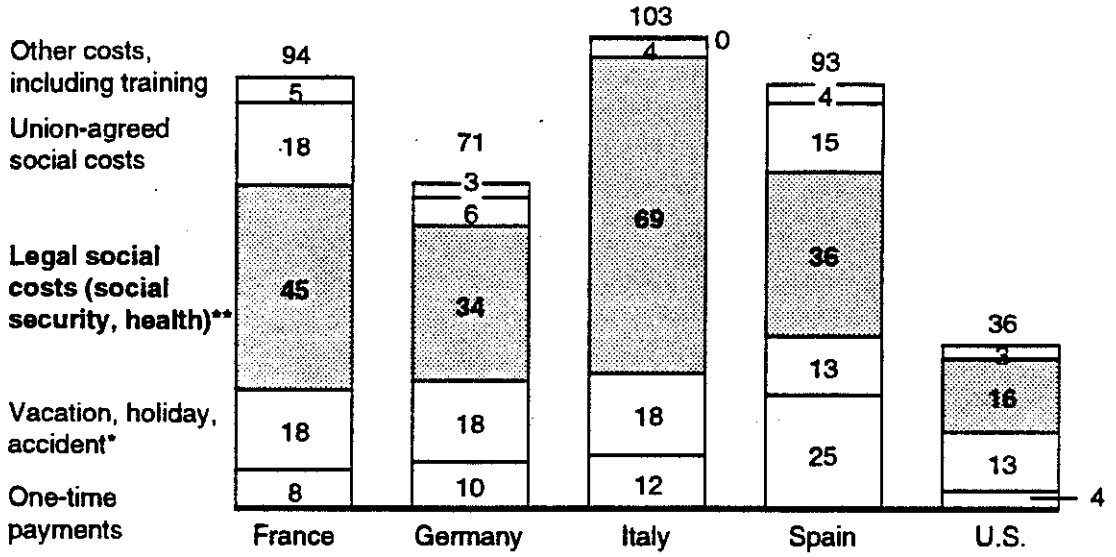
  In France, Spain and Italy, **collective bargaining** agreements apply to the entire construction sector by law or by decree. Also, unions exert strong power both at the company and at the national level. In France, two main unions negotiate collective contracts for the whole sector. These contracts include sector minimum wages. Some estimates put the share of employees at or close to this minimum wage at 80 percent, suggesting that they represent a binding constraint. French unions also enjoy relatively strong support among employees. In Germany, unions in construction seem to be less powerful despite national bargaining agreements and codetermination. Unionization rates are not much

Exhibit 21

SHARE OF SOCIAL COSTS IN CONSTRUCTION 1988

ESTIMATES

Percent of direct wages for hours worked



* Includes time lost due to accidents but not sickness

** Including unemployment benefits, family allowances, etc.

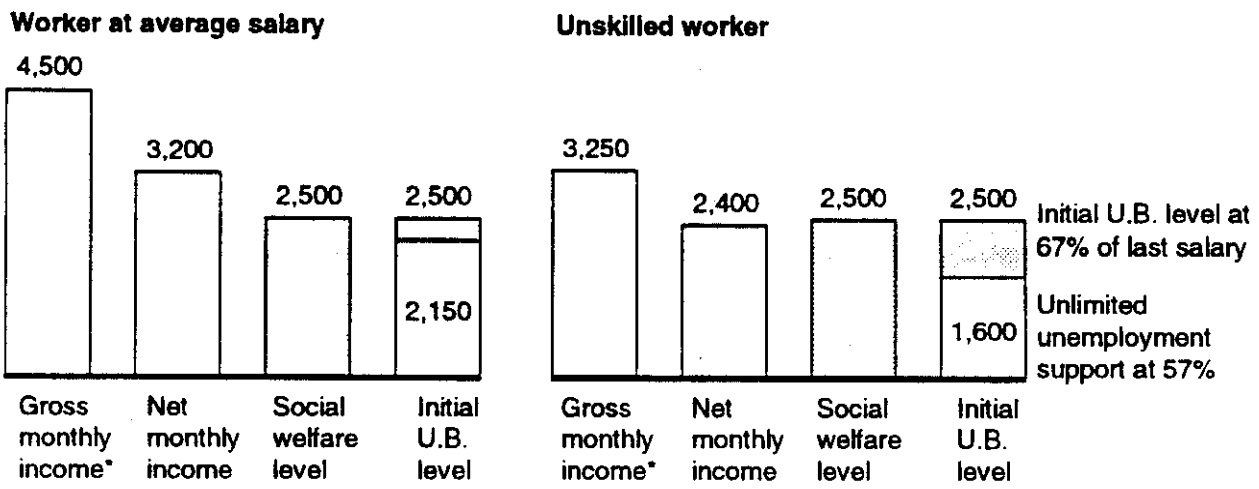
Source: EUROSTAT; Baustatistisches Jahrbuch, 1993

Exhibit 22

MONTHLY INCOME AND BENEFIT LEVELS IN GERMANY 1992

EXAMPLE

DM



* Assuming 41 hours/week (including overtime), full pay for holidays, year-end bonus of 1 monthly salary, social security, pension fund and U.B. deductions of 17.5%; taxes and welfare payments according to a married couple with 2 children

Source: Baustatistisches Jahrbuch; Bundesanstalt für Arbeit; ISG; interviews; McKinsey analysis

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higher than in the U.S. and construction firms often pay above union wages because it is too difficult to find people. In Japan and in the U.S., unions also play a minor role in wage determinations. While unions were traditionally strong in the U.S., the demand shifts towards right-to-work states, employer friendly legislation and a strong pressure to control costs resulted in declining union power, especially in residential construction.

Social costs play a significant role in introducing a wedge between take-home pay and actual labor cost to the employer. This factor is especially important in France, Italy and Spain, where social costs represent between 90 to 100 percent of direct wages for hours worked (Exhibit 21). This wedge, combined with income and value-added taxes, may have resulted in underground economies, which play an important role in construction, e.g., in Germany and Italy. Although there are no reliable data available, many experts believe that the low growth of construction employment in these two countries is, to some extent, due to a shift of construction into the underground market. The tax wedge also limits the ability of European firms to pay higher wages in order to attract more labor. Implicitly, they must compete with lower underground wages.

Despite the fact that construction is a relatively low skill employment sector, its wages usually exceed the **national minimum wage**. In the U.S., average wages in construction are $13.75, substantially higher than the minimum wage of $4.25. In France, the gap is narrower but still significant.

Employee mobility within Europe limits the ability of national unions to demand excessive wages. Construction has always been a sector using a high degree of immigrant labor. In recent years, guest workers from Europe have increasingly replaced Turkish, Italian and Yugoslav immigrants. Even within the EC, however, large wage differences exist. German firms increasingly use British masons through international brokers, for example. Their total labor costs, including room and board, are below those of Germans. Given the lower wages and differences in social costs (for certain types of foreign workers), German unions have pushed for strong limits on the number of immigrants legally allowed into the country.

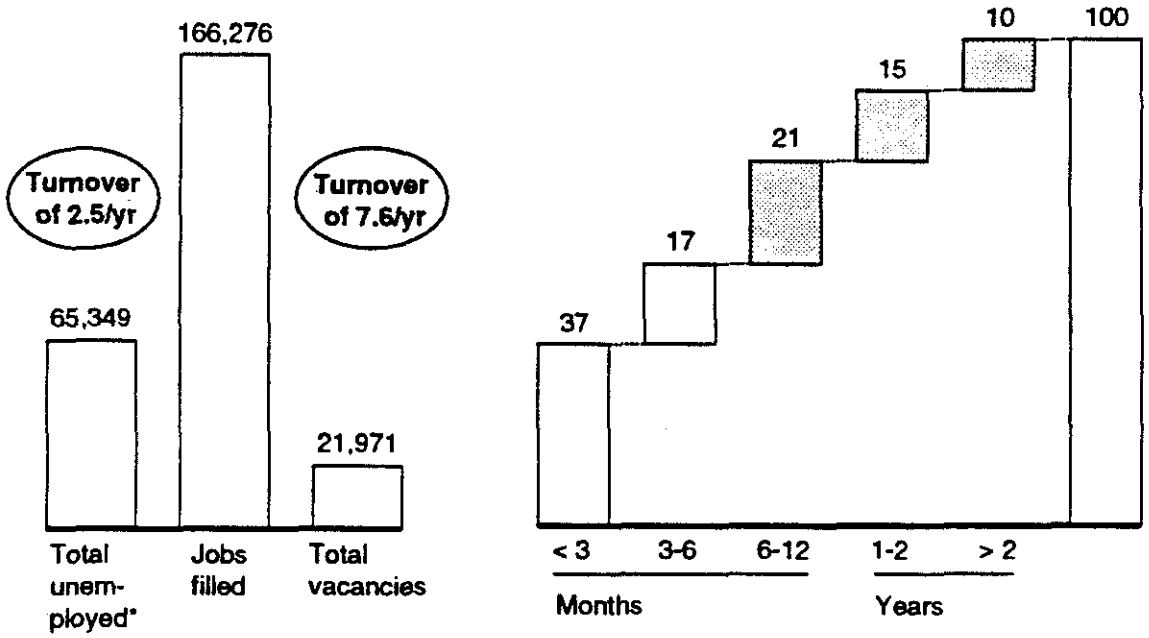
¶ **Availability.** Employers in European countries with slow employment growth all expressed difficulties in finding construction workers. In part, this is due to institutional factors, resulting in significant pressure on labor costs. We found them to be significant in Germany, France and Italy.

The **benefit system** in Germany and France results in strong disincentives for workers to accept construction jobs (Exhibit 22). The net monthly income for unskilled construction workers is often only

Exhibit 23

STRUCTURE OF CONSTRUCTION UNEMPLOYMENT IN GERMANY 1992-93

Number, percent



* Approximately 25% of all unemployed list as disabled

Source: Bundesanstalt für Arbeit; McKinsey analysis

slightly above unemployment or social welfare benefits. With high benefits levels, long-term unemployment persists even in the face of relatively fast turnover of jobs in construction (Exhibit 23). In France, unemployment benefits in the early 1980s increased to up to 90 percent of the previous salary in the case of layoffs for economic reasons. This has been changed and benefits are currently capped at 75 percent. Many construction employees, however, work overtime before spells of unemployment, which inflates the income from which their benefits are calculated. However, social welfare levels are lower in France than in Germany. Both in Germany and France, employers confirm that unemployment benefits act as a strong disincentive for people to accept jobs. In Italy, official unemployment benefits are strongly restricted but companies in financial difficulties can apply for wage subsidies through the system of *Cassa Integrazione*. This maintains a certain income level for employees and keeps them on the payroll. The hope of recalls prevents many employees from actively looking for another job.

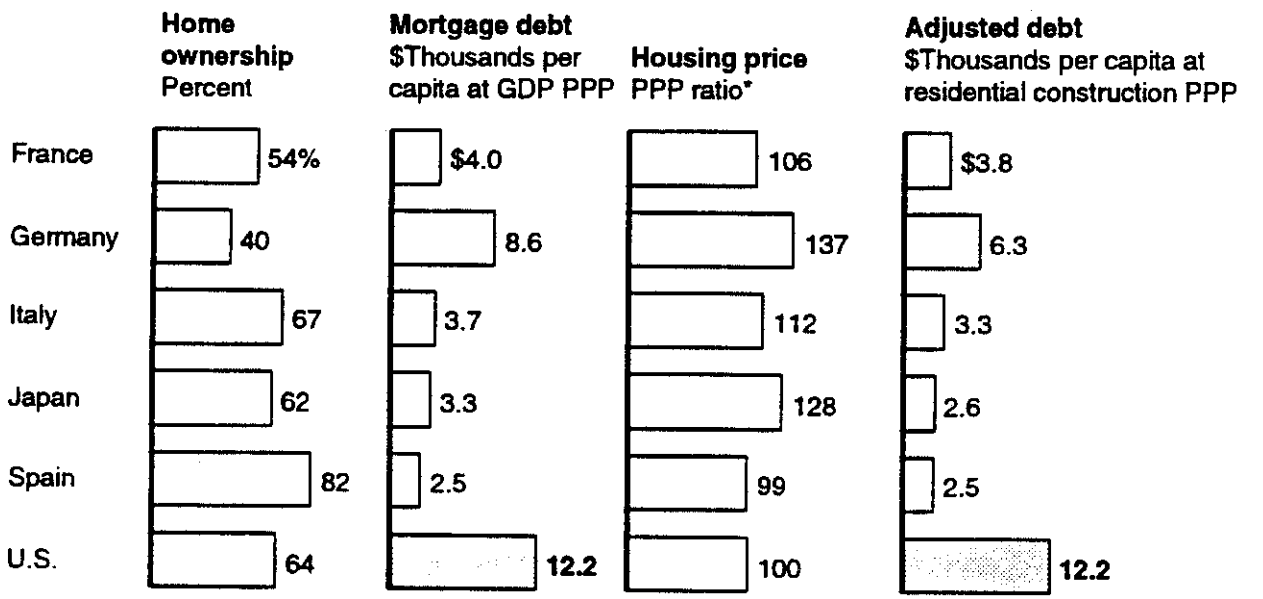
Difficulties in finding construction employees exist even in the absence of benefit systems. Many construction employees have been traditionally recruited from agriculture. In Northern Europe, this labor pool is largely exhausted. In Southern Europe and Japan, however, it still represents a source of labor. Immigrants also often accept jobs in construction. In Germany, they represent around 10 percent of all construction workers, roughly 200,000 employees. The fact that guest workers from Turkey and masons from Britain do not qualify for German *Sozialhilfe* (at least not initially) is another indication that the absence of benefits acts as a strong incentive to find work.

- **Flexibility**. In most countries, even in Europe, layoffs are easier to implement in construction than in other sectors of the economy. For example, many employees are hired on a project basis in the U.S., Spain and Japan. Although this is less the case in Germany, unions still realize that "hiring and firing" is common practice, given the unpredictable nature of the business. A majority of firms are small, their business depends on individual projects, and many employers could not thus survive without this flexibility. As a result, workers' councils usually take a cooperative stance in company-specific negotiations. Stronger layoff protection in Italy and France, however, does generate additional costs of doing business and creates disincentives for companies to hire and grow. In Italy, a number of firms do not pass the 14-employee threshold in order to avoid restrictive legislation.

4. Capital market barriers. The capital market can affect the performance of an industry by providing financing for firms and by exerting pressure on owners. Neither one of these factors is an important cause for differential employment performance in construction. Across all countries, a majority of construction

Exhibit 24

MORTGAGE PENETRATION 1991



* Residential construction PPP divided by GDP PPP; index: U.S. = 100

Source: Housing Finance International; central banks; McKinsey analysis

workers are employed in small, family-owned firms. Construction is generally a very competitive business. Capital is important for equipment, but most firms are self-financed and project finance is generally available.

