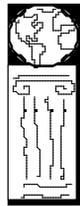


Poland's Economic Performance



**McKinsey
Global
Institute**

**Washington
March 2000**

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Preface

This report is an end product of a six-month long project by the McKinsey Global Institute on the economic performance of Poland.

McKinsey undertook this project as an important step in developing our understanding of how the global economy is working. Poland's economic performance during the decade of the nineties has been among the best among developing countries. Its performance has clearly been the best among economies formerly in the Soviet sphere. Moreover Poland weathered better than most other developing countries the global financial crisis of 1997 – 1998. We wanted to find out why Poland has had such good economic performance. We also wanted to address the issue of whether the market opening of the Polish economy will lead to such rapid productivity improvements that Poland will face an increasingly severe unemployment problem.

Our approach to this work has been to conduct a survey of performance in agriculture and manufacturing to assess the rate at which employment will likely be lost in these sectors as productivity increases. We have also conducted two specific industry case studies at the core of the domestic service industries. These case studies have been in residential construction and general merchandise retailing. Sectors such as these will likely need to grow especially rapidly in Poland in order to increase employment to offset employment losses in agriculture and manufacturing. In these two case studies we assessed the prospects for productivity and output growth and hence the likely employment evolution. In both case studies we found barriers to further productivity growth and output growth and assessed the impact of the removal of these barriers.

This report consists of three chapters and an executive summary. Chapter one presents the synthesis of our findings. Chapter two is the general merchandise retailing case and chapter three is the residential construction case. A core team of four consultants from McKinsey's Germany Office and the McKinsey Global Institute participated on the working team for this project. The Germany based consultants were Björn Klocke and Axel Flashbarth. The Global Institute consultants were Catherine Thomas and Amadeo Di Lodovico. The working team was assisted by Aneta Binienda, Przemek Obloj and Christian Senye, university students serving as interns in McKinsey's Poland office. Vincent Palmade of the Global Institute was responsible for the day-to-day management of the synthesis of our findings. The project was conducted under the direction of Jürgen Wilms, the managing partner in our Warsaw Office, and myself. We are grateful for comments on our work from Olivier Blanchard - MIT, and Sweder Van Wijnbergen

Bill Lewis
Director of the McKinsey Global Institute
March 2000

Contents

EXECUTIVE SUMMARY

CHAPTER 1: SYNTHESIS

CHAPTER 2: GENERAL MERCHANDISE RETAILING

CHAPTER 3: RESIDENTIAL CONSTRUCTION

Executive summary

Economic reforms in Poland have been more successful than in any other Eastern European economy (Exhibit 1). Polish GDP per capita is now 16% higher than at the start of economic reforms in 1989, and it has been growing at around 6% a year since 1992 driven by rapid improvements in labor productivity (Exhibit 2). Tight fiscal discipline, together with capital and product market reforms have allowed Poland to attract a large amount of foreign investment. This has been a key factor to its rapid economic growth and its ability to weather the 1998 global financial crisis (Exhibit 3).

In this report, we have conducted a limited study of the Polish economy to understand better the reasons for its past strong economic performance and identify possible areas for further reforms. Our assessment is based on the detailed analysis of two of the most important domestic sectors, general merchandise retail and housing construction, complemented by an aggregate survey of the agriculture and manufacturing sectors. We have also drawn important implications for Poland from our previous analysis of Russia, Brazil, South Korea, The UK, France and Germany. Given this limited scope, we are not able to forecast future output and employment growth for Poland.

Overall, we believe that there are no social issues which would warrant a slow down in economic reforms in Poland. Although high productivity growth is likely to reduce employment in manufacturing, new jobs created in domestic services should compensate, as long as the barriers to higher output growth are promptly removed, in particular in the area of land use and property ownership. This service employment growth would also, as in the past, cause a further decrease in unemployment and pull more workers out of agriculture. Failing to remove the barriers to output growth in services could, on the other hand, reduce the pace at which subsistence farmers transition into higher wage jobs and prevent further decreases of the unemployment rate.

- ¶ The rate of employment loss in **manufacturing** could markedly increase, resulting in a reduction of up to 4% of manufacturing employment in the 1999-2005 period, against only 1% loss in the 1992-98 period. This acceleration would result from both lower output and higher productivity growth rates in manufacturing.
- Lower manufacturing output growth, relative to GDP growth, is to be expected following the end of the post-transition adjustment, and as the normal shift of the economy towards the service sectors occurs.
- Productivity growth for manufacturing on the other hand should continue to be very high, as multinational companies continue to invest and transfer best operational practices to fill the large

remaining productivity gaps. The restructuring process could even accelerate with, in particular, lower protection from import tariffs and the expiration of the 'no layoff' clauses agreed upon in the privatization of many large industrial companies.

- ¶ Surprisingly, we found the situation to be less worrisome in **agriculture**. This is due to the fact that most of the 'small plot' farming households have managed to achieve relatively high levels of income by finding additional jobs outside of agriculture, mostly in services.
- ¶ In order to absorb the expected manufacturing employment losses and to continue the transition of subsistence (i.e. 'small plot') farmers into higher wage jobs outside of agriculture, increased economic reform is necessary in the **domestic sectors**. We found that low property taxes and the non-exposure to market level property prices of a large number of existing tenants are limiting output and employment growth in the two domestic sectors studied. Removing these barriers would allow the current investment by foreign players to continue.
 - Low property taxes reduce the incentives of local governments and landowners to make land available for retail and housing developments. This, combined with high land fragmentation, administrative red tape, and the risk associated with outstanding claims, results in very high land costs in Poland (Exhibit 4). High land costs limit the growth of land-and-labor-intensive productive businesses. These are the high service specialty chains in retail and the large-scale single family housing programs, which are the most productive and demanded form of housing construction.
 - Subsidized rents on state-owned real estate distorts competition in retail and, together with the unclear ownership status of former state-owned cooperative dwellings, reduces growth in new housing construction by limiting demand.
 - The growth of high service specialty chains is also limited by the fact that the established, low productivity, single product stores enjoy government rents at only 20% of the free market level. With the current restrictions on the growth of high service specialty chains, Poland runs the risk of ending up with a retail sector heavily biased towards high efficiency but low service and low employment formats, such as hypermarkets.
 - The demand for new housing is restricted by the fact that around 40% of urban dwelling tenants are still sheltered from market property prices through direct subsidies in the form of low rents, and low maintenance and utility charges, and through low payments required on non member-owned cooperative dwellings (Exhibit 5). The subsidized rents and low payments are associated with the dwellings themselves rather than tenants' income levels. Removing these market distortions would increase overall demand, helping to address the severe housing shortage

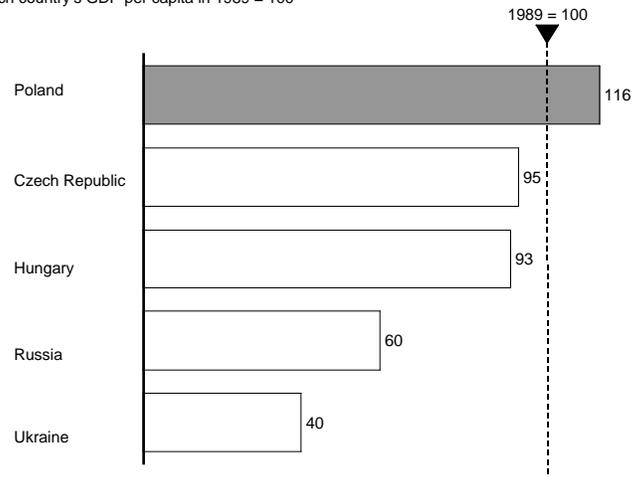
and increase employment in housing construction by 60% over the next 6 years.

- ¶ Going forward, Poland should also avoid the mistakes made by more developed European countries.
- The high cost of low skilled labor (the combination of high minimum wages and social contributions) is forcing French and German employers to cut down on low wage service jobs and expatriate low wage manufacturing jobs. High labor costs could soon affect employment levels in textiles and retail in Poland. It would be far better to complement the wage of low skilled people through targeted labor market supply side subsidies (e.g. the Earned Income Tax Credit in the US and the UK).
 - Restrictive zoning laws could hamper productivity and employment growth. For example, limiting the number or the size of hypermarkets would, like it did in France, freeze the growth of the Polish retail sector. Hypermarkets in Poland have helped to alleviate the city center market failure by making space available around them for the high service specialty chains.

If the barriers to output and productivity growth in domestic sectors are removed or avoided, Poland should continue to enjoy strong overall economic growth and be able to create enough new jobs to accommodate the expected increase in job losses in manufacturing and continue to pull workers out of subsistence agriculture to higher paid jobs.

GDP PER CAPITA IN TRANSITION ECONOMIES IN 1998*

Indexed to each country's GDP per capita in 1989 = 100

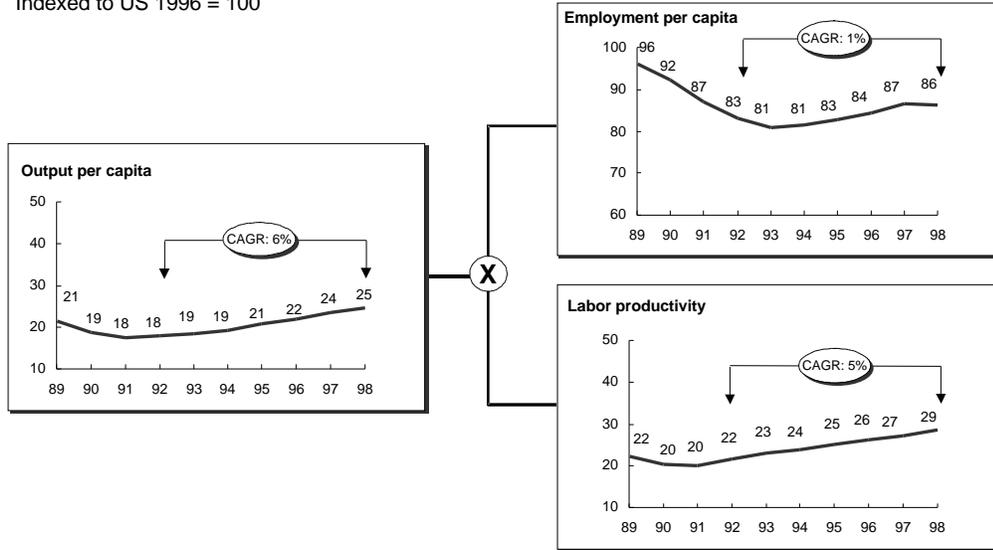


* 1998 estimate

Source: EBRD; Central Statistical Office (GUS); McKinsey Analysis

Exhibit 2

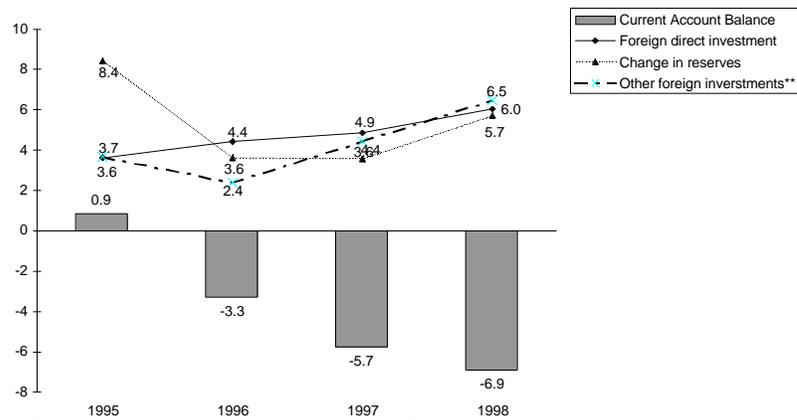
POLISH OUTPUT PER CAPITA TREND, 1989-98
Indexed to US 1996 = 100



Source: GUS; US Census; McKinsey analysis

Exhibit 3

FOREIGN INVESTMENT, CURRENT ACCOUNT BALANCE AND FOREIGN EXCHANGE RESERVES*, 1995-98
Billion USD



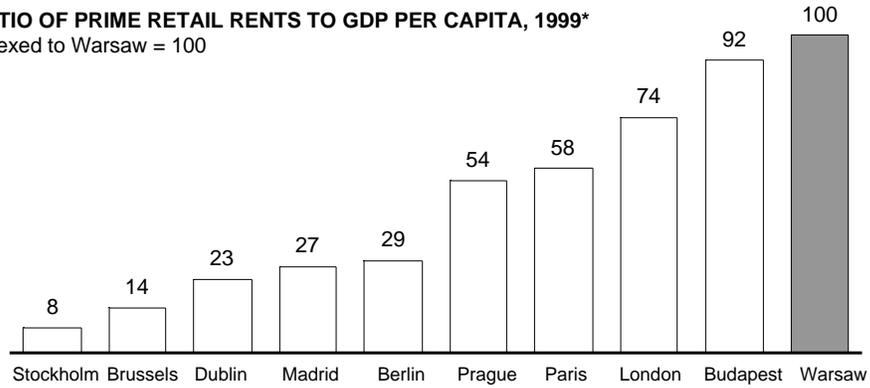
* Balance of payments on a transactions basis. Foreign Direct Investment as reported by the National Bank of Poland (using different methodology from PAIZ)