The capital market does affect construction, however, by providing mortgage funds for homebuilders. Declining interest rates during the 1980s and an efficient and aggressive U.S. mortgage industry made it easier for Americans to finance their houses with debt. As a result, mortgage debt per capita is significantly higher in the U.S. than in France, Italy, Spain or Japan (Exhibit 24). By reducing their financing expenditures, Americans could afford to spend more money on actual construction costs. The result is likely to have been an increase in residential construction employment. Likewise, a more favorable regulatory and labor market environment in construction and the resulting demand growth also helped employment in the mortgage industry.

The level and rise of debt financing for residential and commercial construction in the U.S. also had its shortcomings, however. Many argue that deregulation led to an unhealthy expansion of lending at S&Ls, which were later bailed out by the government. In residential construction, this subsidy is likely to be small: the workout cost of the S&L crisis related to residential projects is estimated to be $9 billion to $10 billion, compared to a cumulative construction volume of $1.7 trillion (1984 to 1992). In commercial construction, the workout costs are significantly higher ($67 billion). Vacancy rates increased significantly in the 1980s and remain high. As much as 50 percent of the new commercial real estate built in the 1980s may have merely increased vacancies. Overall, however, even in commercial construction the impact of the "S&L bubble" is relatively small; much of the growth was corrected by 1992 and our point-to-point comparison of employment levels in 1980 and 1990 does not show a much higher growth rate than if the correction of 1991 to 1992 is included. Furthermore, the impact of commercial construction on overall employment growth in construction is strongly limited.

Competitive intensity and adoption of best practice lead to productivity growth differences

We have shown that the strong employment performance of the U.S. is partially due to its low productivity growth rate. Employment in France, on the other hand, was negatively affected by its strong productivity growth. To a lesser extent the same applies to Germany and Italy. In Japan and Spain, the high productivity growth rates were, to a large extent, offset by output growth which exceeded that of the U.S.

What are the causal factors affecting these differences in productivity growth? No detailed cross-country comparisons of construction productivity exists. On

the contrary, the academic debate in the U.S. suggests that even within one country, productivity figures and their underlying causes remain a matter of dispute. Given that this study did not focus on productivity per se, our causal explanation remains sketchy. Four potential causes for productivity growth can be identified.

- **Competitive intensity and adoption of best practice.** Several countries had very low levels of productivity compared to the U.S. in 1980. This specifically applies to Japan (46 percent of the U.S. level), but also to France and Spain (63 and 62 percent). By 1990, these differences had narrowed considerably. European and Japanese firms increasingly adopted materials and processes introduced in the U.S. during the 1960s and 1970s. Exposure to trade and foreign direct investments certainly played a minor role in the adoption of best practice, despite attempts to open up the bidding processes for large civil engineering projects. However, **domestic competitive intensity** may have resulted in pressure to adopt best practice. We found competitive intensity to be relatively high in all countries. A vast majority of employment is in small, family-owned companies. Establishments with over 500 employees represent only 4 to 5 percent of total employment, with few differences across countries. Even in the U.S., firms with several establishments account for only 16 percent of total construction employment, and only 4 percent of employment in residential construction. Construction is a local business. This is certainly the case in Europe, where cross-country bidding is rare, even in large projects. But in the U.S. as well, only 5.9 percent of the 1987 construction volume was done by out-of-state establishments. Furthermore, this share has decreased from 12.1 percent in 1977. Competitive intensity was found to be somewhat limited in Japan, however. Japanese local associations and authorities often support small competitors, hardly compete on price, avoid transparency in their billings and discourage new entrants.

- **Product mix effects.** In France, Italy and Spain, construction grew fastest in the public sector, while in Japan and Germany, commercial construction increased its relative share. The U.S. is the only country with residential construction representing a larger increase than any other subsector. Even within residential construction, several countries experienced an increase in the share of apartment buildings. The high equipment to labor ratio of public and commercial construction can lead to a growth in overall average productivity.

- **Labor costs.** The fact that labor costs increased significantly in Europe (both compared to the CPI and compared to labor costs in other sectors) may have pushed firms towards replacing capital for labor. While this argument seems logical, we believe that the effect of any capital-labor substitution has been very small at most. Capital represents only around 10 percent of factor inputs and, thus, significant shifts in the capital-labor ratio will contribute little to overall productivity gains.

- **Availability and quality of labor.** Given the high labor intensity, the quality of labor plays an important role in determining productivity. Studies in the U.S. suggest that the share of unskilled, young workers has increased somewhat. In Europe, the contrary has happened. Many countries have in the 1981 to 1982 recession and then again in the late 1980s reduced the number of immigrants and guest workers. The construction industry is strongly dependent on these workers and the difficulties of finding cheap and unskilled labor may have pushed many firms to increase productivity. However, the lack of comparable data across countries again makes it difficult to evaluate the relative importance of this factor.

SUMMARY AND IMPLICATIONS

We conclude that the better employment performance of the U.S. is due partially to higher output growth, partially to lower productivity growth. U.S. output grew strongly due to limited restrictions on residential construction output, especially zoning laws and building codes. Less important causal factors include a more flexible labor market, a more efficient mortgage industry, and a somewhat higher exogenous demand growth. These factors are most relevant in comparing the U.S. with Germany, France and Italy, although the relative weight of each factor varies by country.

Japan and Spain represent somewhat special cases, since some causal factors work to the advantage of these two countries. Both enjoyed a much higher growth in output and demand, due to "catching-up" effects, higher GDP and household income growth, and higher government expenditures. This positive impetus partially offset some of the factors that hindered employment growth; notably restrictive zoning laws in Japan or rapidly increasing labor costs in Spain.

For Japanese and European policymakers, our findings imply that relaxing the regulatory environment is likely to increase construction output. The U.S., and to some extent Spain, with relatively weak barriers and a more flexible regulatory approach, illustrate this potential increase. This raises the question of fundamental trade-offs. The maintenance of an agricultural base as well as the protection of the environment and establishment of "green zones" around metropolitan areas is an issue of high priority, especially in European countries. Our intent was not to say that these restrictions should be abandoned. Our intent was to show that they have a significant negative side-effect on construction employment. At the very least, policymakers should review the real trade-offs involved and question whether these restrictions are in place to improve the "public good" or whether they merely protect the vested interest of a small minority. This could be the case, for example, in suppliers' influence on building codes or in farmers' influence on zoning laws.

The construction case also provides interesting insights into the links between product market deregulation and labor market deregulation. If Germany, France

and Italy were to relax product market restrictions, we would expect land prices and building costs to fall. But the existence of high benefits, sectorwide minimum wages, unions and layoff protections all are likely to result in upward wage pressure. If these labor market barriers persist, the additional demand will be absorbed by higher wages for "insiders." Some wage increases may be unavoidable in order to increase the "attractiveness" of construction jobs. But increased demand for housing can be translated into more jobs only if the labor market barriers described above are relaxed as well. This has important implications for governments wanting to increase employment in this industry. Although we attributed a lower weight to labor market factors, a review of some of these constraints is likely be a necessary condition for employment growth as well. Specific actions could include the opening of national contracts, lower social costs for unskilled workers, and lower unemployment benefits.

Chapter 4: Synthesis

In Chapter 2 we explained our main hypothesis as to why employment growth has been much faster in some countries than others. The constant evolution of economies results in job losses in some firms and industries and job creation in others. Barriers in the labor, product and capital markets inhibit the creation of new jobs in emerging service industries. Those economies with the most constraining barriers, or that have faced the most rapid structural change, will have weak overall job performance. We argued that the evidence in the prior literature was not adequate to support this view and that industry case studies might fill the gap. In this chapter we summarize what we have found and determine the extent to which this additional evidence supports the main hypothesis. In addition, we use the case studies to estimate which barriers are most important.

The most striking results that emerge are:

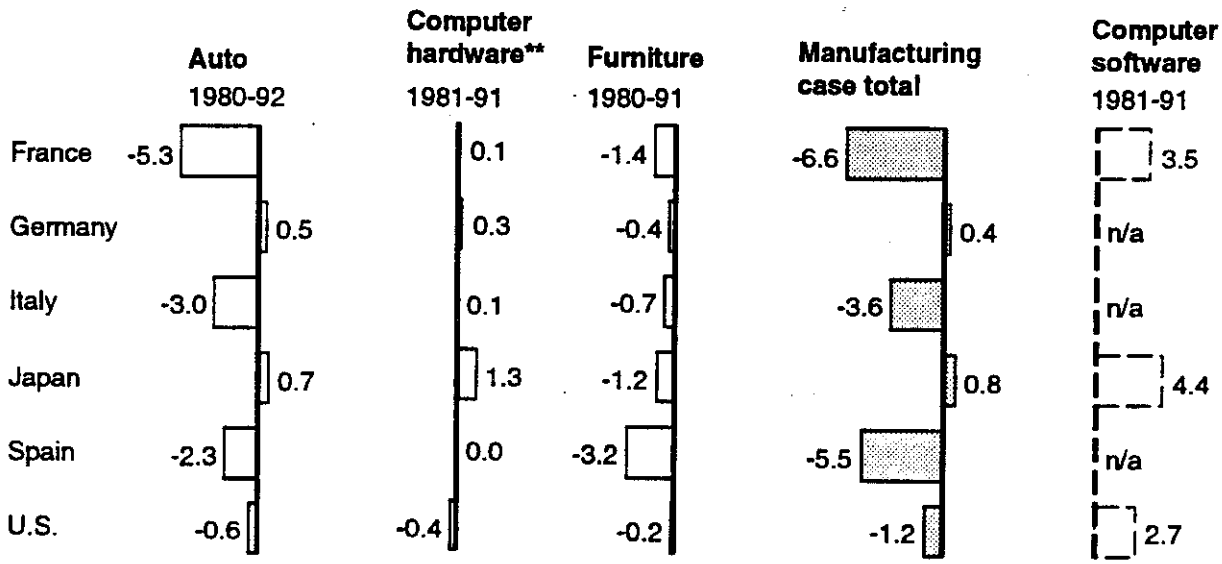
¶ Slow employment growth occurred in Europe because the natural evolution of the economy was accelerated at one end through competitive pressure in manufacturing, but retarded at the other end as a result of restrictions on service sector and construction employment.

- Manufacturing industries restructured more rapidly in many European countries than in Japan or the U.S.
  - Domestic demand growth in Europe was much slower than that achieved during Japan's investment-based boom.
  - Individual industries occasionally lost share to producers from other countries that had more favorable productivity levels and labor costs, though the direct effect of trade was small across the entire manufacturing sector.
  - The indirect effect of trade became significant especially in France and Italy as increasing levels of international competition forced manufacturers with low initial productivity levels to restructure in order to survive.
- European countries experienced some employment growth in service industries and construction, though the amount of expansion was significantly below that of the U.S.
  - Restrictive regulatory environments in Europe limited entrepreneurship and competition.

Exhibit 1

EMPLOYMENT PERFORMANCE IN MANUFACTURING

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

** Including semiconductor manufacturing

Source: National household and establishment surveys; McKinsey analysis

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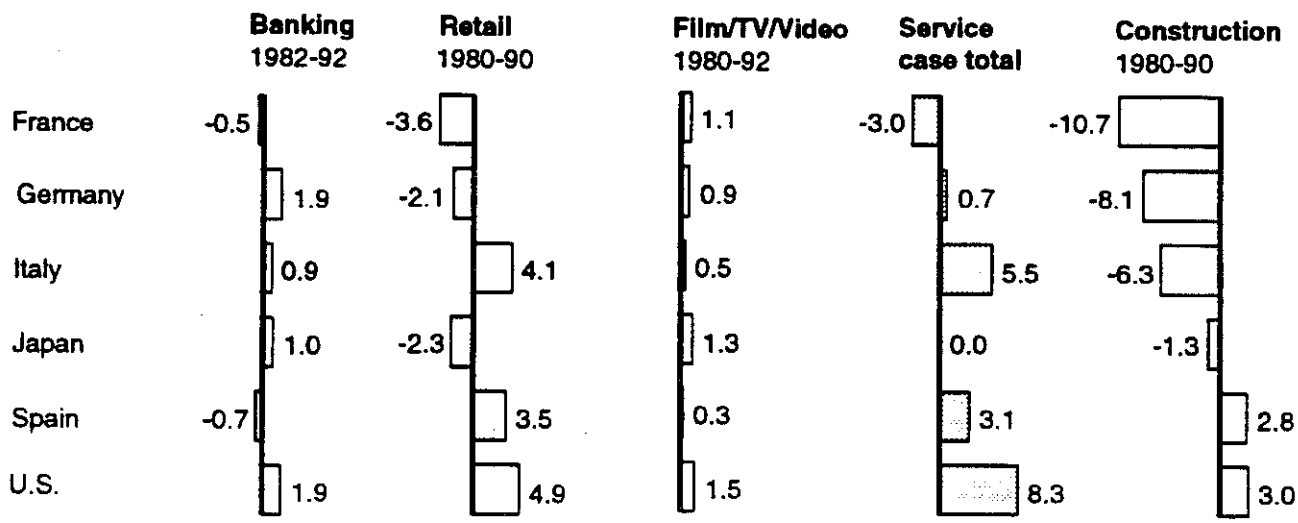
Exhibit 2

EMPLOYMENT PERFORMANCE MARKET SERVICES AND CONSTRUCTION

Net jobs created per thousand working age population*



* Adjusted for growth in the working age population

Source: National household and establishment surveys; McKinsey analysis

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- This prevented companies from innovating and rapidly adding customer value.

¶ These "product market"[1] barriers to value creation are as important, if not more important, than labor market differences in explaining differences in job creation during the 1980s.

EMPLOYMENT PERFORMANCE AT THE CASE AND AGGREGATE LEVEL

The pattern that emerges in each country's employment performance in our case industries is similar to what one would expect given the evolution of economies described in Chapter 2. In most of the countries there were employment declines in the three manufacturing industries (Exhibit 1). Only Japan and Germany increased manufacturing employment relative to working age population in the case studies. In market services, there is general evidence of increasing employment, although France had an employment gain only if computer software is included (Exhibit 2). The sizes of the increases in service sector employment vary widely, with the U.S. having the largest increase overall and the largest gains in each of the three individual industries and in construction.

Looking at the performances by country rather than by industry, we see that our case studies reflect partially, but not fully, the countries' aggregate employment performances. Our case studies are drawn from private sector manufacturing and services, and hence, neglect agriculture, mining and public sector employment. The main effects this has are for Spain and Italy which look better in our cases than in the aggregate because both experienced large declines in agricultural employment in the 1980s.

The case study results confirm that France has a particular employment problem. It has the largest employment decline in three of the seven industries and, except for computer software, no industry has strong employment growth. The U.S. also stands out with moderate job declines in manufacturing and large increases in construction and services. These findings from the case studies were also evident in the aggregate data.

The remainder of this chapter uses both aggregate data and case results to explain why employment evolved in the way that it did. First, we focus on the sectoral level. What caused Japan to have superior manufacturing employment while France and Italy experienced significant declines? Why did the U.S. have such a rapid increase in employment in many of the service industries? We then turn to a broader country perspective, examining the factors in each nation that led to its overall net performance. Finally, a framework is provided to illustrate

[1] We use the term product market to mean all factors which affect the market in which firms sell their goods and services. This heading also occasionally refers to restrictions on land or other nonlabor and noncapital inputs to a company's production process.

Exhibit 3

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Manufacturing cases

● Important
○ Secondary
X Undifferentiating

Benchmark	Auto Japan	Computer Japan	Furniture U.S.	Manufacturing case average
Capital market				
• More pressure from owners	X	X	X	X
• Less government ownership/support	X	X	X	X
• Readily available capital	X	X	X	X
Labor market				
• Low labor cost	○	●	X	○
• High availability/low benefits	X	X	○	X
• More flexibility	X	X	X	X
Product market				
• Fewer restrictions on output and competition	X	X*	X	X
• More new business facilitation	X	X	X	X
• Rapid demand growth	●	○	●	●
Industry dynamics/competitive intensity				
• Better trade/FDI performance	●	●	○	●
• More price competition/restructuring	X	X*	X	X
• More innovation/new products	○	X	○	○
Higher output growth	●	●	●	●
Higher productivity growth	X	X	X	X
Lower productivity growth	X	○	●	○

* Opposite is true with strong influence

Source: McKinsey analysis

why we think many of the results in our cases can be generalized to entire economies.

MANUFACTURING

Exhibit 3 summarizes the causes found for employment differences in the three manufacturing cases. It suggests that Japan (the benchmark in the auto and computer cases) and the U.S. (the benchmark in furniture) created more manufacturing jobs in individual industries than the European countries during the 1980s primarily because plants located in these countries expanded output more rapidly than their peers. Most of Japan's output increase can be attributed to particularly rapid, but potentially unsustainable, increases in domestic consumption and investment, though better trade performance also played some role at the case level. The chart also indicates that much of the output growth difference must be attributed to initial penetration rates, income growth, or other exogenous factors since most factors in the capital, labor and product market were not major differentiators.

Output and productivity

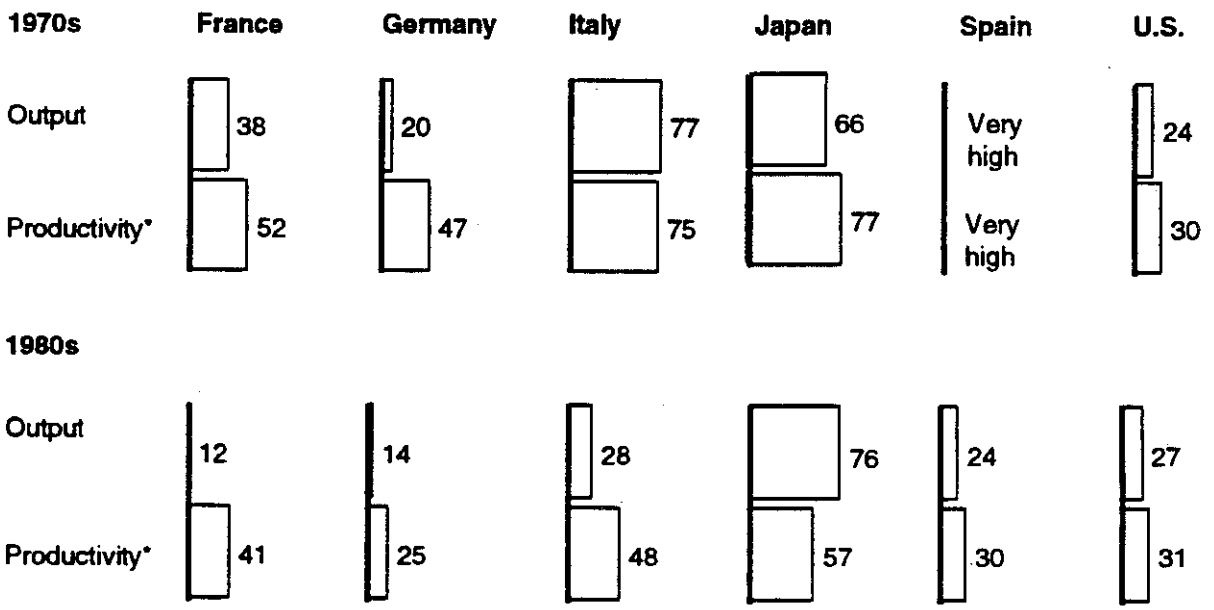
Productivity, as we have defined it, is output divided by labor input, so there is a simple algebraic relationship between the variables. Any increase in labor input (i.e., employment) is equal to the increase in output less the increase in productivity. The actual relationship between productivity, output and employment is more complex since the mere fact of slower productivity growth might well cause output to grow more slowly (see box in Chapter 1 for a full description of the relationship between productivity, output and employment). Based on our best efforts at output growth measurement, we found a very clear association between output and employment growth in manufacturing. We also found that rapid productivity growth often hurts employment at the industry level, though this effect is far less important than the output growth differentials in explaining employment performance.

In all three manufacturing cases, the benchmark country had high output growth. The reverse was also true: the countries with the largest employment losses in auto, computer hardware and furniture had particularly slow growth in output. Aggregate data supports the conclusion that Japan's strong employment in manufacturing is due to rapid output growth (Exhibit 4). Japan's manufacturing output grew 76 percent over the 1980s, almost three times as fast as in any other country. Furthermore, the production growth rate in Japan was higher in the 1980s than in the 1970s, while increases in manufacturing output decelerated in all other countries except the U.S. At the other extreme, the performance of France, Italy and Spain in the case industries can be explained by the significant slowing in their overall manufacturing output growth rates.

Exhibit 4

CHANGE IN MANUFACTURING OUTPUT AND PRODUCTIVITY* OVER THE 1970s AND 1980s

Percent



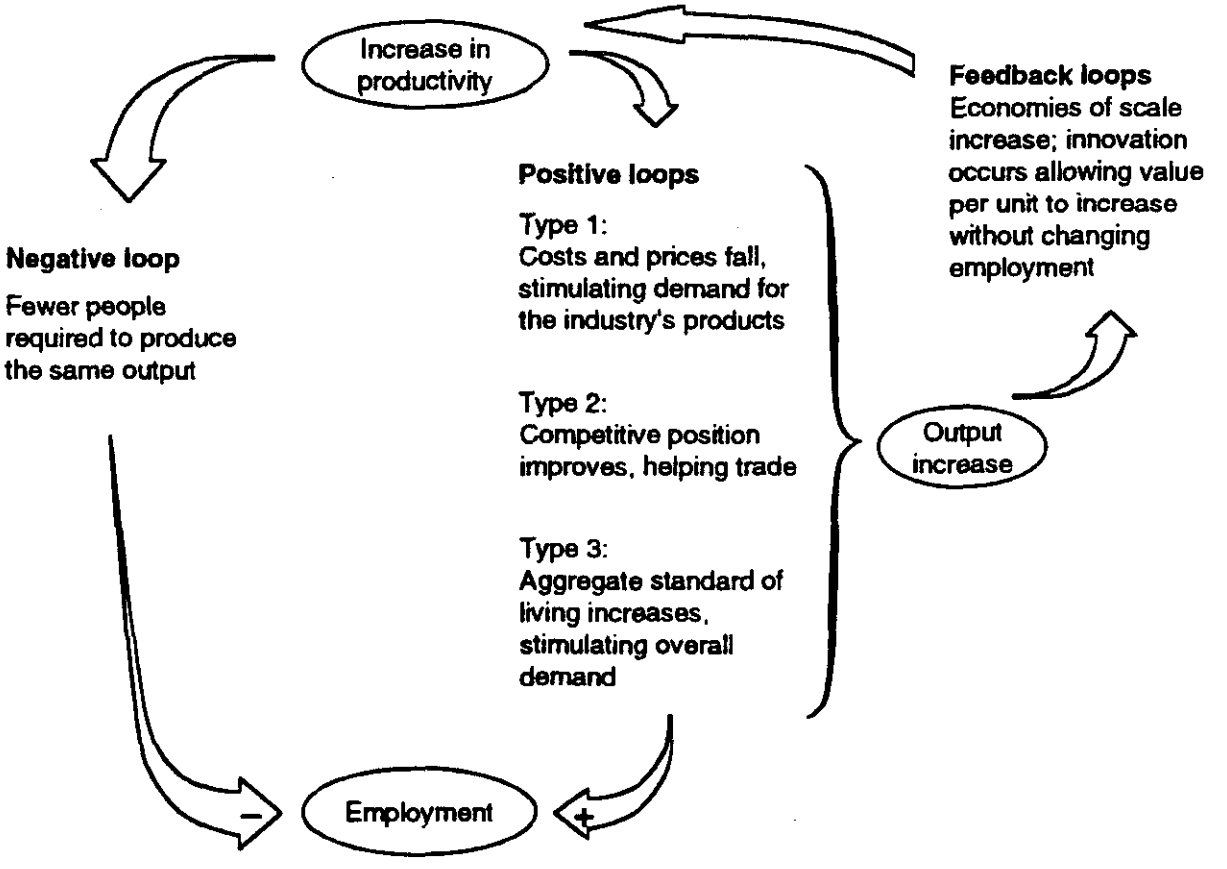
* Measured as value added per hour worked

Source: BLS establishment surveys; *Encuesta industrial*; McKinsey analysis

Exhibit 5

CONCEPTUAL

RELATIONSHIP BETWEEN PRODUCTIVITY, OUTPUT AND EMPLOYMENT



Source: McKinsey analysis

The fact that productivity growth was less important than output as a differentiating factor in the cases is not surprising given the dual nature of its effect. Increases in productivity lead to fewer workers for a given value of output, but they also frequently stimulate a rise in output. Japan had the most rapid increase in overall manufacturing productivity during the 1980s, and it had the best employment performance. At this level, it appears that there was a "positive productivity loop," with output rising, at least in part, because of increasing productivity. This relationship was less clear in the manufacturing cases, with higher productivity growth often coinciding with employment declines. All countries except Germany experienced very rapid increases in productivity in the auto industry, yet output often did not keep pace. German employment was actually helped relative to the other countries because of its slow increase in productivity. In furniture, operations in Japan had rapid output growth, but productivity increases were even greater and employment declined. The U.S. had better furniture employment performance than Germany, Japan or Italy largely because of its slower growth in productivity.

The negative correlation between productivity growth and employment in the case industries and positive correlation between the two at the sector level can be reconciled using the elements of the productivity/employment relationship introduced in Chapter 1 (Exhibit 5). At the case level, the effect of being able to produce the same amount of output with fewer workers (i.e., the negative productivity loop) exceeded the positive effect a better price/value relationship had on domestic demand and trade (positive loops type 1 and type 2). This industry level relationship was captured in our causal framework (Exhibit 3) under the heading lower productivity growth. The black dot for furniture indicates that slow productivity growth was one of the primary reasons the U.S. had relatively strong employment growth. At the sector level, the increase in buying power resulting from improved productivity in one industry (positive loop type 3) resulted in sufficient additional demand for the products of another industry to increase output more rapidly than productivity. This effect was difficult to isolate in our cases, but typically contributed to the benchmark countries' strong performance on the rapid exogenous demand growth line item. Type 3 effects are likely to prevail whenever workers are able to shift from one job to another and their new positions are captured in the analysis.

The negative relationship between productivity growth and employment at the industry level appears to be short lived. Any attempt to engineer fast employment growth or maintain employment by slowing the growth of productivity will be damaging in the long term. If an industry attempts to maintain employment levels by halting increases in productivity, its products will eventually become more expensive than similar offerings from international competitors, and more expensive than other products available in the same economy. As a result, output will decline and companies will come under pressure to reduce employment enough to match the lower demand level and regain a competitive advantage. The experience of the German automotive industry over the last 15 years illustrates this type of effect. Employment levels

remained high throughout the 1980s because productivity growth was half that of other countries. These slow productivity gains hurt the competitive position of German manufacturers and resulted in the need for substantial restructuring in the early part of the 1990s. The unsustainability of maintaining employment through slow productivity growth is also reflected in the fact that the country with the highest 1980 productivity level in autos (Japan) and furniture (the U.S.) also had the best employment performance in that industry over the 1980s.

Trade and foreign direct investment

In the aggregate chapter, the direct effects of changes in trade flows did not appear to be a major factor in explaining differences in overall manufacturing employment. We also noted, however, that trade intensity was increasing in many sectors, particularly in Europe. As trade increases, less competitive producers begin to feel a need to restructure in order to increase productivity, and companies and countries with comparative advantage gain share. These indirect effects of trade have a much greater influence on employment than actual shifts in trade flows. It would not be surprising then for individual industries to show diverging trends across countries even if there is little overall movement in trade. This argument suggests that changes in trade can influence the shape and pace of an economy's evolution, and thus indirectly have a significant effect on a country's overall level of employment.

Our cases show that the **direct** effects of trade can be substantial in some industries. Japan improved its trade position in both computers and autos. While the increases were not large, they were in sharp contrast to significant declines in the U.S. and France. The strongest trade effect occurred in the computer industry, where U.S.-based companies increasingly sourced low cost peripheral equipment from low wage countries in Asia. Germany also lost employment as PC producers responded to tax incentives and lower wage costs and established production facilities in Ireland and Scotland to serve the European market. Japan held its employment in this industry because of lower competitive intensity, the low wages available in small subcontractors, and innovation in peripheral equipment.

A somewhat similar pattern emerges from the auto and furniture cases, though the sources of advantage were productivity and product quality as much as wages. French and Italian auto producers lost share, and therefore employment, to more productive producers in Germany. Italian furniture makers expanded their trade surplus as a result of their innovative designs and speed to market.

One factor limiting the long-term effect of trade is foreign direct investment and the creation of transplants. Despite their foreign ownership, transplants are generally positive for employment in that they substitute for imports and allow the volume that accrues to best practice players to be created by local workers. Companies are increasingly able to transfer best practice across national boundaries, thus moving production closer to market or to areas with low factor costs. Changes in the auto industry over the 1980s illustrate this phenomenon.