** Also includes "Errors and Omissions"

Source: National Bank of Poland

Exhibit 4

RATIO OF PRIME RETAIL RENTS TO GDP PER CAPITA, 1999*
Indexed to Warsaw = 100



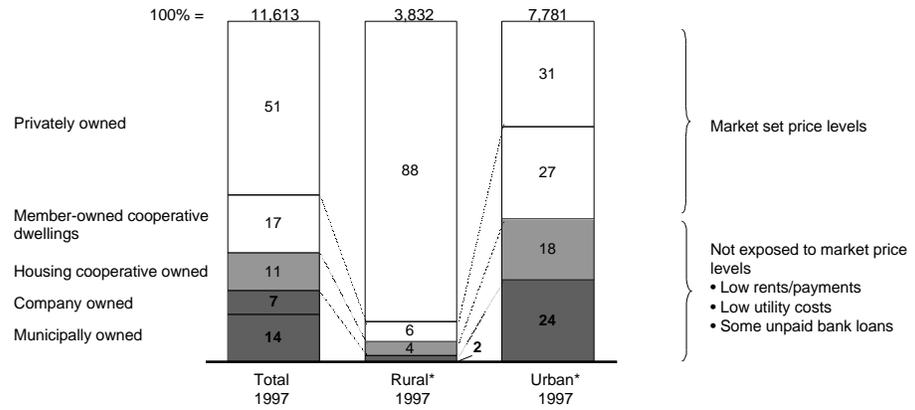
Rent USD/sqm/ month	Stockholm	Brussels	Dublin	Madrid	Berlin	Prague	Paris	London	Budapest	Warsaw
	62	96	116	105	215	77	400	380	103	80

* GDP per capita at market exchange rate for 1996
Source: Jones Lang LaSalle; OECD

BREAKDOWN OF HOUSING STOCK OWNERSHIP

Percent; thousand dwellings

ESTIMATE



* Assumes share of member owned to non-member owned cooperatives is the same as for Poland overall
 Source: Central Statistical Office (GUS); State Office for Housing and Urban Development in Poland; Interviews

Synthesis and Implications

We have conducted a limited study of the Polish economy to understand better the reasons for its past strong economic performance and identify possible areas for further reforms. We have analyzed in detail two of the largest sectors of the economy – general merchandize retailing and housing construction (which are summarized in this chapter). The complete sector case studies are described in separate chapters of this report. We have also conducted an aggregate survey of both the agriculture and manufacturing sectors.

In agriculture, we focused our analysis on the sources of income of various types of farmers to assess whether they are being left behind by the current economic progress. We did not study in detail the implications for Polish agriculture of joining the European Union. In manufacturing, we have estimated the potential rate of future job losses given, in particular, an assessment of future productivity growth in the sector drawing from our studies of manufacturing sectors in other developing countries.

Given this limited scope, we do not pretend to be able to forecast future output and employment growth for Poland. Nevertheless, our survey suggests that Poland could increase its chances of remaining on a high economic growth path if it promptly reforms its land and real estate markets. These reforms should also allow Poland to keep reducing its unemployment rate while continuing to pull workers out of low productivity jobs in agriculture.

This chapter consists of the following four sections:

- 1) Poland's past overall economic performance
- 2) Employment outlook in agriculture and manufacturing
- 3) Barriers to output and employment growth in services¹
- 4) Implications for policy makers

¹ For the purpose of this study, the definition of service sectors includes construction as well as 'traditional' service sectors.

POLAND'S PAST OVERALL ECONOMIC PERFORMANCE

This section gives an overview of Poland's past performance and the main policy actions taken since -the launch of market reforms in 1989. Understanding the past performance is necessary for assessing Poland's future growth and employment prospects. Based on our assessment of past economic performance, the remaining sections will provide an assessment of Poland's economic outlook. In doing this, we will place special emphasis on understanding the existing barriers for productivity and output growth in manufacturing and services and their effect on future aggregate employment.

Overview of main economic indicators

We assess Poland's economic performance at the aggregate level by comparing its past experience with that of the US and several transition economies. Taking the level of GDP (output) per capita as the measure of economic well-being, we disaggregate Poland's output gap into the differences in the level of labor inputs (employment) and labor productivity (the efficiency with which labor inputs are used to produce a certain level of output).

¶ **GDP per capita level.** Output per capita in Poland dropped by around 18% after the implementation of market reforms in 1989. In effect, communist era products and services found it difficult to pass the market test following price liberalization and a drop in government spending. Since 1992, however, output has grown steadily at an annual average growth rate of around 6% (Exhibit 1). As a consequence, and in contrast to most other transition economies, output has already surpassed pre-reform levels reaching, by 1998, 116% of the 1989 levels (Exhibit 2).

As a result of this growth, Poland has caught up with Hungary and Brazil in GDP per capita terms; it is now at around half of the level of Spain and Korea, and at one fourth of the US level (Exhibit 3).

¶ **Productivity.** The key factor in explaining Poland's recovery after initial reforms is the steady increase in labor productivity, which has grown at around 5% since 1991. Poland's overall productivity level is still low, at less than 30% of the US level on average, across all sectors of the economy. The level of labor productivity (output per unit of labor) reflects the extent to which an economy is making efficient use of its labor inputs. Past productivity growth has been the result of increasing capacity utilization in the remaining industrial assets, and more recently, from foreign direct investment in new productive facilities (discussed later in more details).

Our microeconomic analysis of other developing countries (Korea, Russia and Brazil²) has shown that productivity could grow very fast in most sectors of the economy. Although the skill level is low, trainability has never been found to be an issue, and due to on-the-job training, high productivity levels have been achieved by best practice companies with low skilled labor in all these countries. Relying on up-to-date technology is most often justified, despite low labor costs, on the grounds of higher product or service quality, higher energy efficiency and overall reduced complexity. Furthermore, in the case of Russia, we found that most of the industrial assets left over from the communist times could achieve high productivity levels with only relatively modest and targeted investments.

Because of this, the developing countries, which are stimulating productivity growth by liberalizing their markets, need to achieve high growth rates to avoid running into serious social/employment issues.

¶ **Employment.** In contrast to output, employment per capita has not been able to recover from the initial drop after market reforms. From 1989 to 1993 employment per capita decreased by around 15%, mostly as a result of layoffs and company closures in the manufacturing sector. As a result, unemployment rates peaked in 1993 at around 16% (Exhibit 4). Since 1993, employment per capita gradually increased by 1% per year, leveling off the unemployment rate at around 11% in 1998.

As explained earlier, output growth is key in determining future employment trends. As shown in Exhibit 4, Poland seems to have to grow at more than 5% to decrease its unemployment rate. As layoffs take place in the existing industrial assets, large investment into new production facilities (service) sectors must occur to offer new employment opportunities. In the absence of strong investment/output growth, large productivity gains would result in a decrease in aggregate employment.

¶ **Investment.** An important element behind Poland's rapid productivity growth has been the high level of foreign direct investment (FDI). Although the level of private investment is still moderate by international standards (around 16% of GDP in 1997 – compared to more than 30% in Korea), it has been increasing rapidly, with FDI accounting for more than half of all private investments in 1998 (Exhibit 5).

² See 'Productivity – The Key to an accelerated Development Path for Brazil', McKinsey Global Institute, 1998; 'Productivity-led Growth for Korea', McKinsey Global Institute, 1998 and 'Unlocking Economic Growth in Russia', McKinsey Global Institute, 1999.

¶ **Weathering the 1998 global financial crisis.** Besides contributing to productivity growth in most sectors, the large influx of portfolio and foreign direct investment, together with fiscal discipline, allowed Poland to remain virtually untouched by the 1998 global financial crisis, despite the country's significant current account deficit. Foreign investors remained bullish about Poland due to its tight fiscal discipline and the favorable conditions found in most sectors – illustrated later by the detailed analysis of the Polish retail sector. The continued influx of portfolio and foreign direct investment allowed Poland both to finance its current account deficit and increase its foreign exchange reserves (Exhibit 6). This contrasts with the experience of many other developing countries, notably Korea, Brazil and Russia.

- Korea went bankrupt because its banks kept lending to low return ventures. These banks were forced to borrow on the international capital markets at shorter and shorter maturity. These currency and maturity mismatches were eventually brutally exposed once the central bank, which was trying to defend the won, ran out of foreign exchange reserves. These low return investments resulted from the fact that, being protected in their domestic markets, Korean conglomerates (Chaebols) did not adopt best managerial practices (e.g. marketing, finance and lean manufacturing), which led to over investments and low asset utilization (low capital productivity). The continuous lending to Chaebols was the fault of corporate governance problems, in the form of government interference, at Korean banks.
- Russia and, to a much lesser extent, Brazil, suffered crises because of uncontrolled government deficits, which had to be financed by offering high real rates on government bonds – as an alternative to printing money – which would have brought these two countries back into hyperinflation territory. These real interest rates reached unsustainable levels with the Asian crisis, aggravated in the case of Russia, by falling oil prices. Here again, the central banks' efforts to defend the currency were in vain.

Main economic policies undertaken

In the case of Poland, high output and productivity growth rates are the result of sound economic policies undertaken after the end of the communist era. After the initial price liberalization, important steps were taken in to stabilize the macroeconomic environment as well as to liberalize the capital, labor and product markets. We review briefly below the main reforms that have been undertaken. Despite much progress, we believe more reforms are necessary,

notably in the areas of land and real estate privatization (discussed in the last two sections of this synthesis).

¶ **Macroeconomic policies.** A combination of tight monetary policy and improved fiscal discipline played an important role in reducing inflationary pressures from price liberalization. As a result, inflation in Poland has gradually slowed down from the initial peak after liberalization and is now at less than 10%. On the fiscal side, maintained revenue trends and progressive reduction in expenditures were essential in maintaining the deficit close to EU standards. At the same time, the public debt ratio also declined mainly as a result of large-scale relief granted by foreign creditors and real exchange rate appreciation (Exhibit 7).

¶ **Capital markets.** Much progress has been achieved towards establishing a market-based system of capital allocation, starting with privatization and ending recently with the pension fund reform. Together with complete macroeconomic stabilization, these reforms should help increase Poland's relatively low savings rate (around 19% of GDP in 1997 compared to 26% in Hungary and 33% in Korea) and thus mobilize domestic sources of funds for business investment.

- Privatization has nearly been completed in most sectors and can be considered a success (Exhibit 8). Poland, unlike Russia, has been willing to sell off 'key' companies to foreigners. This brought to Poland much needed hard currencies as well as best practice management and technological skills. Privatization is being delayed in some sectors for two main reasons. Firstly, to provide enough time to agree on and put into place specific restructuring programs such as in steel and mining. An alternative has been to explicitly set 'no layoff' clauses for a definite period of time after privatization. These measures probably helped unemployment to remain below 16%. The second reason for delaying privatization has been to ensure that the appropriate sector-specific regulatory frameworks were put in place beforehand (in banking, telecom, utilities, airlines, etc).
- The privatization of financial institutions, together with lower interest rates and the continued development of the stock markets, should allow domestic sources of finance for corporate investment to complement foreign direct investment. Similarly, in the area of personal finance, mortgages should follow consumer finance as the next big growth area.

- Reform of the pension system has been recently introduced. In 1999, the old pay-as-you-go system was replaced by a multi-pillar, defined contribution, partially funded scheme..

¶ **Labor markets.** Although some progress has been made, labor market reforms are far from complete. The institutional framework for wage-setting has evolved considerably since the beginning of the 1990s. Under the new system, wage bargaining takes place mainly at the firm level under a nationwide ceiling for wage increases set quarterly by a Tripartite Commission (which includes representatives of the state, unions, and employers). Minimum wages are also negotiated and set periodically by the government, trade unions, and employers. Over the last few years, the minimum wage has increased at about the same pace as the average wage but faster than average prices. This is further aggravated by high social contributions paid by employers on top of the minimum wage. If no measures are taken in this respect, minimum wages will soon be binding for low skill workers and thereby endangering employment in some sectors (discussed later in the context of the apparel and retail sectors). Employers, in complying with the officially set minimum wage, will not be able to fully offset the higher wage costs by raising market set prices thereby reducing employment for low-wage unskilled workers.

¶ **Product markets.** We include in this category all the regulations, which tend to be specific to each market/sector. They include tariffs, product specific taxes, building codes, zoning laws, pricing regulations. All the previous studies from the McKinsey Global Institute have shown that this area is both crucial and dramatically overlooked by policy makers. Such regulations often lead to lower competitive intensity by raising barriers to new entrants (e.g. country-specific building codes). They can also directly limit output growth by preventing innovation (e.g. fixed telecom pricing) or by leading to higher input costs (restricting zoning laws in retail). Poland is tackling such regulations in most of the manufacturing sectors, where it is in constant talks with trade partners, notably the EU, to agree on lower tariffs. It is also tackling them in many service sectors (e.g. banking, telecom, airlines and public utilities). As illustrated later by the two service sector case studies (housing construction and retail), much more has yet to be achieved, notably in the area of land and real estate liberalization.

¶ **Other reforms under way.** In addition to the above, Poland is also reforming its healthcare system and decentralizing its government.

Economic challenges going forward

The main economic challenge for Poland will be to create enough new jobs in the service sectors to compensate for the inevitable loss of employment in manufacturing and agriculture, especially since the remaining barriers to productivity growth are being lifted in these sectors.