Auto manufacturers headquartered in Japan continued to gain share in the world car market throughout the 1980s, but the number of vehicles exported did not rise significantly. Instead, manufacturers chose to establish new facilities near the major European and North American markets. Political pressure, exchange rate volatility, local production as a marketing tool, and the transferability of best practice productivity made these decisions the right ones for individual companies, but they increasingly decoupled the market share results of companies from the employment performance of their "home" country.

Companies' strategies to produce in or near major end use markets limit the ability of any country to amass a large number of jobs in a single industry. They do not, however, ensure that every country will have employment in an industry in proportion to the size of its market. If a country is home to an uncompetitive industry, like Spain was in automotive in the late 1970s, it may be able to sustain at least some jobs by attracting transplants. Spain's traditional automotive manufacturers shed over 35,000 jobs from 1978 to 1992, but its transplants allowed the country to regain almost half of this employment during the same period. If, however, the country makes this investment difficult, or imposes conditions on newcomers that make them uncompetitive, then it can lose its entire industry to neighboring countries with more friendly policies.

Transplants do more than just replace final product imports and add jobs, however. They increase competitive intensity thus stimulating the need for more restructuring on the part of traditional players. They can also stimulate additional trade, both in the form of more imports of parts or source material and more exports of competitive final products.

The **indirect** effects of trade and transplants often have a larger influence on employment than the direct effects. Many industries restructure when it becomes clear that they will lose their market to foreign producers if they do not become cost competitive. Aggregate trade figures do not change, but the economy begins to operate at higher levels of productivity. Employment in the traditional industries that faced the trade threat often declines, but new opportunities are created in other parts of the economy as a result of increased buying power.

Growth in domestic demand

Japan's rapid increase in domestic demand was a much more important factor than trade in explaining Japan's strong output performance in manufacturing during the 1980s. Approximately half of the manufacturing output growth differences between Japan and other countries stem from Japan's bubble economy which led to unsustainable demand for investment goods between 1987 and 1990. The other half of Japan's particularly strong output growth can be attributed to the fact that Japan was at an earlier stage of evolution. Product penetration levels were low and GDP per capita was rising rapidly.

Our cases illustrate both phenomena. The number of vehicles per capita registered in Japan in 1980 was less than half that in the U.S. and 20 percent

below France and Germany. Similarly, low penetration levels existed in personal computers and office furniture. As demand for these products increased, producers built facilities and expanded capacity. The boom in consumer durables coupled with access to low cost funds fueled the sale of investment goods. When the bubble burst, manufacturers were left with significant overcapacity. Demand for investment goods slowed significantly and is unlikely to increase in the near future at anywhere near the rate that it did in the recent past.

Other factors leading to higher manufacturing output

The strong trade performance of Japanese manufacturers and the rapid rise of domestic demand stem from differences in industry dynamics and product and factor markets.

- **Innovation** helps increase output in manufactured goods. New products, styles and features stimulated demand in the furniture, automotive and computer industries. These factors kept saturation from occurring by leading to more rapid product replacement and more extensive customer value per item. The computer case shows that it is difficult to sustain demand growth in mature sectors without this kind of innovation. The furniture and automotive cases also show, however, that innovation is possible and can have a large output effect even in very traditional sectors.

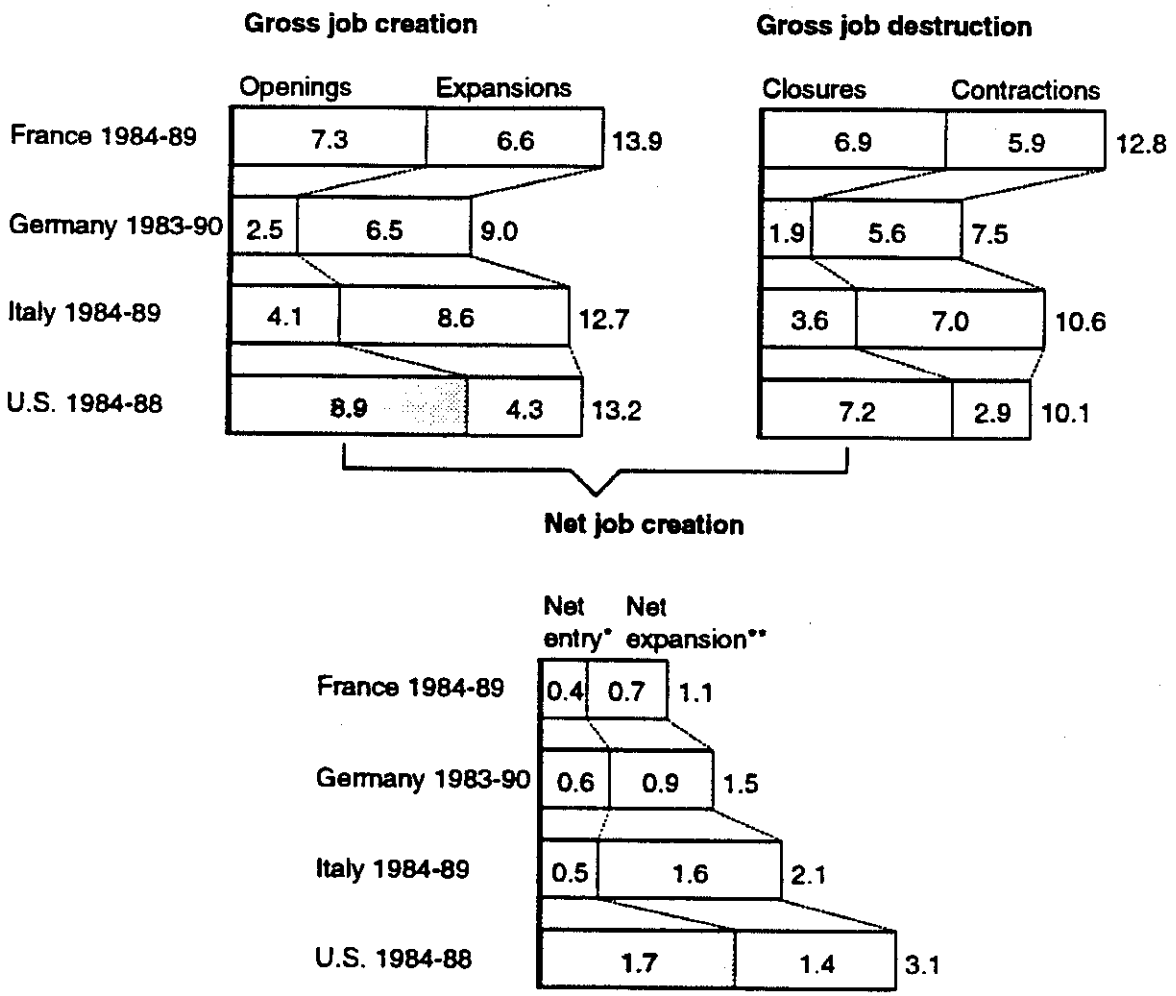
- **Low labor costs** also help output in traded sectors. Japan's manufacturing success stems partially from low labor costs. The total hourly compensation of a manufacturing worker in Japan in 1980 was $5.52 at international exchange rates. This was below all five of the other countries, and 55 percent less than the German average. In the auto case, these low wages gave Japanese manufacturers a significant cost advantage over U.S. producers at a time when they had fairly comparable levels of productivity. In computers, it was partially the wage distribution and the existence of very low wage subcontractors that allowed jobs to stay in Japan rather than moving to other Asian countries. While wage gaps are important determinants of trade, they are clearly not essential. Japan continued to record trade surpluses well after it had passed many European countries in compensation cost. Germany was the trade leader in Europe despite having a large and growing wage premium vis-à-vis other countries on the continent.

  A more important lesson about wages is that advantages in this area tend to be temporary, and thus unsustainable as a basis of competitive advantage. Japanese manufacturers saw much of their cost lead evaporate as a result of currency appreciation. Spain lost its cost advantage, and thus its ability to attract foreign investment, because its unions were able to raise wages faster than in most other countries.

Exhibit 6

GROSS JOB CREATION PERFORMANCE

Average annual rates in percent of total employment



* Openings minus closures

** Expansions minus contractions

Source: OECD Employment Outlook 1994

Companies considering locations for an automotive transplant in 1994 tend to rate the UK or Turkey much more highly than Spain. Developed countries will have difficulty attracting or retaining jobs purely on the basis of labor costs because there are always other countries willing to offer companies even lower wages and nonwage labor costs, but countries can increase the likelihood of success of their manufacturing sectors by making sure wage increases do not exceed productivity improvements.

Nondifferentiating factors

A number of other factors that are often mentioned in the academic literature were not found to be broadly important in explaining employment differences.

- **Restrictions on output and competition.** Some restrictions certainly occur in manufacturing, but they generally do not explain why one country created more employment than another. If anything, it appeared in our cases that product content requirements and barriers to competition kept employment high in the short run. Vehicle emission standards and furniture ergonomic requirements resulted in more money being spent per item without a completely offsetting drop in volume. Language and distribution channel barriers in computers kept domestic shares high in Japan and prevented a shift towards less labor intensive PCs.

- **New business facilitation**. Much is made of MITI's nurturing of Japanese industry, but there were few indications that it was a significant force in computers or autos during the 1980s. The one place where MITI's effect was felt was in furniture where it helped initiate a campaign to upgrade the office environment of white collar workers. Although this led to high output and productivity growth, Japan still had relatively poor employment performance.

- **Worker flexibility**. We consistently heard complaints about the inflexibility of the work force in Europe, yet found little evidence that this had been a binding constraint or an inhibitor to hiring during the 1980s. Exhibit 6 suggests that increased competitive pressures actually caused European establishments to contract more rapidly than their U.S. counterparts in the 1980s. This was not always true in our cases, as automotive employment was somewhat more variable in the U.S. than in Europe, but all companies have found ways to vary their labor input. Many companies in Europe have begun to use temporary contracts in order to more easily ramp up during good times and downsize during recessions.

  The fact that employers in all countries were eventually able to restructure does not suggest that they were all able to do so with equal efficiency. Many companies delayed layoffs until they became essential

Exhibit 7

WHY DID THE BENCHMARK COUNTRY HAVE A BETTER EMPLOYMENT PERFORMANCE?

Service sector cases

● Important
○ Secondary
X Undifferentiating

Benchmark	Banking U.S.	Retailing U.S.	Film/TV/ Video U.S.	Service sector case average	Construction U.S.
Capital market					
• More pressure from owners	X	X	X	X	X
• Less government ownership/support	X	X	X	X	X
• Readily available capital	n/a	X	X	X	○
Labor market					
• Low labor cost	X	●	X	○	○
• High availability/low benefits	X	○	X	○	○
• More flexibility	○	○	X	○	X
Product market					
• Fewer restrictions on output and competition	●	●	●	●	●
• More new business facilitation		X	○	○	X
• Rapid demand growth	●	○	○	○	○
Industry dynamics/competitive intensity					
• Better trade/FDI performance	○	X	○	○	X
• More price competition/restructuring	X	X	X	X	X
• More innovation/new products	●	●	●	●	X
Higher output growth	●	●	●	●	●
Higher productivity growth	○	X	X	X	X
Lower productivity growth	X	○	X	○	●

* Opposite is true with strong influence

Source: McKinsey analysis

for survival. Others acted only after the government provided funds to encourage workers to shift jobs or take early retirement. The resulting tax burden often placed an additional drag on the economy.

Our interviews in the case industries did identify barriers to layoffs and reassignments in Europe in the larger industries (computers and auto) but found that similar impediments existed in the U.S., and to some extent Japan, as a result of union agreements or company practices. All of these barriers kept employment high during recessions, but none of them appear to have done much to temper companies' willingness to hire during past boom times. Many companies claimed that they had learned from the most recent downturn, and that they would minimize employment expansion in the face of increased demand in the future.

¶ **Capital market.** While the capital market, and in particular the market for corporate control, can contribute to the overall performance of an industry, little direct relationship was found between an efficient capital market and high employment in our cases. Large companies in the auto and computer industries had little trouble obtaining capital in any of the countries examined. They did, however, face somewhat different pressure to succeed. In autos, all companies resisted restructuring until their survival was threatened. In computers, companies receiving significant government support maintained similar employment to their less protected peers, but at lower levels of output and productivity.

SERVICES AND CONSTRUCTION

The first level causal factors affecting employment in services and construction are not significantly different than those in manufacturing. Employment increased in the benchmark, the U.S., because output expanded very rapidly. However, the causes of this output growth are somewhat different than they were in manufacturing. Output grew whenever few barriers existed to block innovations that could lead to new products or business forms (Exhibit 7).

Innovation, new products and business systems

Differences in the rate of adoption of innovations resulted in large differences in employment performance in all the service industries. Banking provides a striking example of this phenomenon. The U.S. eliminated a large number of jobs in traditional products, but it created an even larger number of new jobs in mortgage origination and in the securities industry. New, or significantly expanded, specialized mortgage banks competed with traditional players by utilizing low paid workers and leveraging information technology. These innovations reduced lending margins, increased the speed with which loans could be processed and allowed higher risk borrowers to get loans without jeopardizing the stability of financial institutions. Similar innovations did not

occur in many other countries because the environment was less competitive, mortgage-backed securities were illegal or did not have a developed market, and wage inflexibility reduced the incentive to use labor saving technology.

Other industries confirm the importance of innovation. U.S. entrepreneurs created and captured additional customer value by developing a large number of stage three retail stores (small outlets specializing in a narrow segment of demand). These innovators saw that customers were willing to pay a premium for easy access to the specific goods they wanted and for the convenience of longer opening hours; so they responded by expanding operations and increasing employment. In film/TV/video, developments in electronics made it possible to offer programming in a variety of new formats (notably videotapes and cable/satellite). These inventions were available everywhere, but only the U.S. industry was able to turn both into large scale employers.

Regulatory environment

The key reason these innovations were more commercially successful in the U.S. than elsewhere was that it had a regulatory environment that made new entrants more likely. The U.S. had both fewer restrictions on output and competition and more of the regulations necessary to facilitate certain new businesses. Our cases helped us identify three types of government intervention that can influence the number of jobs created in an industry.

- **Regulations intended to preserve old jobs.** Many countries try to freeze the evolution of the economy and preserve existing patterns of employment. Regulations are established or retained in order to sustain employment in existing establishments. France and Italy have tried to do this in the retail industry. Both countries have laws and practices designed to protect mom-and-pop retailers from large chains and malls. These have come in the form of restrictions on opening hours, retail price maintenance agreements, and restrictive new store approval processes. Despite these measures, hypermarkets have found ways to expand in France and mom-and-pop stores have suffered. The most lasting effect of the regulations is that stage three stores, those with the greatest employment creation potential, but also the most significant need for malls and other new arrangements, have not been created in large numbers as they have in the U.S. Italy has been somewhat more "successful" in protecting its mom-and-pop stores, but it has achieved this success by stunting the overall value-added growth of its retailing sector.

  A similar set of forces are at work in the French film/TV/video industry. Several regulations are in place to protect the established, but declining theater segment from video rentals and TV. The result has been a less dramatic drop in cinema employment than was experienced elsewhere, but also much less expansion in the high employment video rental segment. Usually the net employment effect of this type of

regulation is negative because it inhibits the creation of new jobs in the industry.

- **Regulations with other societal goals.** Many regulations have nonlabor market goals like preserving the environment. These policies change employment in one or more industries as a side effect of their intended goal. Zoning restrictions in Europe have been passed to preserve open land and to protect agricultural and other vested interests. These restrictions have raised residential and commercial land prices and inflated construction costs thus reducing employment in construction. Furthermore, they have indirectly increased the cost of most service firms by making space expensive. This has made it more difficult for video rental stores, stage three retail stores, and other fledgling enterprises to reach the break-even points needed to be sustainable.

  Competition was minimized in many banking systems throughout the 1970s and 1980s in order to preserve macroeconomic stability. The employment and productivity penalties of this planned approach were not evident until the U.S. began to deregulate and reveal pent-up demand for new and innovative financial instruments.

- **Regulations that facilitate new business.** Some regulations facilitate the growth or evolution of an industry by supporting industry development or reducing ambiguity in the rules of competition. One reason for the strong employment performance of the U.S. securities industry is the strong set of pro-transparency regulations administered by the SEC. Standard accounting procedures and prohibitions on insider trading give investors confidence that they can receive a fair price in the market. As a result, retail penetration increases and large numbers of mutual fund providers become viable.

Trade and demand growth

Trade and exogenous demand factors were less important in the service sector than in manufacturing, but they still played some role. The U.S. performance in both securities and film/TV/video illustrates that first movers and countries with skill advantages can become major exporters in some high value industries. A combination of a favorable regulatory environment and a leading position in the evolution of economies allowed the U.S. to establish a commercial market and a set of skills in film production and securities structuring/processing before any other country.

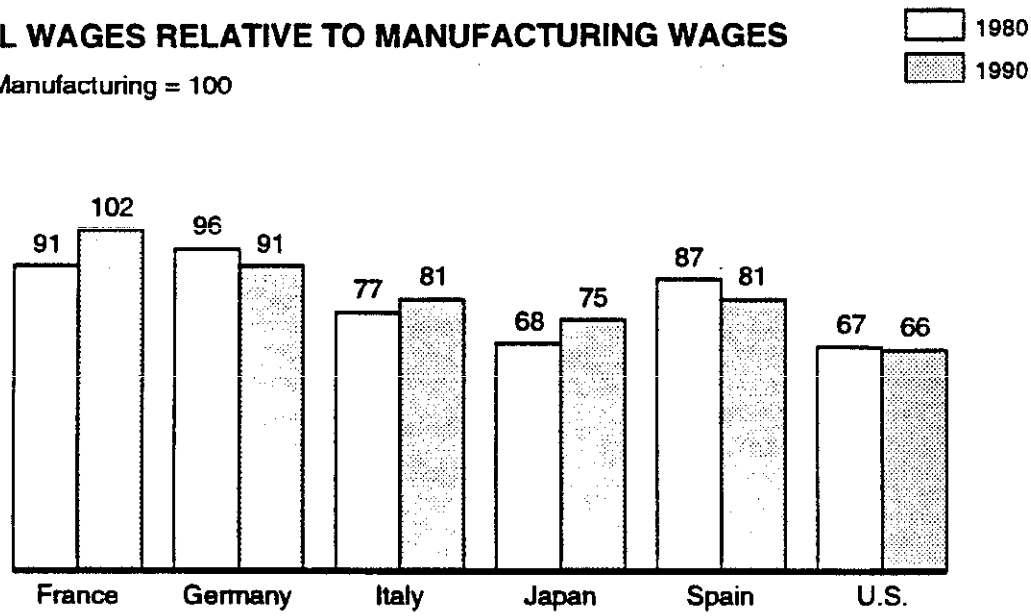
Labor market factors

The most striking feature of our analysis of labor market factors is that they are less important as overall differentiating factors than would be expected from

Exhibit 8

RETAIL WAGES RELATIVE TO MANUFACTURING WAGES

Index: Manufacturing = 100



Note: 1982-90 for France, 1981-90 for Japan

Source: BLS Hourly Compensation Costs in Manufacturing; McKinsey analysis

what has been written about the problem of weak job creation (see Chapter 2 for a brief synopsis of the labor market literature). We did, however, find that labor market factors played an important role in low wage sectors such as retailing.

Part of the reason labor market restraints were less important than we expected was because they often gave way in the face of intense product market competition during the 1980s. Companies around the world were able to downsize in order to survive, and unions occasionally moderated wage requests in an attempt to minimize the need for further restructuring. This type of flexibility was observed in the project-based construction industry. Workers were forced to become more flexible given the sporadic nature of demand.

Maintaining labor rigidities until the point of company extinction is not healthy for an economy, however. High labor costs and worker inflexibility can prevent reallocation for some time and thus deter significant employment increases in expanding service industries.

In industries with relatively low wages, we found the following labor market factors to be important:

- **Labor costs** were a major concern in French and German retailing for two reasons. First, the cost of employing a retail worker in the two European countries is nearly equal to that of employing an average manufacturing worker, while in the U.S. retail workers get only 66 percent of a manufacturing employee's compensation (Exhibit 8). These input cost differences result in high retailing prices relative to other goods and services in Germany and France. A second concern in Europe is the lack of flexibility in wages and benefits. In Chapter 2, we showed that 18 million people in the U.S. are compensated less than the equivalent of the French minimum wage plus benefits. Some of these people are employed in retail formats that might not be viable with higher compensation levels.

- **Availability**. The construction industry in Germany reported difficulty in hiring people because of the level of unemployment benefits. Construction jobs are hard and considered to be of low status and so even though wages are not low, it is difficult to hire people. This suggests that any expansion of employment in construction that results from relaxing zoning laws in Germany would require either a lowering of unemployment benefits or an increase in wages. The latter would increase inflationary wage pressure and thereby offset the expected decline in housing costs rather than allow the maximum possible expansion of employment.

- **Flexibility**. In banking and retailing, companies in the U.S. were willing to experiment with new branches and outlets in part because they knew that they could release workers easily if the new facility proved to be unprofitable. The aggressive new mortgage lenders in the U.S. took month-to-month leases when opening new branches and hiring new loan officers with the understanding that they might be

released with little notice if the branch did not succeed. This indicates that opening new facilities in banking and retailing is more costly in countries where there is less flexibility. This will reduce the number of openings.

Capital market factors

Conventional wisdom suggests that the capital market might be a major impediment to job growth in the service sector. It is argued that companies in Europe lack the incentive to expand into new product areas because their owners do not pressure them to deliver the maximum possible returns. Others suggest that small entrepreneurs are unable to get funds because bank lending and the equity markets are overly concentrated and slanted toward funding existing enterprises. These may be important factors, but we found little direct evidence of either of these effects in our service cases.

- **Lack of pressure from owners.** Many service companies are small and owned by families or small partnerships. These owners exert as much pressure on managers in Europe and Japan as they do in the U.S. Additionally, most of the larger banks and retailers who are criticized for failing to initiate new efforts in mortgage banking or stage three retailing, are behaving in a way that maximizes their profit given the barriers to competition that exist in these markets.

- **Government ownership/capital support** often help an industry's employment in the short run, but the long run effect can be more harmful. An industry can suffer reduced productivity and an atrophied commercial orientation. French and Spanish movie producers and public television networks throughout Europe experienced this during the 1980s. These players often lacked the aggressiveness needed to capitalize on emerging market opportunities. Some of the traditional players were sufficiently protected to be able to sustain their employment levels, but others became exposed and shed large numbers of workers.

- **Readily available capital.** Capital markets are becoming increasingly global. This is equally true for bank debt, small private placements and widely traded corporate equity. Capital flows to opportunities no matter where they are. Nothing illustrates this better than the "big bet" world of movie production. Funds for this purpose exist in Europe, but much of it flows to U.S. studios since their established track record of turning these investments into large hits give them a better risk/reward profile than projects in Europe.

There is some evidence, however, that the capital market can have an important effect on employment because of the influence that owners exert in the product market. Owners of existing enterprises often lobby government officials with the hope of erecting product market barriers and limiting new entrants. A truly

aggressive profit maximizer would not behave in this way. Such an entity would attack product market barriers that limit the profit that can accrue to any single player. WalMart has recently exhibited this type of behavior in trying to overturn regulations preventing it from operating in Vermont. Large real estate developers in the U.S responded to similar incentives by pushing for changes in zoning regulations that would make more land available. These actions might reduce overall industry profit, but they enhance the chance that a single enterprise could maximize its return.

RESULTS BY COUNTRY

These findings from the cases and the aggregate data provide many explanations for the country-specific employment patterns we noted at the beginning of this report. Product market barriers played a major role in dampening the demand for labor by making it more difficult for enterprises to compete and add customer value, particularly in the naturally expanding service sector. They also allowed many manufacturers to survive or even flourish until 1980 despite low productivity levels, and thus contributed to the extent of restructuring that had to occur during the 1980s. Labor market rigidities also played a role in making transitions from one sector to another more difficult, particularly when workers needed to shift from high wage to low wage positions. The relative importance of each of these factors varied somewhat by country.

- France had weak job growth in both manufacturing and services during the 1980s. Restructuring occurred in manufacturing and in many traditional parts of the service sector because of slow demand growth and the disadvantaged productivity/wage position of many companies. Numerous product market restrictions have inhibited new job creation in services and construction. High benefit levels and payroll taxes have further reduced employment opportunities in lower wage industries such as retailing.

- Italy experienced strong employment growth in the service sector, but it was not sufficient to compensate for heavy losses in manufacturing and agriculture. Employment declines occurred in all branches of Italian manufacturing as high productivity growth was unmatched by output growth. The pace of restructuring was more rapid in Italy than elsewhere because of the low initial productivity of many Italian manufacturers. Companies that had historically faced little competition in Italy's oligopolistic markets began to face pressure to become more cost competitive. Service employment grew, but much of this occurred in traditional products rather than in emerging areas like mortgages, securities, new retailing formats and cable networks.

- Spain began the 1980s at an earlier stage of economic evolution than did most other countries in Europe. Large numbers of people were still occupied in agriculture and traditional manufacturing industries.

During the decade farm jobs were lost as productivity increased. Spain also lost manufacturing jobs despite low initial penetration of investment goods. High real interest rates dampened demand growth in investment goods while low productivity levels, increasing wages, and a real appreciation of the peseta caused the increase in demand which did occur to be fulfilled by imports. Spain did increase service sector and construction employment, but numerous product market barriers kept this from being enough to absorb the outflow from manufacturing and agriculture.

¶ Germany began the 1980s with a high level of manufacturing productivity relative to the rest of Europe. This helped its manufacturing companies to gain market share in Europe during the 1980s and postpone major restructuring. The resulting small loss of employment in manufacturing allowed Germany to have better job creation performance than the rest of Europe despite the slowest growth in service sector employment. Product market restrictions in services and construction and high total labor costs have reduced job creation in many of the emerging sectors of the economy. The unsustainability of this development became obvious at the beginning of the 1990s when large numbers of layoffs in the manufacturing sector could not be absorbed by the service industries and consequently led to an increase in the unemployment rate.

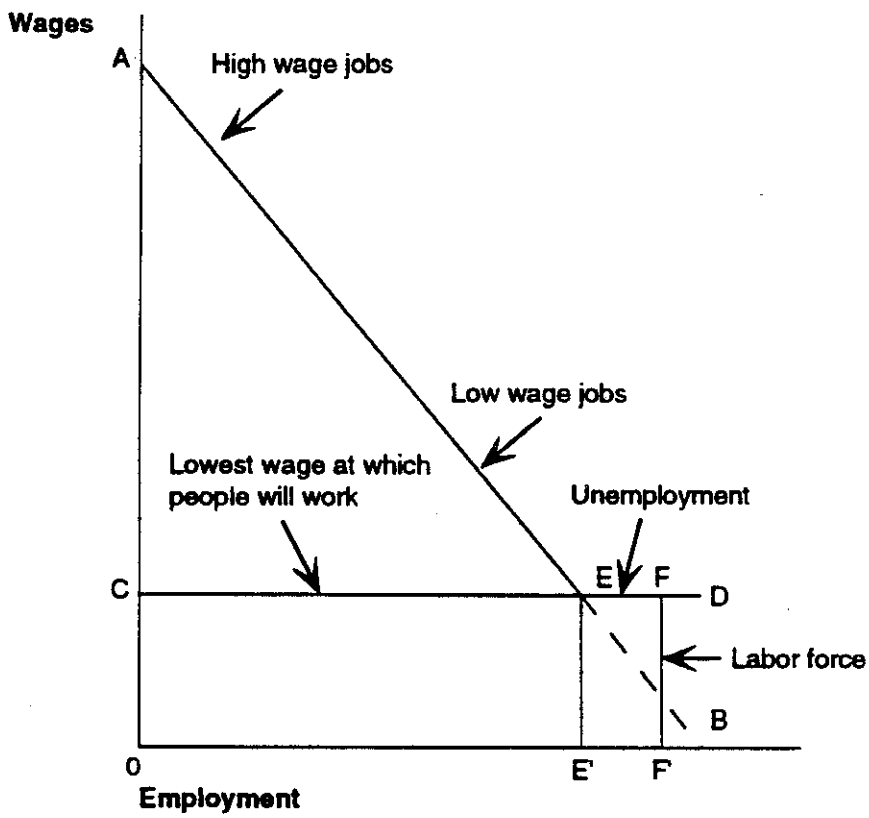
¶ Japan experienced employment increases in both manufacturing and services during the 1980s, though the sustainability of many existing jobs remains in question because the country avoided much of the restructuring which took place in the U.S. and Europe. High productivity industries such as auto and machine tools were able to increase employment while extending their worldwide lead in productivity because Japan experienced an extraordinary increase in demand for investment goods during the bubble economy of the late 1980s. Lower productivity industries like retailing and food processing were often protected from foreign competition and prevented from evolving rapidly, and thus remained uncompetitive. Significant employment dislocations are likely to occur in both types of industries in the future. Demand for consumer durables and investment goods will slow now that product penetration levels have approached western levels and industries are experiencing overcapacity. Consumer pressure for lower prices will force productivity to rise in the lagging industries or will result in increasing imports.