Given its GDP per capita level, Poland has a high share of workers still employed in manufacturing and agriculture (Exhibit 9). Beyond a certain level in economic development, the share of workers employed in agriculture and manufacturing decreases as service employment increases (Exhibit 10). This transition has already started in Poland, and past strong employment creation in services following economic liberalization has successfully absorbed job reductions in agriculture and manufacturing and contributed to the reduction in overall unemployment (Exhibit 11).

Going forward, three questions then arise, to which we try to bring some answers in the remaining three sections of this chapter:

- ¶ The first issue is to assess the rate at which employment would be lost in agriculture and manufacturing if the remaining barriers to productivity growth were to be removed in these sectors (treated in the following second section).
- ¶ The second issue is to assess the output and employment growth potential in services. We do this by looking systematically for the barriers to both higher productivity and output in retail and residential construction, two of the largest service sectors (third section).
- ¶ The third issue is to derive suitable policy implications from these findings. Can expected future unemployment levels still be treated through targeted demand side social policies or is there a case for deliberately reducing the pace of restructuring and productivity growth in agriculture and manufacturing, or even in services (see last section)?

EMPLOYMENT OUTLOOK IN AGRICULTURE AND MANUFACTURING

We discuss in turn the employment outlook in agriculture and manufacturing.

Employment outlook in agriculture

The overall situation in agriculture seems to be markedly better than suggested by the very high official agricultural employment level and recurrent street protests. Agricultural employment has been decreasing rapidly between 1994

and 1998 to levels which are more in line with other countries' at similar GDP per capita levels. Furthermore, the average household income of farmers is quite close to the national average, due in particular to employment of household members in the gray service sectors. These facts suggest that employment in agriculture will continue to decline to the extent that there is an employment pull coming from the service sectors. In the absence of such a pull, agricultural employment would stay at relatively high levels, but without causing a major social issue. This is because the income levels are quite high and farmers are for the most part self-employed and owners of their land, which provides an additional financial cushion – only 100,000 out of 2.75 million farmers do not own the land they work on.

¶ **Declining agricultural employment.** Based on the Labor Force Survey methodology, the share of real (full time) farmers was estimated to be 18% in 1998 down from 23% in 1994 when the first of such surveys was completed. This is in marked contrast to the stable 25% share of agricultural employment shown in the official statistics, which rely on traditional methodology that does not properly account for farmers' employment outside agriculture, especially in the gray sector. Over the past few years, agricultural employment fell while the economy-wide unemployment rate was falling and output was growing at around 6% a year (Exhibit 12). This suggests that farmers have been pulled out of agriculture by new and relatively attractive job opportunities (especially in services), an hypothesis confirmed by a more detailed analysis of their level and sources of income (see below).

¶ **Relatively high income levels.** The high incidence of jobs outside agriculture, in particular for members of farming households with very little land, has helped 'farmers' to achieve and maintain income per capita levels close to those of other household categories (Exhibits 13 and 14). We present below the characteristics and sources of income for farming households, distinguishing between 'small farms' and 'large farms' farming households.

- **'Small farms' farming households.** Accounting for around half of farming households, 'small farms' farming households derive most of their household income from jobs outside agriculture. These households usually have at least one member fully employed outside agriculture. These jobs are concentrated in construction, trade, and transportation sectors (mostly gray employment). As a result, around 75% of the household's work remuneration (59% of the household's income per capita) comes from non-farming jobs. For this group, which also includes the so-called 'subsistence farmers', the need to rely on jobs outside agriculture comes from lower quality soil and fragmented land holdings. On average, only

24% of households in this group have farms with more than 5 hectares (Exhibit 15). Moreover, their farms tend to be more fragmented – usually composed of several smaller plots.

- **‘Large farms’ farming households.** ‘Large farms’ farmers have much larger and productive farms and derive most of their household income from agriculture (around 75% of total income). These farmers enjoy higher quality soil and larger plots, which facilitate the use of tractors and allow them to achieve higher returns per hectare of cultivated land. In 1997, around 66% of total households in this segment were located in farms with more than 7 hectares (Exhibit 16). Although ‘large farms’ farming households have been able to maintain their relative income in the recent past, mismanaged expectations on official procurement prices for their main products (e.g. grain) have hampered their returns from farming in the last year. These price interventions are, together with the uncertainty attached to the future European Union Agricultural Policy, the main causes for the recent farming protests in Poland. Despite these developments, the economic situation of ‘large farms’ farmers is not likely to worsen in the near term. Although a complete assessment of the implications of EU accession for Polish agriculture is beyond the scope of this study, low wages and land availability have been often referred to by experts as giving Polish farmers competitive advantage, especially in the meat and dairy products.

Employment outlook in manufacturing

The employment situation in manufacturing is more troublesome. Even if GDP continues to grow at 6% per year, the rate of employment losses in manufacturing could increase markedly up to 4% a year until 2005, from 1% a year on average since 1992 (Exhibit 17). This acceleration would occur due to both lower output and higher productivity growth rates in manufacturing. Lower manufacturing output growth, relative to GDP growth, is to be expected following the end of the post-transition adjustment and the experience of other countries at this stage in their development, which reflect a gradual shift of the economy towards the service sectors. Productivity growth on the other hand should continue to be very high as best practice companies continue to invest and transfer best operational practices in order to fill the remaining large productivity gaps. The restructuring process could even accelerate with, in particular, lower protection from import tariffs and the expiration of the ‘no lay off’ clauses agreed upon in the privatization of many large industrial companies.

¶ **Future output growth in manufacturing.** Based on the observation that, as countries develop, output growth in manufacturing tends to decline relative to overall GDP growth, we expect the growth of manufacturing output in Poland to slow down from over 9% in the 1992-98 period to around 7% between 1999 and 2005. These estimates are based on the assumption that the overall GDP continues to grow at an average of 6% a year, the average growth achieved since 1992. Although this high GDP growth seems well within Poland's reach, there are growing concerns that future GDP growth may slow down following the downturn since 1998. As we will discuss later in more detail, one of the key factors in returning to a 6% GDP growth rate will be to remove the remaining barriers to output and productivity growth in the service sectors.

- **Continued 6% GDP growth well within Poland's reach.** Similar growth rates have already been achieved by countries with GDP per capita levels comparable to Poland's (e.g. 8% in Korea 1985-97 and in Chile 1985-95) as well as by countries with higher levels of income (e.g. 7% Ireland in 1986-97). We have concluded, based on our detailed analysis of Korea and Brazil, that there are two possible ways in which developing economies could achieve high economic growth rates. Poland seems well on track in pursuing the one we would recommend – provided that the remaining barriers affecting growth in services are removed (discussed in the next section).
 - The first one is the so-called 'Japanese model', which is followed by Korea and many other Asian countries. It consists of mobilizing high levels of labor and capital inputs to export-driven manufacturing industries, while curtailing the growth of the large domestic service sectors through heavy product market regulations. Although it seems to have been very successful, our analysis has shown that this model achieves high economic growth for a high price (low consumption and long working hours). Furthermore, and as discussed earlier in the case of Korea, our analysis has also shown that it does not seem to be sustainable in the long run, notably because it leads to low capital productivity, translating eventually into financial crisis.
 - The second model is 'productivity based' as opposed to 'input based'. It has been developed and followed, to various degrees, by most of the Western democracies, and more recently by Chile and Ireland. It is also the model which Poland has successfully pursued since the end of the communist rule. It relies on fully liberalized capital, labor and product markets, which encourages best practice companies to enter and invest in all the economic

sectors. This model allows high output growth rates with relatively limited amounts of investment and work, and because of this may create high unemployment levels, the central issue discussed in this synthesis.

- **Expected decline in relative manufacturing output growth.** Relative to GDP growth, manufacturing output growth has been high in Poland, at 9% a year compared to 6% for GDP, since the beginning of economic recovery in 1992 (Exhibit 18). The highest manufacturing output growth rates have been achieved between 1992 and 1995, when business investments were very low, which suggests that output and capacity utilization were recovering from the shocks of economic liberalization. The average manufacturing output growth seems to be declining slightly since 1995 (despite the mass arrival of foreign direct investment). This lower relative output growth rate is more in line with the experience of other countries at similar stages of their development and should thus be expected to continue (Exhibit 19).

¶ **Future productivity growth in manufacturing.** Productivity growth in manufacturing should remain very strong, and could even increase until 2005, to around 11% per year compared to 10% in the 1992-98 period. Productivity levels in all manufacturing sub-sectors are still far from best practice levels, suggesting large scope for further improvements (Exhibit 20). Taking a closer look at some sub-sectors, we found reasons to believe that productivity growth could indeed accelerate, notably in the food processing and passenger cars sub-sectors. In these two sub-sectors, productivity growth has been modest relative to the experience of other developing countries we have studied (Brazil and Korea). In Poland, productivity should increase with the planned removal of barriers to higher productivity such as import tariffs and 'no layoff' clauses. Productivity growth should also increase in the metals and mining sectors, following the recently agreed upon government restructuring plans. Finally, we expect, for the remaining manufacturing sectors, productivity growth to continue at about the same rate. This is based on the fact that productivity levels are still low and that high productivity growth rates in the past suggest that there are no significant productivity barriers left to be removed in these sub-sectors (Exhibit 21).

- **Food Processing.** The increase in productivity since 1992 has been mostly the result of output growth, with very little change in the overall food processing employment (Exhibit 22). The companies

that have survived the initial downward output shock of 1989-92 have now been forced to consolidate further. Double-digit productivity growth is not unusual in consolidating food processing industries (Exhibit 23); this is what we expect for Poland as a result of the following changes in the external environment:

- *Increased pressure from established best practice companies.* Food processing has attracted the largest share of FDI (27% of total manufacturing FDI), with most of this investment being made in the last 2 years. FDI capacity is expected to take market share away from the small and low productivity firms.
- *Improvements in the distribution sector.* In the future, the emergence of nationwide wholesalers and the increased penetration of hypermarkets, which tend to source directly, will allow large processors to increase their sales coverage, thereby increasing competitive pressures on smaller producers (discussed in more detail in our separate analysis of the Polish retail sector).
- *Increased pressure from imports due to ongoing tariff reductions.* Tariffs on food items are currently the highest of all Polish import duties, averaging around 30% (Exhibit 24). In the run-up to EU accession, lowering tariffs will increase imports, intensifying competitive pressures on Polish producers.
- *Reduced impact from fragmented agriculture.* The fragmentation of the agricultural sector has been a barrier to the growth of large food processors by increasing their cost of supply and limiting the availability of the high quality inputs they require. For example, farms with one or two cows still account for 50% of milk production. Going forward, the combination of existing government subsidized loans and the possibility of 'contract growing' practices by large processors will accelerate the consolidation of the sector around specialized large farms.
- *Increased pressure from owners.* Currently, 14% of employment in food processing remains in government-owned enterprises. These enterprises, concentrated mainly in the sugar, meat, and vegetable sub-sectors, are already included in the government's privatization plans of the next few years.
- ***Passenger cars and parts.*** As with food processing, past productivity growth in the sector has been mostly the result of a strong increase in the domestic demand for cars, as opposed to downsizing (Exhibit 25). This reflects the impact of 'no layoff' clauses as well as high tariffs. As these factors are being phased out, we expect productivity growth to increase to 12%. Foreign

manufacturers will force consolidation of part suppliers, restructure the existing assembly plants and invest in productive new capacity. Our productivity growth estimate is consistent with the experience of both Brazil and Korea when they were at similar productivity levels (Exhibit 26).

- *Expiration of employment guarantees given at the time of privatization.* Clauses limiting future layoffs were included by the Polish government in the privatization contracts of most automotive manufacturers. In these cases, companies were usually prevented from reducing their workforce in the 3 years following privatization. These obligations have either recently expired or will expire in due course, which will enable the new owners to realize previously untapped productivity improvement opportunities.
- *Planned tariff reductions.* High import tariffs currently shield local producers from international competition. Tariffs on imports of passenger vehicles and parts from the EU are currently at 15% and will be removed completely by 2002 (Exhibit 27). This removal will enhance productivity of Polish manufacturers as they are forced to compete with cheaper imports from best practice foreign manufacturers.
- *More cooperative behavior by unions.* The long tradition of union activity in the automotive sector has often hampered restructuring in the past. This trend has changed recently, in the light of the increasing competitive pressure from cheaper imports and frequent group layoffs in other sectors of the economy. Facing these pressures, the bargaining position of companies in labor negotiations with the unions and the government is expected to increase.
- **Metals and mining.** Based on the current government restructuring and privatization plans, employment in the metals and mining sectors is expected to decline by 13% and 50% respectively by the year 2005. As a result of this reduction in employment, productivity improvements for this sector would reach up to 10% per year until 2005, up from 7% in the 1992-97 period.
- **Other manufacturing sectors.** We expect productivity growth to continue to be high in the remaining manufacturing sectors – we used the past productivity growth rates since 1992 for our future productivity growth estimates. Firstly, high productivity growth rates in the past in most of these sectors suggest that there have not been significant barriers hampering productivity growth. Secondly,

productivity levels are still low, which suggest there is scope for additional operational improvements. The situation in the apparel industry should be singled out to illustrate the possible impact of a strict enforcement of the relatively high minimum wage in Poland (including social contributions). Currently, the average wage paid by the gray apparel companies is estimated to be 20% lower than the official minimum wage. Moreover, unregistered gray sector companies do not pay social security contributions (approximately 40% of the minimum wage). Therefore, a strict enforcement of labor regulations would significantly increase labor costs in this sector thereby endangering the viability of many apparel companies. According to our estimates, up to 60,000 – 70,000 additional jobs would be at risk, amounting to around 2% of total manufacturing employment (not included in our forecast).