¶ The U.S. lost a few manufacturing jobs as a direct result of its increasing trade deficit, but it lost even more to the corporate restructuring which took place in response to intensified Japanese competition. Its overall employment performance did not suffer, however, because the country created very large numbers of service sector and construction jobs. These were stimulated by relatively few restrictions in product markets and some facilitating regulation. About half of the jobs created were

Exhibit 9

EMPLOYMENT AND UNEMPLOYMENT

ILLUSTRATIVE



Source: McKinsey analysis

high skill jobs, but low unemployment benefits and low payroll taxes also made it possible to expand employment in low skill, low wage industries such as retailing.

HOW GENERAL ARE THESE FINDINGS?

The aggregate data led us to hypothesize that barriers to the evolution of employment had inhibited job creation and that the combination of the speed of the underlying economic evolution and the height of the barriers explained cross-country employment performance differences. We concluded that adequate evidence was not available to confirm this hypothesis. The case studies show that countries that were subject to strong international competitive pressure experienced more rapid restructuring in their manufacturing sectors and released large numbers of workers needing to find alternative jobs. The case studies of services and construction provided substantial support for the view that differential barriers to employment growth at the industry level explain why new jobs in these industries were created much more rapidly in some countries than others. Overall, therefore, our hypothesis has been supported at the micro level.

However, some questions remain about the validity of our explanation of employment performance differences and the extent to which lifting market restrictions at the industry level would increase aggregate employment. First, the literature based on aggregate data has suggested that barriers in the labor market, especially unemployment benefits and wage rigidities, are paramount in explaining employment differences, whereas the case studies indicated that product market barriers were more important. Second, is the question of whether increasing employment in one industry (e.g., by removing product market barriers) will simply reduce employment in other industries. Third, any increases in employment may simply be inflationary. In this section we attempt to resolve these reservations.

We begin by revisiting the simple framework that was introduced in Chapter 2 (Exhibit 9). The framework assumes initially that wages and prices are set in competitive markets where allocation decisions are made on the basis of marginal costs and benefits, but but it can also be used to show how specific market interventions or distortions, such as product market restrictions, unemployment insurance benefits and wage rigidities give rise to excessive unemployment.

An employment framework[2]

With this framework one can easily show how aggregate employment is determined by the productivity (and hence the wage) of the lowest skilled workers and the level of the "reservation wage," the lowest wage at which people are willing to work. The vertical axis includes both direct payments to workers and all the social costs involved in employing a person. The larger the "social cost wedge," the higher a worker's productivity must be to generate the same take home pay. The reservation wage will depend upon the extent of income support provided by unemployment insurance and other benefit programs, by minimum wages and by taxes. In reality this is not one standard amount for all workers. Former manufacturing workers with high historic wages but limited skills outside their narrow area of expertise will have high reservation wages (i.e., CD lines) and therefore little incentive to take positions in retailing or other expanding lower wage industries.

- In this economy, there is so-called "classical" unemployment in that removing all unemployment benefits and wage minimums would induce more employment, adding new jobs at the bottom of the wage distribution.

- If an economy becomes more productive and efficient (illustrated as an outward shifting of the AB line), then this will generally increase the amount of employment because more people will be above the reservation wage. In general, we can expect innovations and increases in productivity to increase the number of jobs with high wages as well as those with low wages. However, this conclusion may not hold if either technological change fails to increase the productivity of those workers who are below the reservation wage (skill-biased technical change), or alternatively, if the reservation wage rises in step with the increase in the wages available to the unemployed.

The framework is consistent with the literature on aggregate unemployment that stresses the importance of minimum wages, unemployment benefits, taxes, and other labor market factors. We judge that this model is correct in pointing to the reservation wage as a limiting factor determining the level of structural unemployment. Although they have not been the subject of our study, we know of countries such as Russia, with very low rates of unemployment and no unemployment benefits. The experience of these countries shows that if people

[2] The framework is a standard textbook version of a general equilibrium model. It can be described in mathematical terms using, for instance, Cobb-Douglas production functions. An example exploring product market restrictions, changes in benefit levels and technological change is available upon request.

are forced to choose between working and starving, they will work at something.[3]

This model of employment determination suggests that factors in both labor and product markets will play a role in explaining employment differences by influencing the supply and demand for labor.

Reconciling the case studies with the implied importance of labor market factors

If we are to use this framework to help us understand how employment is determined in actual economies, we must reconcile its implications with what was found in our case studies. Why did labor market factors not show up more strongly in our case studies, when the framework suggests they are important?

The framework suggests that fewer people would want to work in countries with generous unemployment benefits, yet we found only a few cross-country differences in companies' ability to find people to fill available positions. This apparent inconsistency occurs because each country has wide variations in the pool of unemployed and the companies looking for employees.

- Where benefit levels are high relative to wages in low wage, low skill jobs, the financial incentive for many workers to accept these jobs is low. There will be a pool of unemployed skilled workers unwilling to accept the low wage jobs immediately available to them, but willing to accept high skill jobs if or when they appear. If unemployment benefits provide a sufficiently comfortable lifestyle, some of this group may resist taking a job in a new industry or geographic area even if it pays relatively well because it is not consistent with their formal training. This appears to be taking place in Germany where 40 percent of the unemployed have apprenticeship qualifications. There is, however, also a pool of people who have never worked or who have only worked in low wage industries. These people will be willing to accept entry level positions in low wage industries, and thus will allow these areas of the economy to show job growth.

- A company's ability to attract workers is directly related to the wages it pays. High wage industries, like many of those included in our study, will not report difficulty in attracting workers. Availability problems will be limited to lower wage sectors. In our case studies we did find

[3] Another aspect of the Europe/U.S. comparison helps support the validity of our employment framework. The framework implies that high social benefits will increase average worker productivity because all of the low productivity jobs and workers will be pushed into unemployment or early retirement leaving the average productivity of those still employed higher. This is consistent with European countries such as France that have high relative productivity levels in services even though we have found that service sector innovations have generally diffused much less than in the U.S. In Europe, the low productivity jobs have been cut off and average productivity is high. (A caveat to this conclusion is that cutting off some jobs may inhibit innovation.)

examples of companies (in retailing and construction) that had trouble recruiting workers because of the disincentives created by social benefits. We did not, however, interview employers who could make profits only if they paid wages below the reservation wage, because there are no such employers. For example, some retail formats are not viable when minimum wages are high. This means that our interviews will understate the extent to which minimum wages or benefit levels are the constraint on job growth.

- Low wage sectors experience an additional labor market constraint. Taxes levied on workers close to the reservation wage are high relative to the actual wage paid. For example, the employment tax paid for video rental sales clerks in Italy effectively doubles employers' out-of-pocket expenses. This social cost wedge often makes it uneconomic to hire additional workers. The productivity of a clerk's job must be well above the reservation wage in order to make it viable from both the employer and the employee's standpoint.

For these reasons we judge that the employment framework, the aggregate results, and our case studies are mutually consistent and point to both labor market and product market barriers to job growth. This conclusion differs from much of the prior literature that stresses only the former. The level of employment in an economy depends not only on the reservation wage, but also on the job opportunities available.

Product market distortions and employment

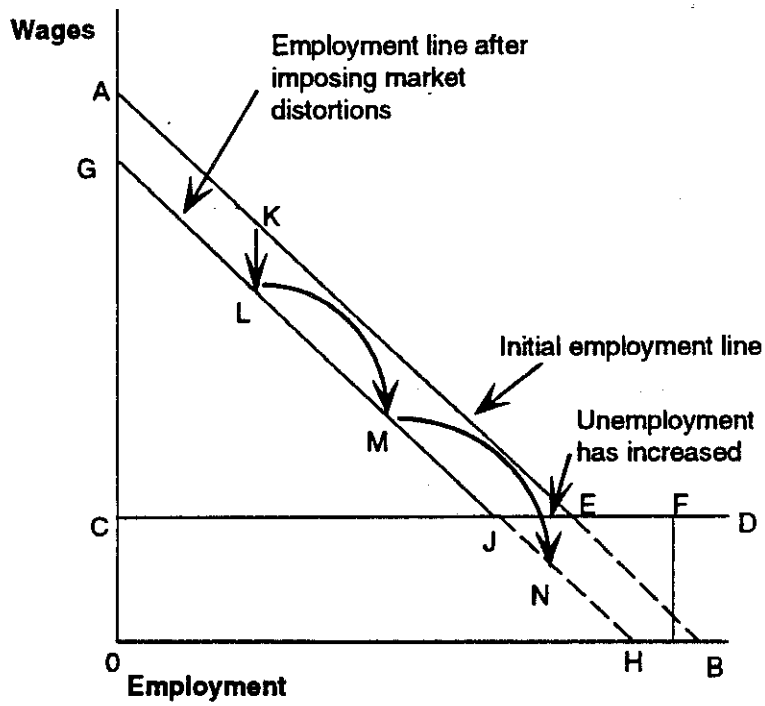
Product market restrictions hurt either productivity or employment or both. If wages are free to fall, then employment can be maintained, but the loss of productivity keeps real wages low. If wages are maintained, then restrictions show up in unemployment. The employment framework can be used to illustrate how market distortions can reduce aggregate employment. Zoning restrictions that make land unavailable for residential construction or that prevent the creation of shopping malls will reduce employment in the construction industry, mortgage banking and retailing. We will show that market restrictions such as these make an economy less productive at the aggregate level and reduce the number of jobs that are above the reservation wage.

A market economy encourages workers to move to their most productive activities, since high marginal productivity will tend to be reflected in high wages. High productivity will also translate into high value to the customers buying particular goods or services. If a product market restriction or market failure displaces employment from its most productive use, then the workers must find other employment where they will have lower productivity. In this new activity the goods or services produced will have lower value to customers. If workers that are prevented from being employed in their best jobs cannot find alternative employment opportunities that have a productivity high enough to

Exhibit 10

THE IMPACT OF PRODUCT MARKET DISTORTIONS ON EMPLOYMENT

ILLUSTRATIVE

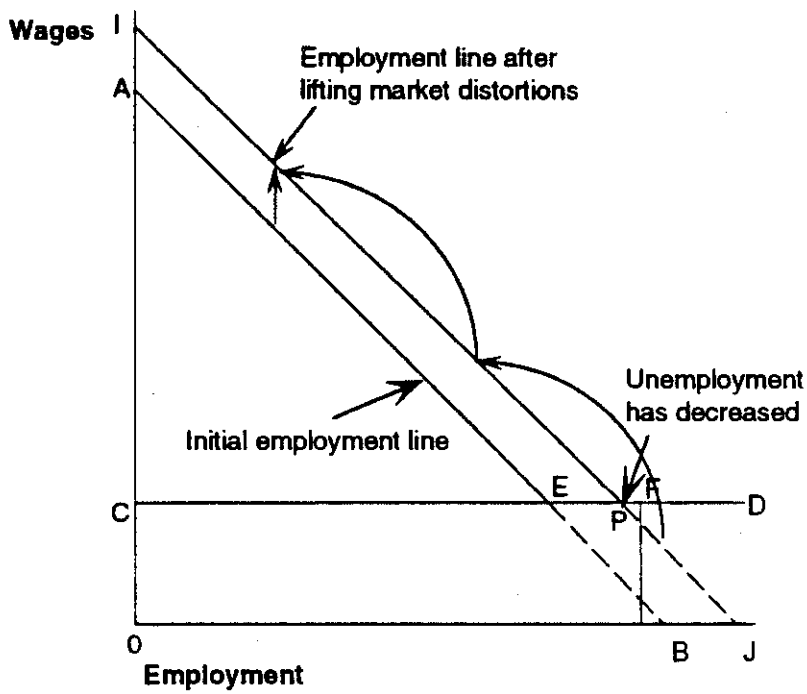


Source: McKinsey analysis

Exhibit 11

THE IMPACT OF LIFTING A RESTRICTION ON EMPLOYMENT

ILLUSTRATIVE



Source: McKinsey analysis

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provide a wage above their reservation wage, then they will remain unemployed. If an innovation generates new employment and shifts customer purchases, then this indicates that it is adding to the productivity of the economy and adding to total customer value.

In Exhibit 10, we show the same lines AB and CD that were drawn in Exhibit 9, but we have added the line GH, which is the new employment line that results in an economy where regulations have prevented jobs with high or adequate market value from emerging. The framework shows that a restriction, such as zoning that reduces the amount of land available for construction, will shift the employment line down. We extrapolate from this to the many-industry case as a shift from AB to GH.

In an economy with this restriction, someone who would have held a job at point K along AB can no longer obtain that job. That person moves to a job at point L on line GH, but the person who would have held that job in the efficient economy is bumped down the ladder and ends up at point M. Then the next person is bumped to point N, except of course, this is below the cutoff and the person ends up unemployed. In this illustrative example, distortions in the product market that have prevented high value jobs from emerging have actually resulted in an increase in unemployment among low skilled workers. The unemployment is still in a sense "caused" by social benefits, but the distortions of the product market have been the real reason for the excessive unemployment.

One of the observations that is made about the rise of European unemployment is that it has occurred over a period when social benefits and minimum wages have not increased (they have actually gone down in some cases). This framework may help us understand how this could occur. If market distortions have worsened, or if existing rules have had a larger effect over time because of the changing structure of the economy (the shift to services), then even lower social benefits will end up "causing" more unemployment.[4]

In Exhibit 11, we show the opposite case to the one given above, where market restrictions are lifted and this moves the employment line out from AB to IJ. This increases the availability of jobs along the spectrum of wages, allows skilled workers to move up the job ladder, and opens up opportunities for the less skilled to move out of unemployment.

An innovation that leads to a new product or service of sufficient value to customers will have an equivalent effect. By providing higher productivity jobs for some people, it will increase the number of available jobs above the reservation wage and increase overall employment. Economies that have the freedom to innovate (either drawing on their own inventions or by adopting the inventions of others) will create a more rapid flow of new jobs. Economies that discourage or restrict new lines of business will create fewer jobs.

[4] Technically, it is possible that adding new distortions could offset existing distortions and the economy would be more efficient and employment would be higher. We do not view this as the normal case, however. Adding new distortions to offset old ones is a recipe for long-term economic problems.

Not all distortions are the result of government actions and not all government actions create distortions that lower productivity. In banking, for example, Fannie Mae and Freddie Mac facilitated employment gains. And policies to encourage competition will also be pro-market rather than distorting.

Potential reservations about these conclusions and responses to them

The employment framework corresponds in many respects to the behavior of actual economies and is consistent with what we have found in our aggregate and case study analyses. We believe that it makes a case for reducing market distortions as a way of increasing employment. But it is obviously only a simplified example and may give a misleading picture. We cannot verify our conclusions in a complete manner; economic issues are rarely amenable to this. But we can give some additional reasons why lifting market restrictions will increase aggregate employment, plus some cases where we think additional conditions beyond those discussed in the employment framework may be needed in order to bring this about.