Summary employment implications from the analysis of the agriculture and manufacturing sectors

Even if the overall GDP growth in Poland recovers to 6% a year (from 4% in 1998 and 1999), manufacturing employment would, based on the above, be expected to decline by 4% per year until 2005. Given the current share of employment in manufacturing, these losses would amount to a 5% reduction in economy-wide employment by 2005 (Exhibit 28).

This situation should not be aggravated by additional unemployment/migration from agriculture as long as ‘small farm’ households can earn most of their income in jobs outside agriculture, notably in services.

Thus, given the already high unemployment rate in Poland, creating the conditions for continued economic growth and job creation in services is the key to Poland’s future economic success and social balance.

BARRIERS TO OUTPUT AND EMPLOYMENT GROWTH IN SERVICES

In this section we synthesize the results of the two service sector case studies: general merchandise retailing and residential construction. These two sectors are among the largest in the economy and they lag significantly behind those in more developed countries – not only in terms of output but also employment.

At the sector level, we specifically analyze the barriers to higher productivity because productivity growth is the main engine of economic growth. Indeed, higher productivity stimulates demand by leading to lower prices and/or higher value/new products and services. This is reflected by the fact that the overall

performance of an economy is primarily determined by the average labor productivity achieved in all of its economic sectors (Exhibit 29).

Interestingly, general merchandise retailing and housing construction have many characteristics in common and face similar issues going forward. For both, productivity is growing fast and many of the barriers to higher productivity have been removed. The main remaining market distortions, which are in the area of land and property ownership, tend to directly limit output growth. Therefore it will be thus essential to remove these distortions to ensure that these two sectors achieve their full potential in terms of much needed job creation.

We discuss in turn the overall current economic performance of these sectors, the reasons for the productivity gaps at the operational level, the factors left in the external (regulatory) environment limiting higher productivity growth and crucially, those directly limiting output growth.

The detailed findings and approach used for analyzing these sectors are presented in the two case studies included as separate chapters of this report.

Economic performance of retail and housing construction

Poland is lagging behind more developed economies not only in terms of output but also in terms of employment in housing construction and general merchandise retailing. These two sectors could, therefore, be net job creators in the future under certain conditions that we will detail at the end of this section. We also found labor productivity to be low in both sectors, at around 25% the US level (Exhibit 30).

¶ **Output.** Following the end of most State financed social housing, and despite a relatively small and low quality housing stock and growing population, housing construction output in Poland has fallen to very low levels. It lies at less than 20% of the US per capita output level and at more than 35% behind the Hungarian level, where demographic trends are much less favorable (Exhibit 31). Output is picking up in the apartment building (multi-family home – MFH) segment of the market, where it grew by 22% in 1997. The growth in single family homes (SFH) construction over the last few years has been prompted by tax breaks on new housing investment and the rapid emergence of ‘new rich’ Poles but it is expected to tail off. The output gap in general merchandise retailing is even bigger at less than 10% of the US level, but it has been growing at more than 10% a year in recent years.

¶ **Employment.** Even accounting for the relatively large share of shadow workers, employment in general merchandising is less than one third of the US level and is 25% lower in housing construction. It has been stable in recent years for both sectors.

¶ **Productivity.** Both sectors have around 25% of the US productivity level, which is close to the level achieved by the overall Polish economy, estimated to be at about 29% of the US level. Productivity is increasing fast in the whole of retail as well as in the MFH segment of housing construction. We discuss in more details below the nature of the productivity gaps and how they are being closed.

Low but increasing productivity

Productivity is low in both sectors because most of the employment can still be found in sub-scale operations with antiquated modes of organization. These are the single product stores in retail and the small construction companies building SFH one by one. Large and productive retailers (hypermarkets and specialty chains) are expanding fast. The same is true for the builders of MFH.

¶ **Long tail of low scale operations with antiquated modes of organization.** More than 75% of these two sectors' workers are still in companies which are low scale and poorly organized. These companies should not be viable in the long term, but many of the underlying capital assets (i.e. construction equipment and franchised ex-single product stores) could be used as part of new productive business systems (discussed later).

- About 75% of construction workers are involved in building SFH one by one, which, at less than 20% the US productivity level, is much less efficient than large-scale SFH or MFH programs. Large-scale housing programs allow for better scheduling and smoother working flows, higher task specialization (in house or through contracting to special trade), and more reliance on equipment such as hand power tools and conveyors because they can be better utilized. Productivity in the sub-scale Polish SFH programs is further affected by poor incentive systems, with workers compensated by the hour as opposed to by satisfactorily completed tasks. These problems are exacerbated in the case of SFH built 'brick by brick' by the owner, as financing becomes available.
- Similarly, 75% of retail employees are in city center single-product stores with another 15% sitting behind open air stands in bazaars, with both formats at less than 20% the US labor productivity level. Being sub-scale reduces their capacity to negotiate attractive terms with suppliers and prevents them from branding. Furthermore, their product offering is very limited and the service/convenience level very low, which result in low customer traffic, making investment in productivity enhancing devices such as scanning equipment non economical. Many of these stores (especially the

larger ones) could achieve high productivity levels if they become part of specialty chains by selling off to them or through franchise agreements.

¶ **New large players are growing and approaching best practice productivity levels.** In both sectors, a number of foreign and domestic players already achieve more than 50% of the US productivity level and account for around 10% of each sector's employment. Their productivity is also increasing and is expected, in many cases, to reach best practice levels in a few years, once minimum efficient scale has been reached and the personnel fully trained.

- In retail, a large and increasing number of best practice retailers (hypermarkets, category killers and high service specialty chains) are present in Poland. They are mostly European and American retailers, and started entering the Polish market significantly in 1995. They have by 1999 already captured 20% market share and, according to current plans, are expected to reach around 50% market share in 2005 (Exhibit 32). Their productivity level is more than three times higher than the ones of the traditional domestic formats and is around 75% of the level they manage to achieve in their home country (Exhibit 33). Best practice retailers expect to close the gap by reaching critical size (e.g. 20 chained hypermarkets) and training their store managers, which is the current bottleneck. Due to the rapid growth of these foreign retailers, productivity has been growing at more than 10% a year in the Polish retail sector. It should be noted that suburban hypermarkets have been relatively more successful than high service specialty chains, which are having difficulties finding good locations in city centers. Fortunately many hypermarket chains act as shopping center developers and find it very profitable to make space available for specialty chains around them.
- The situation in housing construction combines two contrasting stories. Best practice is diffusing in the construction of apartment buildings (MFH) while the few companies involved in large-scale single family home (SFH) programs are having difficulties increasing productivity and gaining market share (Exhibit 34).
 - In MFH construction, Skanska, the Swedish best practice firm, is already achieving 70% of the US productivity level with a relatively sub-scale pilot project and untrained labor. Large domestic companies are beginning to emulate best practice. The productivity in this segment is increasing rapidly with the continued consolidation of the industry around the current large industry leaders, whose productivity has been estimated to be at

around 60% of the US. Industry leaders in this segment are consolidating mainly through acquisitions. In this process, they are introducing much better scheduling and management skills, relying on their in house specialized labor, while leveraging the local knowledge and contacts of the acquired companies to move around red tape.

- The situation for SFH is not as good. There are only a few companies involved in large scale SFH programs, but they are not growing and their productivity level is less than 40% of their US counterparts because of the lack of good special trade companies, inefficient planning and disruption in the workflow due to bureaucratic and financing delays. Small companies tend to be less adept at managing the building permit process leading to bureaucratic delays. Construction work is often funded on a 'pay as you go' basis because individuals often still have difficulty obtaining mortgages. One of the largest, and best practice, builders of large-scale SFH even told us that he was phasing out this activity (expanding instead in MFH). He felt that the end to tax breaks would accelerate the decline in demand for SFH from the few new rich Poles, most of whom have by now invested in new houses. Despite being the preferred type of housing, SFH is just too expensive in Poland for the emerging middle class – we will explain why below.

Not many barriers to productivity growth remain

We did not find many barriers to higher productivity left in these two sectors. The leftover barriers do not prevent the rapid growth of certain types of modern productive players (e.g. hypermarkets and builders of MFH). In both cases, the fast growing modern players are the providers of relatively cheap retail services and flats, which in the long run could have serious output and employment consequences (discussed later).

¶ **Positive economic policies in Poland.** By combining tight fiscal discipline (the key to macro economic stability) with micro-level reforms, Poland has managed to establish in these two sectors many of the conditions conducive to the entry of best practice companies and to productivity growth. It is particularly interesting to contrast and explain the positive developments in Poland with what has happened in Russia in these two sectors – with both countries sharing a similar starting position.

- The story of how the Polish retail sector has been evolving in the past few years is one of the clearest illustrations we have come across

of how good policies can, due to foreign direct investment, bring positive results. Foreign investments by best practice retailers from all over the world have been increasing steadily and are expected to continue to increase despite cut-throat competition and low retail margins. Modern retail chains are still scrambling to reach minimum efficient scale (e.g. more than 20 outlets for hypermarket chains against 10 on average today). This example shows how good macro as well as micro economic policies can lead to foreign investments, without leading to a situation in which foreigners can 'quietly milk' the country by repatriating high profits – on the contrary. The key economic policies which have favored these positive developments in the retail sector have been:

- The overall **sound macro economic management** of the economy, in particular the tight fiscal discipline, has given investors confidence in the overall economic conditions and in the currency in particular. It allows investors to predict with reasonable confidence future expected cash flows and demand level. By contrast, the Russian August 1998 financial crisis, wiped out overnight the profitability of ruble-exposed foreign investors and led to a major consumption dip, notably in modern retail stores which had typically been selling a large share of imported products.
- Another important factor behind the development of the Polish retail sector has been the steady growth since 1993 of **foreign investment in the consumer goods industry**. These investments resulted from privatization, favorable conditions for foreign investors and the prospect of EU membership (see the discussion of the manufacturing sectors in the second section of this chapter). A strong domestic consumer goods industry does not only, and as discussed above, protect from macroeconomic fluctuations, it also allows modern retailers to achieve lower costs of good sold by cutting out the middlemen (wholesalers and importers). A best practice hypermarket operator has, as an operating rule, to realize at least 80% of its sourcing locally – in Russia it could only manage 50%.
- Finally, **micro economic conditions in the retail sector itself** have been favorable. Except for some difficulties for specialty chains in finding suitable retail space in city centers (discussed later), the sector has been freed of regulations such as zoning restrictions or limitations on opening hours. Furthermore, the growth of low productivity and informal formats, such as bazaars, has been contained by increased enforcement of tax and counterfeit laws.

Bazaars are now declining in Poland with increased competition from hypermarkets, which for similar prices offer much higher convenience. This is also in marked contrast to Russia, where bazaars account for more than 60% of general merchandise sales (against 10% in Poland), which is explained by the fact that bazaars in Russia enjoy a 20% cost of good sold advantage by evading tariffs, VAT and selling counterfeits. Tax and counterfeit law enforcement in Poland is also facilitated by the fact that the foreign producers have more of a reputation to lose and thus have a common interest with modern retailers to fight counterfeits and VAT evasion, for which they could be held responsible. The nature of this cooperation involves the police; it includes training programs on how to recognize counterfeits, and the reconciliation of sales data between the fiscal cash registers in bazaars and the sales data provided by their main suppliers.

- In **housing construction**, labor productivity is already more than two times higher in Poland than in Russia. This is mostly due to the **end of most government financed housing programs** in Poland, which took place at the outset of economic reforms. This led to a severe fall in output and the subsequent restructuring of all the large formerly state-owned companies. As this tough job has been done, Poland can now look forward to sustained productivity and output growth in the sector – fueled by competition between MFH builders and, following the drop in inflation and interest rates, a nascent mortgage market. In Russia by contrast, half of housing is still directly financed by the government, which explicitly allocates contracts to the ex-state owned firms under the condition that they do not lay off anyone. That situation is leading to artificially high levels of output and employment in the sector, with productivity being stuck at very low levels (10% of the US level).
- ¶ **The main remaining market distortions** have been found to involve the supply of land and real estate for both retail and housing projects. We explain below why they are limiting productivity growth only to a limited extent. We will explain thereafter how they directly limit output and employment growth.
- The **lack of land and real estate** made available does not prevent the growth of the productive hypermarkets and MFH builders.
 - Although the lack of suitable space in city centers (explained later) limits the growth of high service, productive specialty chains, it does not stop the growth of productive hypermarkets and large-scale specialists in the suburbs. Furthermore, these suburban hypermarkets help alleviate the market failure in city

centers – more than half of specialty chains’ retail outlets are located in trade galleries along side hypermarkets.

- Although the issues pertaining to the availability and development cost of large land lots (explained later) limit the growth of productive large-scale SFH programs, it does not stop the growth of high productivity MFH construction, which requires much less land.
- Similarly, hypermarket and large MFH builders are quickly learning to cut through the **administrative red tape**, which surrounds the acquisition of land and building permits for large commercial operations.
 - This red tape may have slowed down the initial growth of hypermarkets – it takes more than 3 years to open a shopping center in Poland against two in the US – but not their current steady state speed of development, having secured and initiated sufficient locations and negotiations.
 - Large MFH builders are now pursuing a strategy of acquiring regional players, in part to help them better navigate the local red tape.

Significant barriers to output and employment growth left

The output and therefore employment growth potential of both residential construction and general merchandise retailing is limited by the land and real estate related issues, which have been discussed above.

- ¶ **Limited exposure to market level rents.** The subsidized rents on government-owned real estate, and low payments for cooperative-owned dwellings, act as a disincentive on current apartment tenants to upgrade. Subsidized retail rents in prime areas limit the growth of the high service specialty chains.
 - The demand for new housing is low because around 40% of urban residents are not exposed to market level prices while they stay in their current dwellings (Exhibit 35). These subsidies originate from the fact that, unlike in Hungary, the existing urban housing stock has not been fully privatized – many urban dwellings are still owned by local governments or old era cooperative boards.
 - The rent charged by local governments is up to 10 times lower than the rent charged by private owners for a similar apartment.

Furthermore, the local governments are also subsidizing utility and maintenance charges.

- Tenants of former state-owned cooperatives make monthly payments to cooperative boards that are below market levels, and yet have no ownership rights over the dwellings. Although tenants have the option to purchase their dwelling at below market price level, the net present value of monthly payments is typically below the potential purchase price. This means that a member of these cooperatives has no incentives to purchase the apartment, either to continue to live in it or to sell it and capture its full market value.
- Strong tenant rights is another limiting factor for output growth in housing, since it discourages investors to build new dwellings for rental and will make mortgage financing more difficult by reducing the collateral value.
- Similar issues affect output growth in retail. The growth of high service (high output) specialty chains is limited by the lack of vacancies in city centers. Here, most of the real estate in city centers is still in the hands of the government. The first problem is that potentially attractive space (e.g. first floor of city center administrative buildings) is not made available for retail development by the government. The second problem is that the existing tenants of (low productivity and output) single product stores are paying rents to the local governments, which are at only 20% of the free market rate. These rent subsidies allow the stores to stay in business, legally preventing them from subletting, and discouraging them from signing constraining franchise deals with specialty chains.

¶ **High land costs.** The lack of financial incentives for local governments to make land available results in very high land costs in Poland for both housing and retail (Exhibits 36 and 37). High land costs affect high service specialty chains and SFH more than hypermarket operators and builders of MFH, which need less land.

- High land costs lead to lower output in retail and housing:
 - The cost of service differentiation becomes higher for high service specialty chains, which face high land costs in city centers (see above) or are forced to pay the high prices charged by suburban hypermarkets, which are taking advantage of the city center price umbrella. This reduces retail output growth by tilting the modern format mix towards lower service/output formats.

- Similarly, the high cost of land makes single family homes differentially more expensive than apartments. If single family homes are relatively expensive, total demand will be lower. Assuming Polish consumers have the same preference for single family homes as consumers in other countries, fewer people would be willing to buy a new home if single family homes were not affordable
- The reasons for the lack of suitable land are:
 - **Low property tax** revenues reduce the incentives for local governments to change the local development plan and make more commercial land available. The government would have to incur high development costs (roads, schools, etc.) relative to the expected increase in property-related tax revenues. Low property taxes also reduce the cost to existing landowners of holding on to their land, sometimes in the hope that land prices will continue to increase. The current property tax is a fixed rate per square meter, set by the Gmina up to a national ceiling. In contrast, in the US the tax paid is linked to the total value of the property and can be up to 3% of the total property value per year. The implied tax rate under the current Polish law is less than 0.1% of property value.
 - This problem is aggravated by a series of other factors:
 - . Expensive and bureaucratic provision of new electricity infrastructure by the state monopoly.
 - . Persistent red tape around the zoning process which local governments have no incentives to solve, as explained earlier. It can take up to 2 years to reclassify land from agricultural to residential land.
 - . Uncertainty related to the risk of claims on land from previous owners, aggravated by incomplete and paper based ownership documentation.
 - . Agricultural land is fragmented; either owned in small plots or in long strips, unsuitable for large developments. This fragmentation increases bargaining costs for large-scale residential projects or for modern retailers.

Negative impact of the barriers on output and employment

Under the assumption of continuing GDP growth of 6% per year, we have estimated that annual output growth could increase threefold in housing construction and by 25% in retail if these land and property related issues were resolved. This would translate into the creation of 60% more jobs in housing construction by 2005 compared to zero growth if barriers are not removed. In the case of retail, employment in modern formats would more than triple up to 2005 if barriers are removed; this growth would be 30% lower if barriers were not removed. The overall net employment impact from removing output growth barriers in retail should also be positive, but is impossible to quantify. Removing these barriers will also help Poland to return to the 6% overall GDP growth track.

- ¶ **In housing construction**, both output and employment growth could increase. Associated with an underlying GDP growth rate of 6% per year, our estimates suggest that if the barriers to output growth are removed, the number of completed dwellings will rise by over 10% per year, rather than the projected 3% under the status quo. Such growth would cause employment in the housing construction sector to increase by 60% by the year 2005 (90,000 additional jobs). If, however, GDP were to grow at 4% per year, the number of potential new jobs created by 2005 falls to around 60,000.
 - **Productivity growth** in housing construction could reach around 5% a year if the barriers to the development of large-scale housing SFH programs are lifted, against 3% otherwise – mostly driven by continued productivity growth in MFH construction.
 - **Output growth** will be prompted directly by newly facilitated demand, and indirectly through price reductions brought about by productivity improvements. These will occur if the rents and payments on the existing stock approach market levels and more land is made available. Our output growth estimates would allow Poland to meet one third of the currently untapped demand for new dwellings (Exhibit 38). Our projection is slightly above the output growth experienced by Hungary, which did bring rents to market levels, but failed to resolve all land issues and had less favorable demographics.
- ¶ **In general merchandise retail** output would increase as a result of larger penetration of high-margin modern formats. If the barriers to the growth of high service specialty chains are removed, the gross margin of the sector could grow at around 4% a year, instead of the projected 3% under current conditions (Exhibit 39). This would also result in 30% more jobs being created in modern formats. This potential growth

in gross margin could occur in addition to the growth in sales, which is, based on the recent trends and experiences of other countries, expected to grow at the same rate as GDP. We believe that the overall net impact on employment should also be positive:

- Prima facie, it appears that there would be no net employment gain in the retail sector because specialty chains require much less hours per sale than the single product stores they would be replacing, despite providing higher service levels (Exhibit 40).
- However, limiting the argument to the short-term employment gains would neglect important positive spillover effects:
 - Higher growth of modern specialty chains would create more jobs in construction (needed to build/refurbish stores), in software services (modern retailers are among the biggest users of software), in advertising, etc.
 - Higher productivity and output growth in the retail sector should increase overall GDP growth, contributing to higher sales (and employment) in the general merchandise retail sector itself.
 - Finally, in the long term, productivity improvements from modern format penetration will level off resulting in net employment creation in the sector as GDP per capita increases. In this scenario, protecting existing jobs in single product stores could prove delusive, since they are bound to eventually lose out against much more productive discounters. As a result, protecting single product stores by slowing down the growth of high service modern formats, would result in less employment in the sector because the format mix would be biased towards low service modern stores.

IMPLICATIONS FOR POLICY MAKERS

Based on the above, we believe that there are no social/employment issues which would warrant a slowing down of economic reforms in Poland – in fact, it is the contrary. Employment coming out from manufacturing should be, at least to a large extent, absorbed by the service sectors, especially if the barriers to higher output, related notably to government ownership and control over property and land, are removed. Furthermore, removing barriers to output growth would also contribute to a faster rate of job creation in the services sectors thus allowing Polish farmers to continue their transition out of agriculture, while reducing the country's unemployment rate. If necessary, higher employment levels could be achieved by lowering the cost of low skilled

labor and reducing unemployment benefits, replacing them, for example, by an Earned Income Tax Credit. Given that there is an overall net output gain, it should be possible to design a redistribution system whereby no party is worse off after the policy changes.

Employment outlook with complete economic reforms

In what follows, we discuss the employment outlook for the overall economy as well as the service sectors under the assumption that the barriers to output and productivity growth identified above are removed and GDP continues to grow at 6% per year:

- ¶ We expect there to be substantial growth in the service sectors. This should more than compensate for the expected faster decline in manufacturing employment. This service employment growth would also, as in the past, allow a further decrease in unemployment and pull more workers out of agriculture. Failing to remove the barriers to output growth in services could, on the other hand, reduce the pace at which 'small farms' farmers transition into higher wage jobs and prevent further decreases in the unemployment rate (Exhibit 41). Moreover, existing barriers to productivity and output growth in services would also make it more difficult for Poland to maintain its past strong GDP growth performance of 6% per year. If GDP growth is lower than the assumed 6%, employment in manufacturing would decrease even further while less service jobs would be created to compensate, thereby jeopardizing Poland's ability to continue to transition out of agriculture while avoiding a further increase in the unemployment rate.
- ¶ Based on our detailed studies, employment in residential construction could grow by 60% in the 1999-2005 period (growing at 6% per year) if issues related to land ownership and property are resolved. These new jobs alone would translate into just under an additional 1% of total employment. Under similar conditions, modern retailers are also likely to expand in the coming years, more than tripling the current employment in these formats by 2005. The overall net employment impact from removing output growth barriers in retail should also be positive, but is impossible to quantify.
- ¶ In other service sectors such as hotels and restaurants, banking, real estate, and other business services, employment in the past 2 years increased at more than 8% per year. This growth is mainly the result of FDI and the continued privatization of state-owned assets. It should also be noted that continued investment and restructuring in manufacturing should create more service jobs, as best practice

manufacturers tend to rely heavily on business services such as banking, software services and advertising. Although a detailed analysis is beyond the scope of this study, there are signs that substantial room for output growth still remains in these sectors. For example, compared with international benchmarks, output in the Polish banking sector lags behind other European countries even accounting for differences in income per capita (Exhibit 42).

How to remove the identified barriers to higher output and employment in services

We discuss in turn some implementation issues to remove the property and land related barriers identified by our analysis.

- ¶ How to privatize the remaining stock of real estate premises, and otherwise expose the existing housing stock to free market forces.
 - In Hungary, over two thirds of municipally owned dwellings were privatized by 1996. This was achieved by selling apartments as, on a smaller scale, in Poland at an average of 23% of the market value. Tenants were further encouraged to purchase their apartment by the threat of higher rents. Many apartments were purchased using ‘restitution vouchers’ – effectively given away to the former owner by the municipality (Exhibit 43).

Poland faces the additional issue of non member-owned cooperatives, where tenants are paying below market rent levels for their apartments, and yet have no ownership rights. An extensive review of the legal status of these former state-owned cooperative boards needs to be undertaken. The aim should be to remove the distortionary incentive faced by current tenants to remain in their existing housing.

In Poland, expansion of the Housing Allowance programs could enable rent or payment increases and privatization by providing needs-based support to low income groups who could not afford to buy their own dwelling. This would allow increases in the rents payable on the remaining state-owned housing stock. Threats of higher rents on Gmina-owned dwellings will lead to more sales, which the Gmina could accelerate by continuing to sell the apartments at very low prices.

- The process of privatization of city center retail space should be speeded up along the same principles. As a result, some single-product stores may shut down as a result of new competition from more productive specialty chains entering city centers. Existing

tenants could also benefit from subsidized financing and in any case be compensated for any past investment they made in the store. If necessary, the government could also find explicit ways to compensate those retailers who go out of business and cannot find alternative employment.

¶ How to solve land related issues

- Property tax should be increased in exchange for the reduction in other taxes to make it politically possible.
- The outstanding claim risk could be alleviated by setting up definite deadlines on acceptable claims and by compensating legitimate claims on a cash basis, which would avoid any risks of business interference. These cash compensations should be financed out of the privatization proceeds on government property.

European mistakes to be avoided

Poland should also learn from the mistakes incurred by other (European) countries. Among others, minimum wage policies and restrictions on land use have been found to be particularly harmful for output and productivity growth. Although these factors are currently not a significant barrier for the development of service sectors, there are already pressures in Poland that may eventually lead to a tightening of product and labor market regulations. Exhibit 44 shows the impact of both a high minimum wage and strict zoning laws on the employment level in the French retail sector.

¶ **Strict zoning laws**, as currently being discussed in Poland, could either freeze the development of the retail sector or lead to an even bigger bias towards low service formats.

- Limiting the number of large formats would freeze the development of the sector as it has done in France since 1995.
- Limiting the size of large retail developments in the suburbs could hinder the growth of high service specialty chains. These currently locate next to suburban developments as a result of existing retail space problems in city centers.