- **Employment creation in one industry need not displace other employment**. Suppose a country lifts a zoning restriction and allows more construction and retailing. There are additional jobs created in these industries, but what if these jobs are created at the expense of jobs elsewhere? The people buying the houses will cut back on something else, and reduce output and labor demand in another industry.

  We cannot rule out that there are distributional effects that result from lifting product market restrictions. But, provided three conditions are met, the presumption is that the increase in employment generated at the industry level will translate into an increase of comparable magnitude in aggregate employment. First, aggregate demand must increase in step with the increase in supply. Second, the output increase must be noninflationary. And third, the workers must either come from the unemployed, or else the new jobs created must open up some places on the bottom of the job ladder that allow currently unemployed workers to move up. In other words, there must have been slack in the labor market prior to the lifting of the restriction.

  The reason these conditions are enough is that adding to total employment has simultaneously added output (supply) and income (available to be spent and to create demand).[5] The employment framework itself supports this point. Provided the new jobs are productive, GDP has gone up because workers that were not producing anything before are now doing so, and this increase in GDP is also an

[5] We take it for granted that macroeconomic policy looks after the aggregate balance and thus are able to focus on industry-by-industry effects.

increase in national income. In the case where construction is increased, the people that buy the newly built houses have taken income that they would have used for something else. But the wage and profit income received by the workers and companies building the houses is additional income available to spend. It replaces the spending that the home buyers were making on things besides housing – not exactly in the same way, of course, because different people spend money on different things, but this distributional effect is likely to be small.

¶ **Aggregate demand can increase with the increase in supply**. The employment framework has a limitation in that it assumes economies will always reach their potential output, except for the effect of the specific distortions built into the framework. In practice, the actual performance of economies will differ substantially from this potential level. If macroeconomic policies or the natural variability of the business cycle has pushed an economy into recession because of inadequate demand, then employment will be lower and unemployment higher than the framework suggests. There will be cyclical unemployment in excess of any classical unemployment and many high wage and high value jobs will be lost.

Some economists argue that unemployment in Europe could be reduced to acceptable levels by means of a stimulus to aggregate demand with no acceleration of inflation. Others strongly disagree, pointing to the chronic nature of the unemployment problem in Europe and suggesting that even when macroeconomic policies have done what they can, there will still be excessively high unemployment. This project will not try to resolve the issue of how macroeconomic policies can or should be used, but we do need to make clear what it is we are assuming as we suggest that aggregate employment can be increased by microeconomic policy changes. We are assuming that if market restrictions are lifted, then aggregate demand will increase and allow the increment to potential employment to be realized. This could occur naturally as the increased economic activity that results from the lifting of a restriction leads to additional consumption by newly employed workers or additional investments by expanding businesses. On the other hand, it could require some adjustment of macroeconomic policies.

¶ **Employment creation need not be inflationary**. As we noted in Chapter 2, those studies that have approached the European unemployment problem from a macroeconomic perspective have concluded that many of the unemployed are not providing a brake on inflation. There is excess labor that could be reemployed in newly created jobs without creating inflationary pressure. Lifting market restrictions can be expected to be less inflationary than expanding aggregate demand because it adds to supply (to potential output). To the extent that deregulation increases competitive intensity and leads to the creation of new businesses that compete with existing businesses, it

may actually hold down price increases, rather than stimulating inflation.

- **Workers will have to relocate and develop new skills.** We did not find that lack of availability of skilled workers was a binding constraint on job creation for the industries that we looked at. But if there were a major expansion of employment opportunities in Europe, in new lines of business and geographic locations, this might require more labor market flexibility than has been required in the past in order that the employment gains be fully realized. In terms of the framework, the "bumping up" process must take place.

- **Distributional effects make it hard to remove restrictions.** In the example of lifting zoning restrictions, there would be substantial redistributional effects among landowners. A sudden increase in the availability of land for construction would cause a drop, possibly a sharp drop, in the price of land that was already approved for urban use. Those whose land was rezoned would benefit and those whose land was now competing with the new land would lose. In another example, workers with protected jobs in state-owned companies will lose if new competition is permitted from private entrants to an industry. Provided the restrictions that are lifted raise overall GDP, there is a net increase in economic value in the economy, but the losers are likely to work hard to protect their interests. Obviously, the employment creation will not take place if vested interests prevent the freeing of markets.

CONCLUSION

Product market restrictions have historically received little emphasis in discussions of differential job creation. However, some economists and policymakers are beginning to question the relationship between these restrictions and the unemployment problems facing many industrial economies. The synthesis of our work has provided new support for the conclusion that employment performance and product market restrictions are linked and, we believe, has shown that these restrictions result in less employment. We have emphasized that market economies continually destroy and reallocate jobs and that they must create a constant flow of new jobs in order to avoid aggregate employment problems. While labor market factors, such as unemployment benefits and minimum wages, are an important limitation on aggregate employment, product market restrictions are probably more important and have been neglected as barriers to job growth.

Even if product market restrictions are no worse than they were in earlier periods, the pressure coming from constant economic change will likely cause their effects to grow worse. The evolution of demand over time will require the growth of new employment opportunities in construction, retailing, banking and

other services. The real question in Europe is whether policymakers are willing to take the steps required to facilitate the employment creation all agree is needed.

Chapter 5: Implications

Policymakers have a number of opportunities to address the employment problem. Discussions in the past have focused primarily on two broad sets of actions to lower unemployment: remove labor market rigidities or stimulate aggregate demand. The main implication of our study is that we find further areas of improvement. Product market regulations (i.e., regulations in the markets in which firms sell their goods and services) strongly affect the creation of new businesses and slow down the rate of job creation, especially in the service sector. Policymakers have numerous opportunities to encourage job creation by deregulating and we judge that these actions would be preferable to other options. Removing product market barriers represents the area of greatest opportunity as it will lead to job creation across the wage spectrum. Removing labor market barriers will stimulate employment growth mainly in low wage categories. Product market deregulation involves reviewing a number of trade-offs and overcoming vested interests. But given the extent of the problem, bold actions are required.

Our study focused on identifying fundamental drivers of differential job creation. Given Europe's weak performance in job creation, many of our implications will apply mainly to European countries. It is in Europe that we find the largest potential for deregulation in the product market. Europe also has some of the most restrictive labor market barriers. Relaxing these barriers will be necessary for job creation in sectors that use predominantly low skill employees. The two courses of action may be somewhat linked; deregulation in the product market increases competitive intensity, thus forcing companies to overcome labor market barriers when their financial position deteriorates severely.

In this chapter, we discuss implications for both policymakers and company executives. While this study is addressed to both groups, we find that most implications concern policymakers. The first section identifies actions that encourage job creation. Maximizing job creation, however, may not be the only goal of policymakers. The second section discusses the broader implications of the findings of our study and addresses the perceived trade-offs between employment and other objectives.

ENCOURAGING JOB CREATION

We have found that not all economies evolve at the same rate and capture the benefits of this evolution equally well. In general, when market forces are allowed to work in a relatively unobstructed way, supplemented by judicious monetary and fiscal policy, economies are able to adjust to a changing

environment and provide jobs for those wanting to work. This leads to short-term restructurings but a strong employment performance in the long run. We observed that employment in manufacturing is stagnant overall and that the main opportunities for new value creation exist in services. Given the right incentives, existing companies and entrepreneurs will identify and exploit previously unmet customer needs and translate these business opportunities into jobs. Nothing leads us to believe that these needs and opportunities are fundamentally different in the countries analyzed.

However, governments intervene in a significant way in the economy, often creating disincentives for potential employers to create jobs and for potential employees to accept them. There are considerable differences in the degree of intervention across countries, and those differences explain employment performance differences to a large extent. In our case industries, we found significant opportunities to relax product market barriers and deregulate. Deregulation does not mean, however, that governments should not and cannot play an important positive role. Public policy can be important in terms of removing externalities, correcting for inefficiencies and facilitating market functions.

Market forces are restricted in three areas: product markets, labor markets and capital markets. Given that the current debate largely neglects the importance of product market regulations for job creation, we discuss this factor first.

Relaxing product market regulations represents large job creation opportunities

The most important implication of our study is that policymakers have numerous opportunities to change the regulatory framework to stimulate job growth. The regulatory environment strongly determines output and employment growth in the long run, especially in service industries which represent the main areas of job growth opportunities.

- **Abstain from regulations limiting competition even if they are intended to preserve jobs.** These regulations may help employment in the short term by smoothing shocks associated with rapid economic change. However, they often have unpredictable effects unforeseen by policymakers. We find that in the long run, these regulations are unsuccessful in preventing restructuring while they do result in limiting or delaying employment growth in high productivity areas.

  Our cases show that vested interests often play a role in introducing and maintaining these restrictive policies and regulations. Bold actions will be required to overcome these vested interests. Strengthening general antitrust regulations and removing barriers to market access are important instruments for increasing competitive intensity and overcoming vested interests. Approval procedures for new stores where existing retailers have veto power are an example of anti-

competitive regulations. These kinds of regulations were more prevalent in countries with low employment performance and low productivity.

- **Review industry-specific regulations in terms of their employment impact.** Many regulations either restrict input or output of a given industry, or are oriented towards governing the type and specification of products and services generated. Even if the original intent was unrelated to jobs, these rules may have a significant impact on employment. Examples include zoning laws in retailing and construction, content and advertising regulations in film/TV/video, and product regulations in banking. Many of these regulations affect industry structure and, thus, employment. A detailed review of these regulations should make the trade-offs between objectives more explicit and could lead to the elimination of unnecessary, outdated restrictions. Other policies, however, will remain in place if the specific objective (e.g., the maintenance of green spaces) seems more important than the creation of jobs.

- **Introduce regulations that guarantee intellectual property rights, encourage experimentation and provide the right competitive environment.** These facilitating regulations help to assure long-run market demand and are especially important where the diffusion of new technologies or new products is accompanied by uncertainties (e.g., banking and film/TV/video). In the banking case, for example, we found that the U.S. government played a facilitating role in both the mortgage and securities sectors. In both areas, facilitating regulations were important in generating output and employment growth.

Relaxing product market restrictions will stimulate economic activity, allowing potential employers to better identify growth opportunities and offer products and services in these areas. It will also stimulate demand through lower prices.

Regulations affecting the process of job creation occur at the regional, national and multinational level. While many of the existing restrictions were introduced at the national level, a significant impetus for change is occurring in multinational organizations. The Common Market and Maastricht treaties, as well as trade agreements in North America, Europe and Asia, provide opportunities to increase competitive intensity. We believe these forces will lead to job creation and productivity improvements in the long term.

The regulatory environment is not the only factor affecting the product market. Aggregate demand, consumption patterns and penetration rates also influence the demand for certain products. In our study, we included demand growth as a causal factor in the product market. In most instances, policymakers have little influence over demand factors at the industry level. For example, Japan's rapid demand growth after World War II is partially due to low initial penetration levels (e.g., in vehicles per capita) which then caught up to European standards. We do, however, observe that demand factors are not entirely exogenous.

Growth in output and employment in one sector can have a number of multiplicative effects on the economy as a whole. Therefore, the benefits of innovation and deregulation in a few industries may spread to the whole economy. We will discuss the impact of aggregate demand policies on demand for a given product in the second section of this chapter.

Reforming labor market institutions is also needed

Our main finding related to labor market barriers is that they generally affect job creation at the lower end of the skill/wage spectrum. High benefit levels, minimum wages and labor market institutions leading to high wages have an impact on both labor supply and labor demand.

Labor costs affect employment through different mechanisms. In domestic industries, which include most of the service sector, labor market factors affect employment negatively in two ways. First, high labor costs depress demand in a given industry; they result in higher relative prices and a lower output in that industry. Second, high reservation wages preclude the establishment and growth of some businesses, be they individual companies within an industry or entire sectors. High reservation wages have prevented European countries from creating jobs with low relative wages.

In internationally traded industries, we find that labor costs hurt employment due to their impact on trade. The implications and relative importance of this finding, however, are often misunderstood by the general public. It is the combination of labor costs and productivity levels that determines a company's competitive position in an industry. Our case studies in automotive and computers show that in individual industries, unit costs can play an important role in determining employment. The resulting implication, i.e., that labor cost growth should not exceed productivity growth, is well understood. However, it was not always followed in Europe or in specific U.S. industries (e.g., automotive).

We found evidence in our cases that the removal of the following labor market barriers would stimulate employment. They are discussed in descending order of importance.

- **Reform unemployment benefits and social assistance systems which essentially act as minimum wages.** We find in several cases that benefits, which were initially designed to provide temporary income support during job search periods, have become quasi-permanent income support systems creating disincentives for workers. While it is certainly necessary to provide a minimum level of protection, these disincentive effects have to be addressed. This can be achieved by lowering replacement ratios, limiting the duration of benefits or introducing stricter conditions. When reforming benefit systems, it

seems especially important to ensure that people are better off working rather than relying on assistance.

- **Increase wage flexibility.** Nationally-binding contracts without "opening clauses" in retailing and other sectors make it difficult for individual firms to respond to market trends in a flexible way or to experiment with new formats. Countries need to reform labor laws that produce excessive upward pressure on wages.

- **Reduce nonwage labor costs, especially for part-time work and low wage employees.** In Germany, for example, video store employment has grown due to the fact that employers were able to hire *Aushilfen* (temporary and part-time workers) with low nonwage costs. In France, this was not possible. An adjustment of nonwage labor costs may take the form of progressive social security contributions or of revising regulations that discourage part-time work.

- **Loosen mandatory restrictions on dismissal and facilitate dismissals on economic grounds.** Although this argument makes sense logically, we were unable to isolate and quantify the impact of such a disincentive. We did find, however, a few examples, such as Spain's "temporary contracts," where loosening protective regulations helped create jobs.

- **Revise laws requiring mandatory institutions for employee representation.** These often constrain firms from expanding and they represent a significant cost to employers. Many construction firms in Italy, for example, do not hire more than 14 employees in order to avoid having to comply with a number of requirements related to workers' representation.

Deregulation in the labor market will, to some extent, lead to a higher number of low skill, low wage jobs. Deregulation in the product market, however, will lead to job creation across the board. It allows countries to create high paying, high productivity employment instead of just jobs at the minimum wage level. This is one of the key reasons why we find implications related to product market factors to be of primary importance to policymakers.

Capital markets have indirect effects on employment

We observed a limited direct influence of capital markets on employment. This does not necessarily mean that governments can afford ineffective capital markets and state ownership without suffering an employment penalty. Government involvement and ownership and a lack of pressure from shareholders had a mixed effect on employment. These factors sometimes led to better employment performance over the period observed (e.g., in computers), while sometimes they led to worse performance (e.g., in the automotive

industry). They almost always led to lower productivity. Therefore, governments should privatize for productivity reasons without fearing aggregate employment losses.