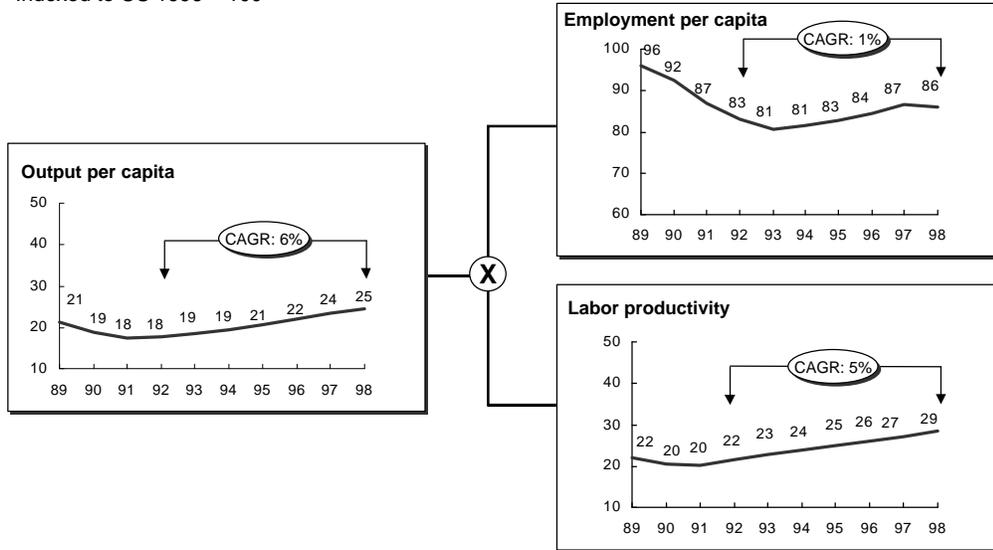
¶ **High cost of low skilled labor.** The threat is already there in the Polish apparel sector, with 40% of jobs currently paid below the prevailing minimum wage, and wages in the Polish retail sector are not much higher than the minimum wage.

¶ Other negative European examples of constraining service sector product market regulations include pricing and product restrictions in

the telecom and banking sectors (France and Germany) and building regulations in the UK hotel sector.

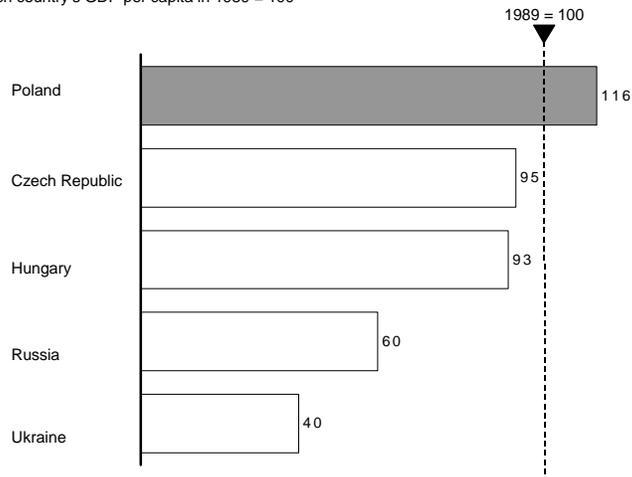
Detailed discussions of how product market and labor market restrictions have constrained growth and employment in Europe can be found in previous studies of the French, German, UK and Dutch economies by the McKinsey Global Institute.

Exhibit 1
POLISH OUTPUT PER CAPITA TREND, 1989-98
 Indexed to US 1996 = 100



Source: GUS; US Census; McKinsey analysis

GDP PER CAPITA IN TRANSITION ECONOMIES IN 1998*
 Indexed to each country's GDP per capita in 1989 = 100

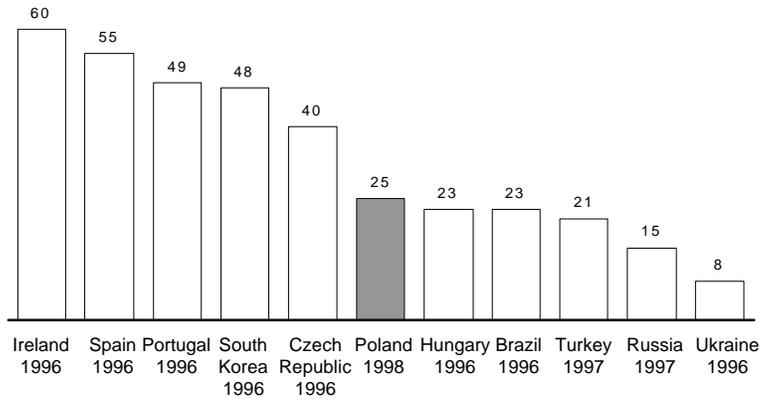


* 1998 estimate

Source: EBRD; Central Statistical Office (GUS); McKinsey Analysis

Exhibit 3

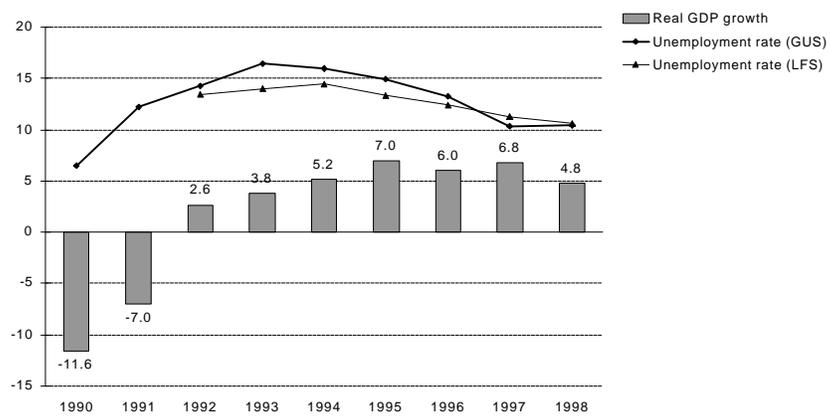
GDP PER CAPITA AT PURCHASING POWER PARITY
 Indexed to US 1996 = 100



Source: Central Statistical Office (GUS); Goskomstat; BEA; WEFA; OECD, EIU

Exhibit 4

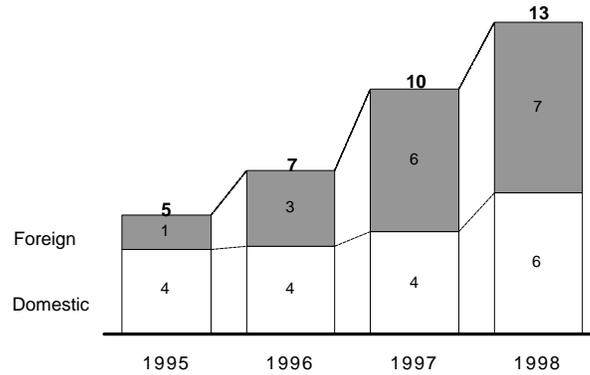
POLISH UNEMPLOYMENT AND GDP GROWTH, 1990-1998
 Percent



Source: Central Statistical Office (GUS)

Exhibit 5

COMPOSITION OF PRIVATE INVESTMENT IN POLAND, 1995-1998
Percent of current GDP

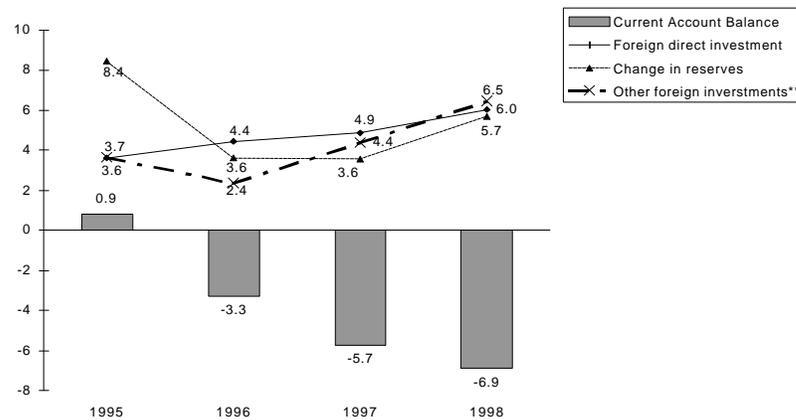


Source: PAIZ; Central Statistical Office (GUS)

5

Exhibit 6

FOREIGN INVESTMENT, CURRENT ACCOUNT BALANCE AND FOREIGN EXCHANGE RESERVES*, 1995-98
Billion USD



* Balance of payments on a transactions basis. Foreign Direct Investment as reported by the National Bank of Poland (using different methodology from PAIZ)

** Also includes "Errors and Omissions"

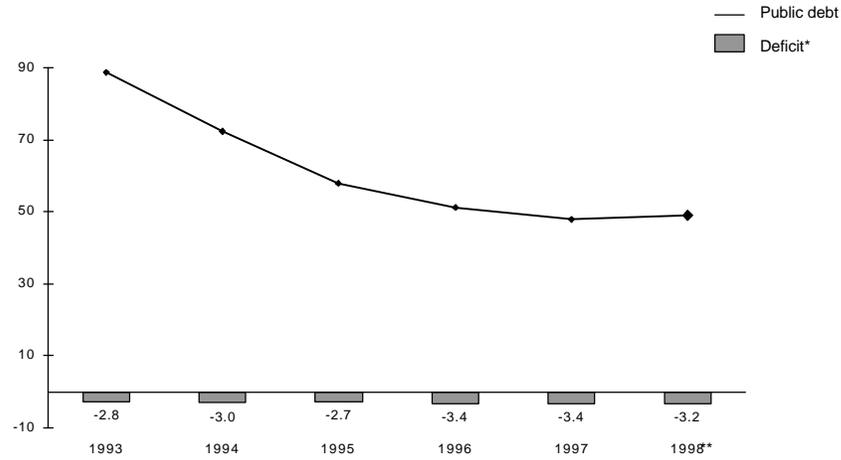
Source: National Bank of Poland

6

Exhibit 7

PUBLIC DEBT AND FISCAL DEFICIT IN POLAND, 1993-1998

Percent of GDP



* Deficit for the general government calculated on a cash basis.
 ** OECD estimate
 Source: OECD (Economic Surveys, Poland 1998)

Exhibit 8

PRIVATIZATION IN POLAND, 1994-1997

Percent of employment

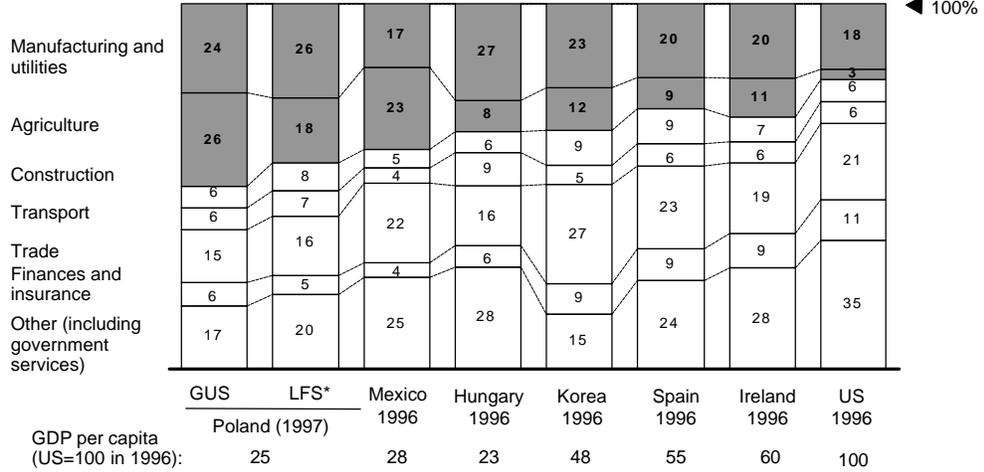


Source: Central Statistical Office (GUS)

Exhibit 9

COMPARISON OF EMPLOYMENT DISTRIBUTION WITH OTHER COUNTRIES

Percent of employed

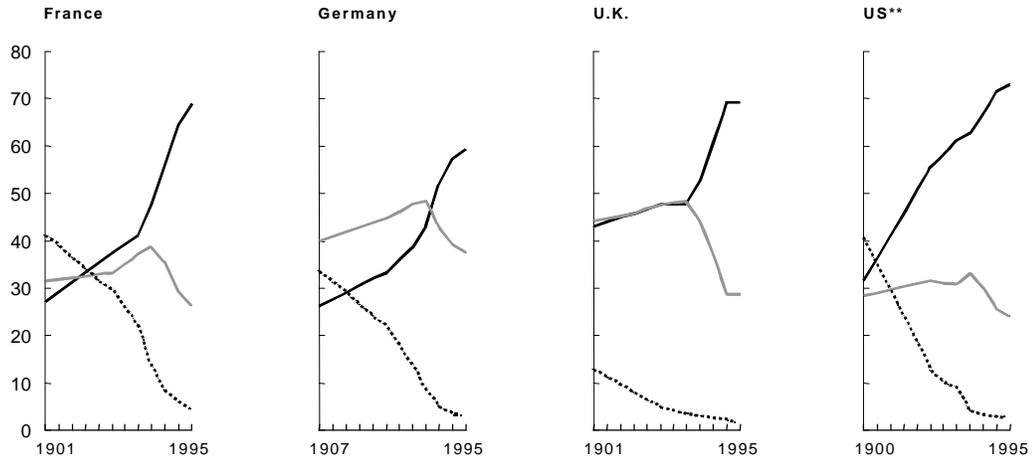


* Full-time equivalent estimates for 1998. Do not include part-time employment outside main occupation
 Source: Central Statistical Office (GUS); McKinsey analysis

Exhibit 10

HISTORIC SHARE OF EMPLOYMENT
Percent of total employment

— Services
— Industry*
..... Agriculture



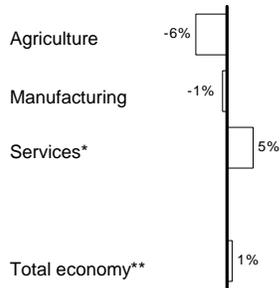
* Manufacturing, construction, utilities, mining
** For 1900-60, services included public utilities

Source: OECD Employment Study

Exhibit 11

AGGREGATE EMPLOYMENT PERFORMANCE, 1994-98
CAGR

Past performance, 1994-98
(CAGR; Sector employment)

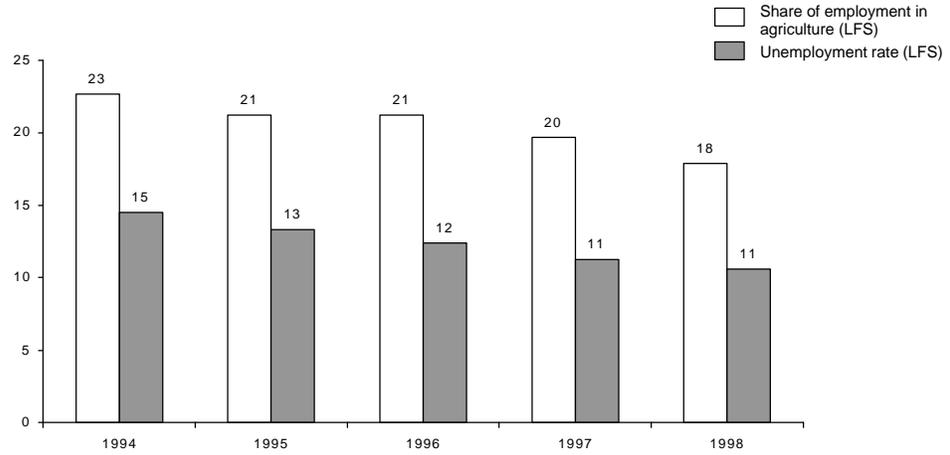


* Does not include government services.

Source: Central Statistical Office (GUS); McKinsey analysis

Exhibit 12

POLISH EMPLOYMENT IN AGRICULTURE AND UNEMPLOYMENT RATE, 1994-1998
Percent; FTEs*

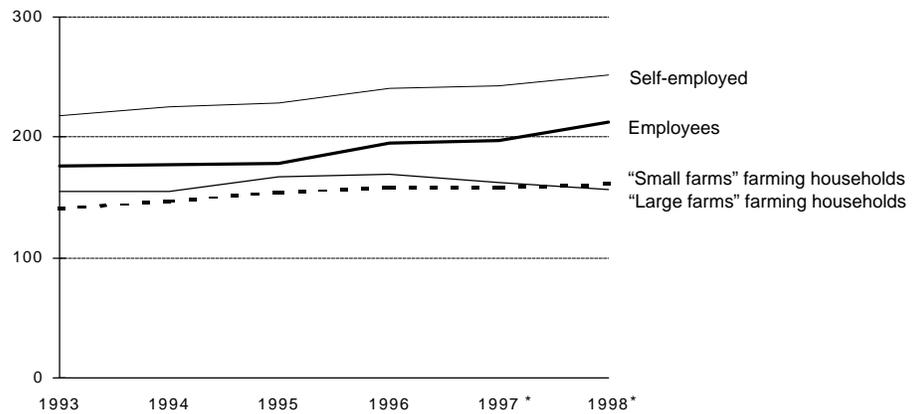


* Full-time equivalent estimates. Do not include part-time employment outside main occupation
Source: Central Statistical Office (GUS)

Exhibit 13

EVOLUTION OF DISPOSABLE INCOME PER CAPITA ACCORDING TO HOUSEHOLD CATEGORIES

PLN (real) per month

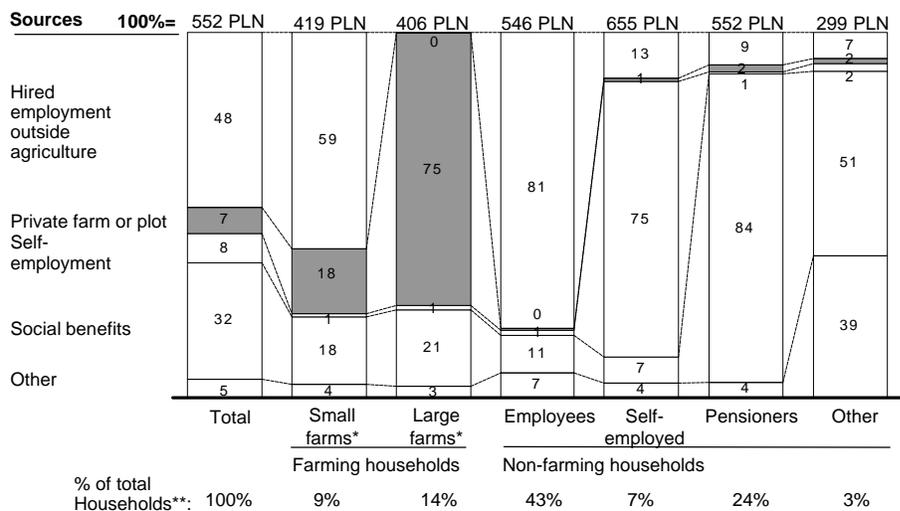


* Based on new methodology adopted by GUS since 1997
Source: Central Statistical Office (GUS)

Exhibit 14

COMPOSITION OF DISPOSABLE INCOME PER CAPITA ACCORDING TO HOUSEHOLD CATEGORIES

Percent; total disposable income per household member in 1998



* Respectively defined as Employee-farmers and Farmers according to the Household Survey terminology
 ** Share of total household members included in the household survey for 1997

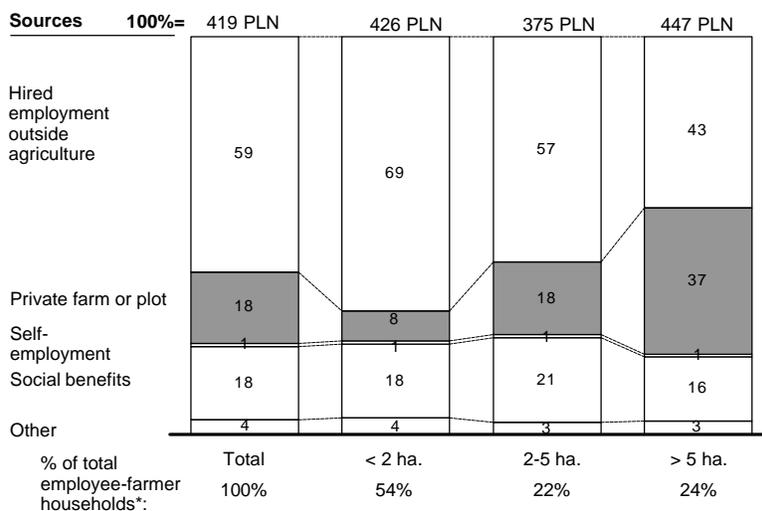
Source: Central Statistical Office (GUS)

14

Exhibit 15

COMPOSITION OF DISPOSABLE INCOME PER CAPITA FOR "SMALL FARMS" FARMING HOUSEHOLDS

Percent; total disposable income per household member in 1998



* Share of total households included in the household survey for 1998

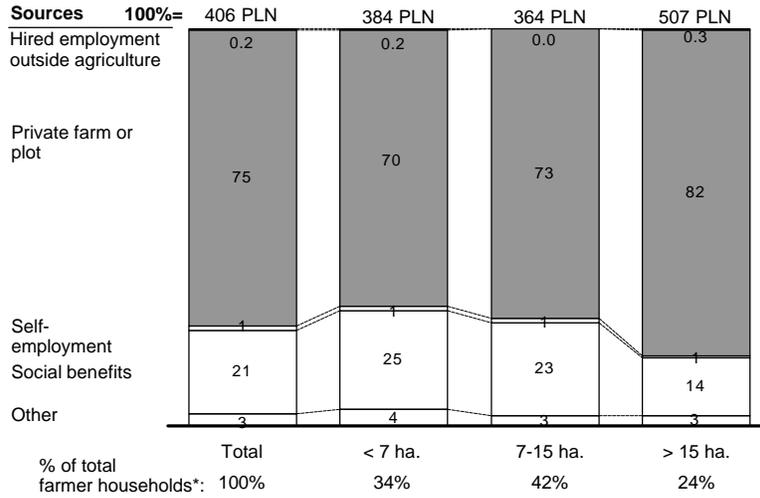
Source: Central Statistical Office (GUS)

15

Exhibit 16

**COMPOSITION OF DISPOSABLE INCOME PER CAPITA FOR “LARGE FARMS”
FARMING HOUSEHOLDS**

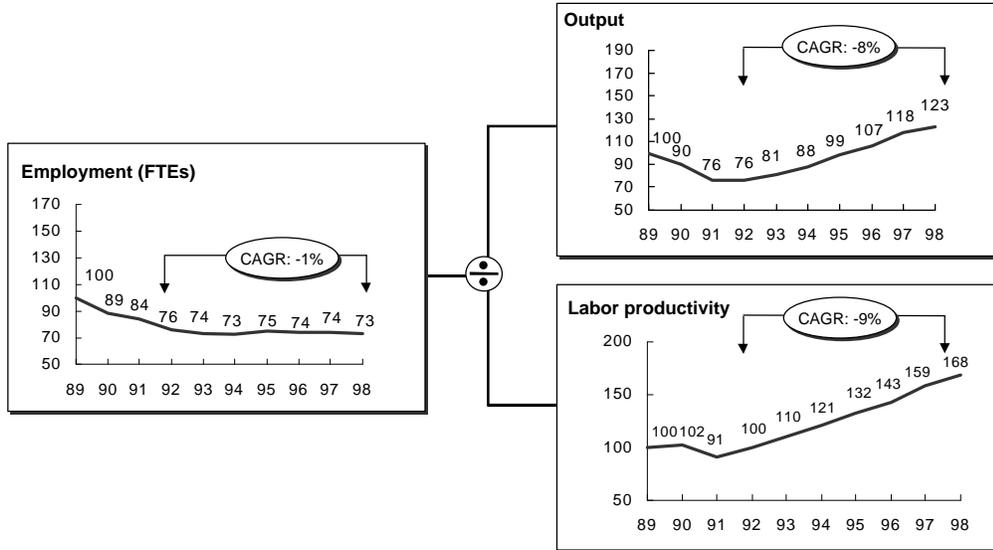
Percent; total disposable income per household member in 1998



* Share of total households included in the household survey for 1998
Source: Central Statistical Office (GUS)

Exhibit 17

POLISH MANUFACTURING EMPLOYMENT TREND
Indexed to 1989 = 100

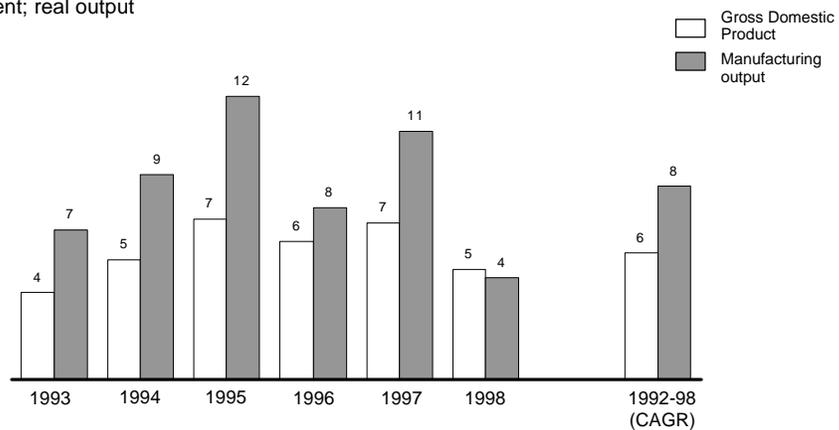


Source: Central Statistical Office (GUS); McKinsey

Exhibit 18

POLISH GDP AND MANUFACTURING OUTPUT GROWTH, 1992-1998

Percent; real output



Source: Central Statistical Office (GUS)

BENCHMARKS FOR MANUFACTURING OUTPUT GROWTH
 Percent; Real Gross value added per FTE

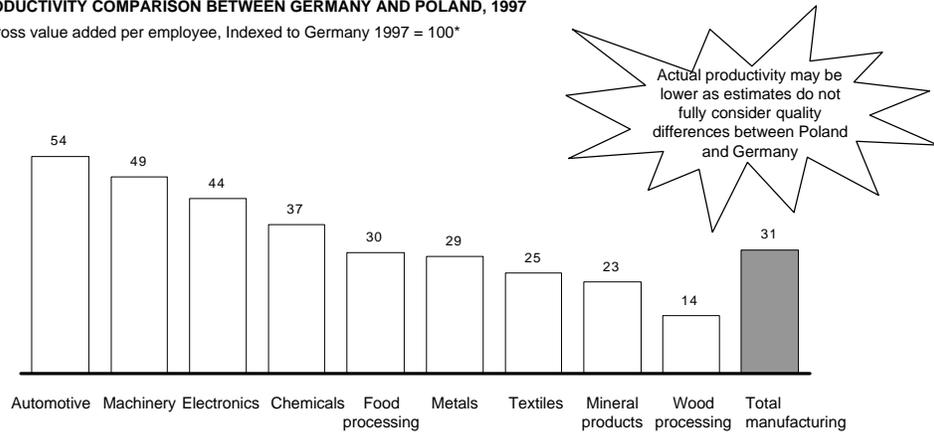
□ Gross Domestic Product
 ■ Manufacturing output