There may, however, be a significant indirect influence of capital markets on employment and competitive intensity. An effective capital market is instrumental in overcoming vested interests against relaxing product and labor market barriers. If European firms are often shielded from shareholder pressure, vested interests will persist despite high costs to consumers. Large retailers, banks and contractors in the construction industry, for instance, have little incentive to remove product market barriers. Policymakers, therefore, should improve the effectiveness of corporate control in order to facilitate the deregulation process.

Implications for companies: innovation and continuous productivity improvements

All of the actions outlined above concern policymakers at the national level directly. The following paragraphs discuss how these actions affect the dynamics of a given industry and what the implications are for CEOs and companies operating in this industry. Companies are not primarily concerned about employment. The main objective of management in Anglo-Saxon countries is the maximization of shareholder value. Even in continental European countries, where other stakeholders play a more important role, employment levels are usually subordinate to profitability objectives. Companies can improve profitability through two fundamental levers: productivity gains and innovation.

- **Productivity**. Is increasing productivity and competitiveness compatible with the objective of creating jobs? Our aggregate data as well as studies of U.S. manufacturing establishments show that, in many cases, productivity gains coincide with employment gains. In mature industries, however, productivity increases may lead to job losses, given low output growth. Even in these industries, there is no implication that faster employment growth or maintaining employment can be engineered by slowing productivity growth. Holding back productivity improvements for fear of unemployment is dangerous, since it leads to maintaining uncompetitive jobs and to drastic restructurings later. The best option is to continuously increase productivity. In a deregulated environment, free of industry-specific barriers, companies will be forced to do just that. In the second section of this chapter, we will discuss in more detail the real and perceived trade-offs between productivity and employment.

- **Innovation.** Companies should focus innovation efforts both on providing new products and services to the customer and on automating and improving productivity. Both areas of innovation can

represent added value to the customer and can increase profitability. Since innovative products and services are characterized by fast demand growth, companies can increase productivity and employment simultaneously.

Companies can also influence the regulatory environment in both product and labor markets. Lobbying for product market deregulation allows them to pursue new business opportunities. Executives can also urge regulators to create more flexibility in work rules, which will enable them to hire people even if jobs are risky and temporary. Finally, companies can increasingly use workers on part-time and fixed-term contracts, allowing a better match of demand and supply of labor. Many of these changes may result in increased competition, and may thus not be in the interest of individual firms. But we find that successful firms are able to compensate for employment losses due to restructurings in some areas by increasing output, profitability and employment in new businesses.

Individual companies also have an opportunity to take action at the level of labor market institutions. Wages are largely determined through direct interactions between employer and employee organizations. It is up to employer organizations and individual companies to ensure that wages increase no faster than productivity and to introduce "opening clauses" in nationwide contracts, increasing their flexibility at the local level.

JOB CREATION IN THE CONTEXT OF BROADER OBJECTIVES

As the first part of this chapter has shown, actions that policymakers and companies undertake in order to create jobs may have broader implications. We recognize that creating jobs may not be the only goal of policy and that trade-offs have to be considered. We are concerned, however, that these trade-offs are not well understood. In the following sections, we will discuss the trade-offs between employment on one side and productivity, earnings, inflation and other objectives on the other side.

Productivity does not have *to lead to lower employment*

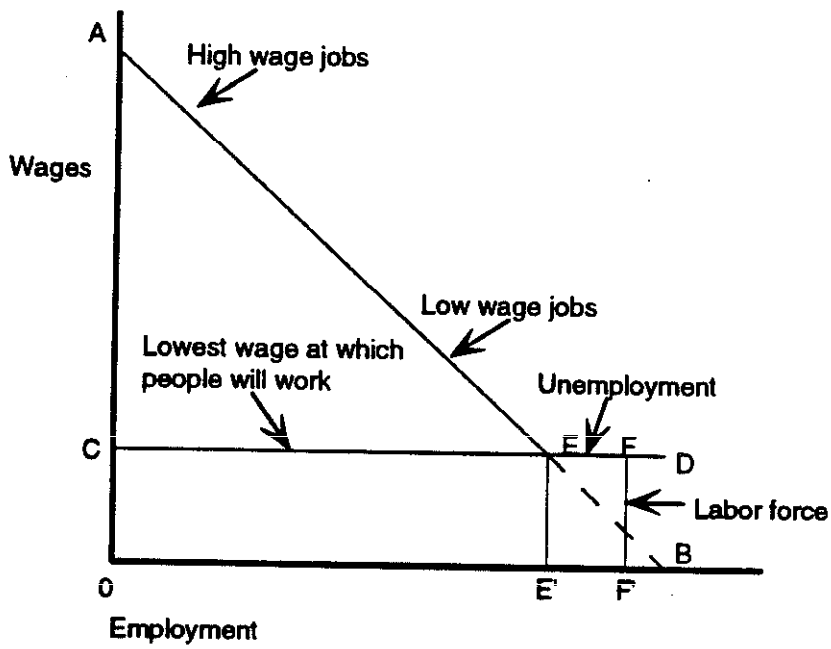
We conclude from our evidence that productivity gains do not necessarily lead to employment losses. We also argue that productivity improvements are a necessary precondition at the aggregate level to increase output and material standards of living.

In many cases (e.g., banking and computers) we observed a "positive productivity loop." Employment increased because price reductions led to higher demand which more than offset employment losses from productivity improvements. Aggregate data confirm that this positive productivity loop can

Exhibit 1

EMPLOYMENT FRAMEWORK

ILLUSTRATIVE



Source: McKinsey analysis

be observed in many manufacturing establishments. The price decline in a given industry can also result in a positive productivity loop in other sectors. Consumers spend less on one good and have more money to spend on other goods and services. This, again, leads to output and employment growth (see box in Chapter 1).

Often, however, large productivity increases result in a reduction of employment. News of mass layoffs at large firms, forced to improve their competitiveness, reinforce this perception in the general public. Foreign competition, innovation, and new technologies are often held responsible for this trend. We did find in our cases that in mature sectors, efficiency gains can result in significant lay-offs, since output increases are too small to offset efficiency gains. The furniture case provides an example of a mature manufacturing sector.

How can the negative, short-term employment effects of productivity gains best be minimized? We find in our cases that productivity improvements were highest when firms had fallen behind and were forced to catch up due to sudden increases in competitive intensity. French and Italian automotive companies in the late 1970s and early 1980s, for instance, were less productive than their German rivals. When trade within Europe increased and their financial results deteriorated dramatically, they had to adopt drastic measures in order to catch up. The best option is to continuously increase productivity and to not fall behind. In a dynamic and growing economy with a limited number of barriers to structural change, continuous productivity increases will not hurt employment.

We have used a framework with a downward sloping "employment line" and a horizontal "reservation wage" line to illustrate the impact of various product and labor market barriers on employment (Exhibit 1). The same framework can be used to illustrate the relationship between productivity and employment. The most obvious way to raise productivity is to cut off the least productive people at the bottom of the "employment line." This shortens the employment line and increases the average productivity of all those remaining in the work force. We argue, however, that economies can also shift the line upward, thus raising productivity without sacrificing jobs. Removing product market restrictions allows employees to use their talents in a more productive way.

Many of the causal factors we used to explain employment performance are also important in explaining a strong productivity performance. We find in many cases that restrictions on output and competition are an important causal factor explaining job creation differences. The same restrictions also limit competitive forces that lead to higher productivity. Encouragement of transplants, openness to trade, lower degrees of regulations and an effective market for corporate control help achieve both employment and productivity growth in the long term. The implications of our findings are thus broader than just pure job growth.

Job creation may lead to more employment at low relative wages

Creating jobs will, to some extent, require creating jobs at the low end of the wage/skill spectrum. In Europe, the U.S. employment performance is often considered to be largely driven by strong growth in low paid, "hamburger-flipping" jobs, resulting in a widening earnings distribution. A number of studies have shown that wages in the bottom 10 or 20 percent of male U.S. employees have dropped in real terms during the 1980s. Most European countries have avoided this negative trend. They cut off some of the low wage jobs through both product and labor market barriers by essentially raising the "reservation wage." This effect was clearly illustrated in some of our cases, such as retailing and construction. Cutting off low paid jobs helped European countries raise their average productivity and increase average real wages of employed low-skilled people. However, it also increased unemployment and thereby lowered GDP per capita.

While it is true that the U.S. experienced some employment growth at relatively low wages, this phenomenon is often exaggerated. The U.S. also had stronger growth than Europe in high skill, high productivity jobs. Also, the general perception that all service sector jobs are low wage jobs is wrong; in fact the wage distribution in services is about the same as in manufacturing.

Many European countries today realize that they need to reform their systems of social benefits in order to bring low-skilled people back into the labor market. We judge that this is compatible with social objectives for two reasons. First, evidence suggests that if policymakers focus on removing regulatory barriers in the product market, job growth will occur across the board. Second, we believe that there are better and more efficient ways to deal with distributional issues than through regulations affecting wages and employment directly. If governments want to guarantee a certain minimum standard of living, it seems that an indirect (tax-based) way of intervention would lead to a better overall economic outcome. From a pure economic perspective, a person working is always better than an unemployed person. An employee produces output and contributes to GDP and national income; an unemployed person only consumes income through taxes levied on others. Earned Income Tax Credits or similar systems would allow countries to capture this output and simultaneously assure a minimum level of security.

Deregulation and aggregate demand management are not rival approaches

Our project has not had the objective of understanding trade-offs between employment and other macroeconomic objectives such as inflation. Essentially, we assumed that if changes in the microeconomic structures result in an expansion of employment and output, fiscal and monetary policies would accommodate this expansion properly. There is an intense debate, however, on

whether aggregate demand policies can have a positive impact on employment. We can neither confirm nor disprove this through the results of our study. We judge that there is no intrinsic conflict between supply- and demand-side oriented policies.

Under the right circumstances, aggregate demand management can help reduce unemployment. At Europe's current high unemployment levels, aggregate demand management may actually be the preferable option, given that it is likely to be faster and easier than deregulation at the microeconomic level. We do believe, however, that aggregate demand management bears an inherent risk in that it is difficult to "get it right." Also, such policies are today constrained by the need in many countries for structural budget consolidation.

Deregulation at the microeconomic level does not bear these risks and is always a "good" option. These measures can and should be introduced whether one believes that the economy is at or over the NAIRU (Non-Accelerating Inflation Rate of Unemployment). Relaxing product and labor market barriers is clearly non-inflationary. If product markets work efficiently, competition will not allow producers to absorb increased demand through higher prices and higher profits. Prices will stay down, output will grow and so will employment. If labor markets work efficiently, competition for jobs will not allow specific employees or groups of employees to use their insider power to achieve higher wages which, in turn, could translate into higher prices. Deregulation does have the disadvantage, however, of requiring significantly more time and effort since a number of individual policies have to be adjusted.

Employment and other public/social objectives

In several cases we found that employment creation could involve potential trade-offs with other objectives of public interest. The following list is not exhaustive but provides a few examples found in our cases.

- **Safety and reliability of the banking system**. The banking sector is one of the most regulated sectors in the economy because it provides critical financing and transaction services to the economy as a whole. Deregulation is often delayed because policymakers may fear that it would endanger the safety and reliability of the system. The problems which U.S. S&Ls experienced in the late 1980s are often cited as an example. We found in our case that this trade-off between job creation and safety is largely unfounded. Only a small fraction of U.S. employment growth is due to an "unhealthy expansion of lending at S&Ls," and after correcting for the fast growth up to 1987, the U.S. still has the best employment performance.

- **Maintenance of an agricultural base and protection of the environment**. We find that an expansion of the construction and retail sector would require a relaxation of zoning laws. The electorate in

several European countries has repeatedly indicated that it puts a high value on the maintenance of an agricultural base, the establishment of "green zones" near urban centers, and on limits to built-up areas. Nevertheless, European countries should review whether agricultural interests could be maintained while rezoning farm land close to major metropolitan areas.

- **Maintenance of neighborhood stores and of lively urban centers.** Restrictions on new retail formats are at least partially based on a desire to maintain the social fabric of neighborhoods and urban centers. Also, policymakers do not necessarily want to encourage increasing dependency on private transportation. As a result, many European countries restrict the construction of suburban malls and superstores. Despite the efforts of individual cities to revitalize downtown areas, we observed that this choice usually led to lower retail employment levels.

- **Stability of employment in a time of rapid structural change.** The structural changes we have described in this report may require many employees to remain flexible and adjust to changes in the marketplace several times during their life. This represents a significant "human cost," either in terms of required educational and professional changes or through increased regional mobility. A society may opt for a minimization of these "human costs" by holding back the process of structural change deliberately. This choice would likely result in lower standards of living and slower overall growth in net employment as the economy is unable to benefit from all potential productivity improvements.

There is no easy answer to these trade-offs. The last three issues mentioned above certainly represent real choices between conflicting societal objectives. They have to be addressed individually through a country's political decision-making process. Most episodes of deregulation will create winners and losers, even if trade-offs are purely economic. We expect the gains to exceed the losses but losers will feel unjustly treated, and in a sense they are correct. Long standing regulations affect people's decisions. The owner of a small retail store has put his life savings into his business. The value of his store is partially dependent on regulations, protecting him against competition from more efficient establishments. An abrupt change in regulations represents a significant economic loss for the owner. In this respect, deregulation in an individual sector always involves a trade-off between greater risks for individuals, and greater returns for society. The political decision-making process should recognize this and has the option of offering compensation or allowing a transition period.

Often, trade-offs between employment and other objectives are not made in an explicit way. Specific decisions and regulations affect employment in unforeseen ways. We also believe that objectives other than employment growth are often used to protect vested interests. Only if the trade-offs are made explicit can an informed debate take place. In retailing, construction, banking and film/TV/video, "insiders" take advantage of regulations and are able to

influence them significantly. It should be the objective of policymakers to separate insider interests as much as possible from objectives shared by the public at large. As to the trade-off between stability and job creation, it appears that the economic cost of stability (i.e. lower living standards) is becoming ever greater as natural evolution and global integration increase.

* * *

The recent rise in unemployment has led to an intense debate about potential cures for this important problem, especially in Europe. This debate is often tainted by ideology. Some people advocate wholesale deregulation, others refuse to even consider adopting some of the practices that made the U.S. successful. What is often lacking is a fundamental understanding of how individual factors affect decisions of economic actors and how important these decisions are in determining employment. We believe that our study adds to the understanding of the relative importance of these factors. We also believe that it opens the degrees of freedom for policymakers. Many countries have begun to review rigidities in the labor market. Removing barriers in the product market should provide a further stimulus for the creation of sustainable and highly productive jobs.