Country	Performance (CAGR)	Starting GDP per capita level (Indexed to US 1996 =100)	Starting point share of manufacturing output (Percent)**	End point GDP per capita level (Indexed to US 1996 =100)
KOREA (1985-95)	8.7 10.6	19 (1985)	20 (1985)	45 (1995)
CHILE 1986-95	7.9 6.8	20 (1986)	18 (1986)	39 (1995)
ITALY 1970-76	3.4 5.5	38 (1970)	16 (1970)	49 (1976)
POLAND (1992-1998)	5.5 8.4	18 (1992)	14 (1992)	25 (1998)
POLAND-Estimates (1999-2005*)	6 7	25 (1999)	19 (1999)	38 (2005)

* Manufacturing output growth is based on the 6% GDP growth assumption
 ** Calculated using series of manufacturing and GDP in constant prices (1995=100)
 Source: Central Statistical Office (GUS); The Economist; World Development Indicators (1999)

PRODUCTIVITY COMPARISON BETWEEN GERMANY AND POLAND, 1997

In gross value added per employee, Indexed to Germany 1997 = 100*



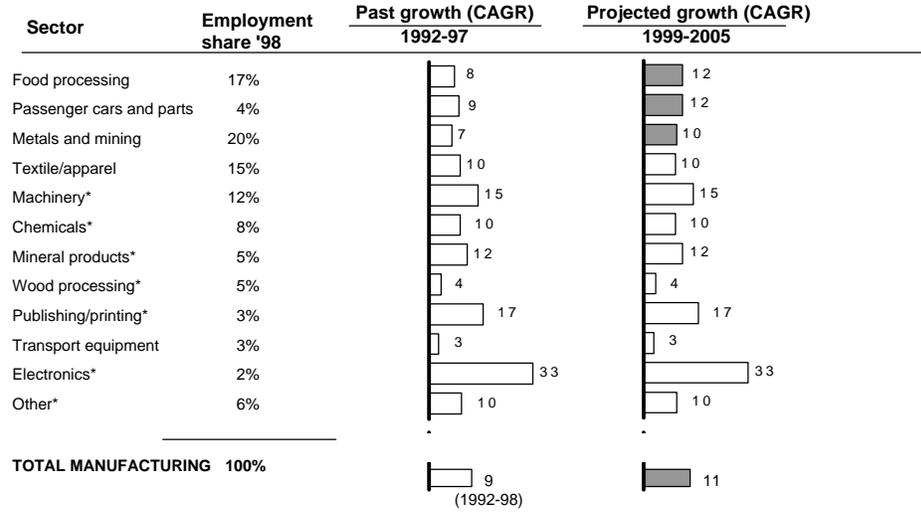
* Updated from 1993 estimates assuming 2.5% CAGR productivity growth in Germany for the 1993-1997 period.
 Source: Van Ark (1995); McKinsey

Exhibit 21

PRODUCTIVITY ESTIMATES OF MANUFACTURING SECTORS UNTIL 2005

Percent; Real Gross value added per employee

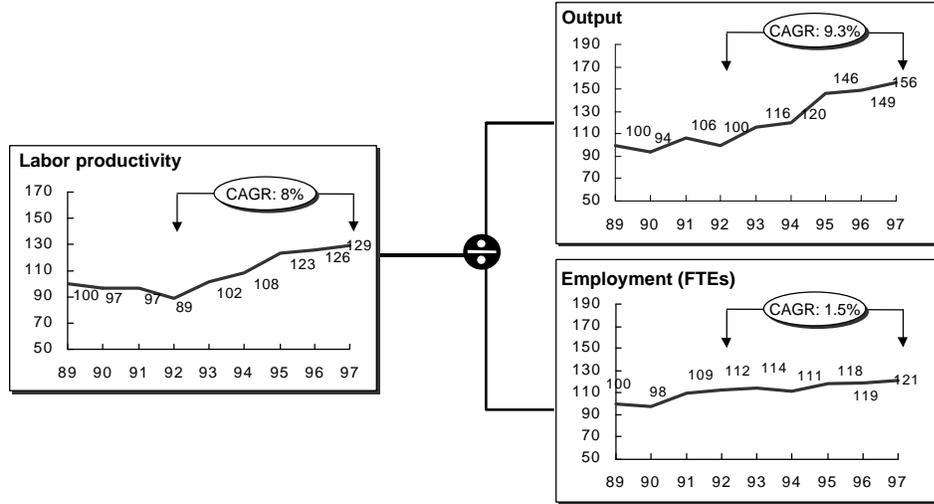
■ New estimate



Source: Central Statistical Office (GUS); McKinsey

Exhibit 22

POLISH FOOD PROCESSING LABOR PRODUCTIVITY TREND
Indexed to 1989 = 100



Source: GUS; McKinsey

Exhibit 23

BENCHMARKS FOR LABOR PRODUCTIVITY GROWTH: FOOD PROCESSING
Percent; Real Gross value added per FTE

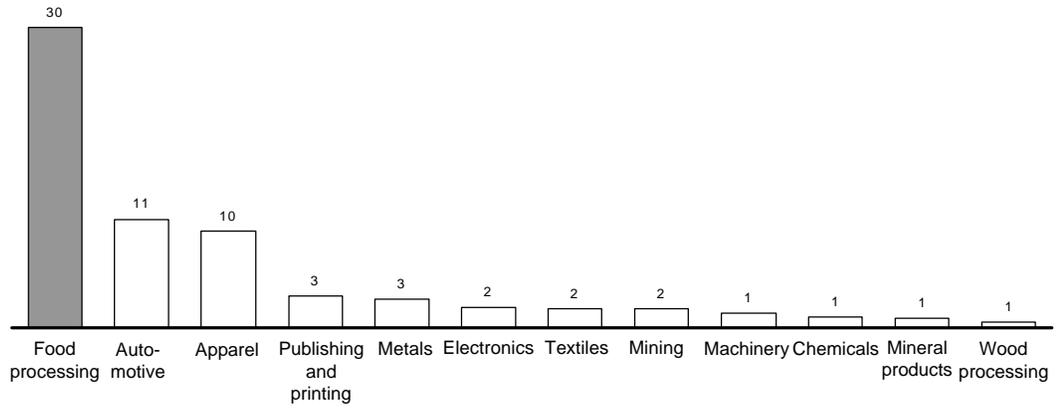
Country	Past performance (CAGR)	MGI Estimates of potential (CAGR)	Productivity level Indexed to US 1995 = 100
KOREA	13 (1985-95)	10 (1995-2005)	40 (1995)
BRAZIL	12 (1991-95)	14 (1995-2005)	18 (1995)
POLAND	8 (1992-97)	12 (1999-2005)	25-30* (1997)

* Estimates based on Van Ark (1995)
Source: Central Statistical Office (GUS); McKinsey Global Institute reports; Van Ark (1995)

Exhibit 24

IMPORT TARIFFS IN MANUFACTURING SECTORS*

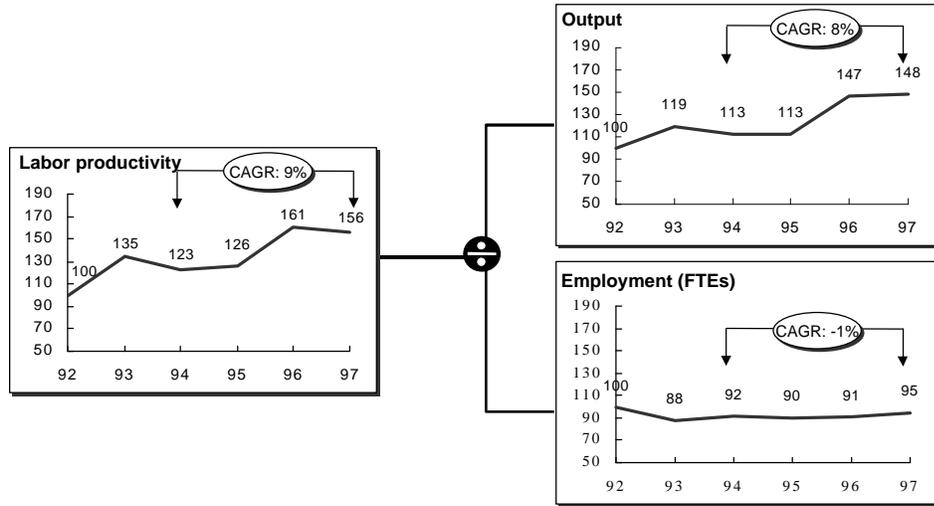
Average tariffs; 1997



* Estimates from product-based data
Source: PAIZ; GUS; McKinsey

Exhibit 25

POLISH PASSENGER CAR AND PARTS LABOR PRODUCTIVITY TREND
Indexed to 1989 = 100



Source: GUS; McKinsey

Exhibit 26

BENCHMARKS FOR LABOR PRODUCTIVITY GROWTH: PASSENGER CARS AND PARTS
Percent; Real Gross value added per FTE

Country	Past performance (CAGR)	MGI Estimates of potential (CAGR)	Productivity level Indexed to US 1995=100
KOREA	16 (1985-95)	10 (1995-2005)	48 (1995)
BRAZIL	17 (1991-95)	16 (1995-2005)	30 (1995)
POLAND	9 (1992-97)	12 (1999-2005)	30-45* (1997)

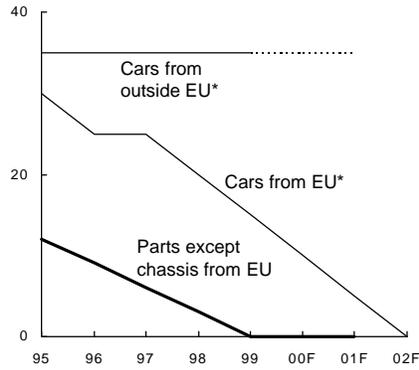
* Estimates based on Van Ark (1995)
Source: Central Statistical Office (GUS); McKinsey Global Institute reports; Van Ark (1995)

Exhibit 27

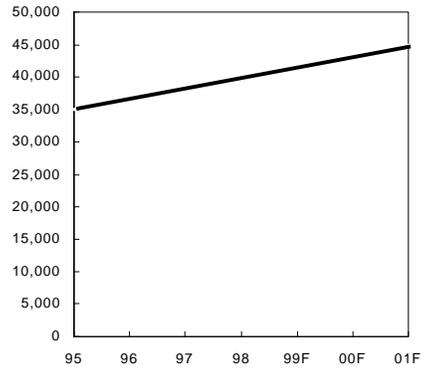
BARRIERS TO TRADE FOR PASSENGER CARS AND PARTS

Tariffs on imports into Poland

%



Duty free quotas for EU-imports into Poland
Cars

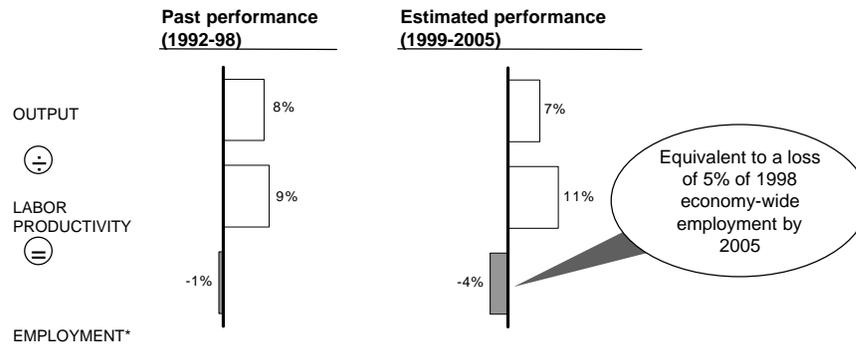


* Cars with volume below 3000 m³
Source: CCFA

Exhibit 28

**ESTIMATED EMPLOYMENT DECREASE FROM MANUFACTURING UNTIL 2005
UNDER THE 6% GDP GROWTH SCENARIO**

Percent (CAGR)

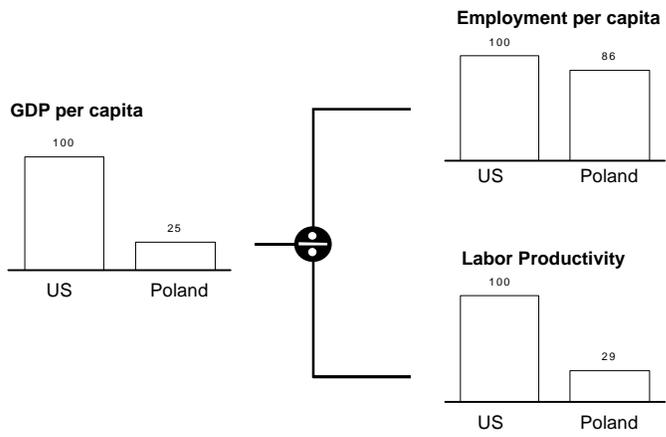


* Calculated assuming no change in employment in other sectors of the economy
Source: Central Statistical Office (GUS); McKinsey analysis

Exhibit 29

POLISH OUTPUT PER CAPITA, 1998

Indexed to US 1996 = 100

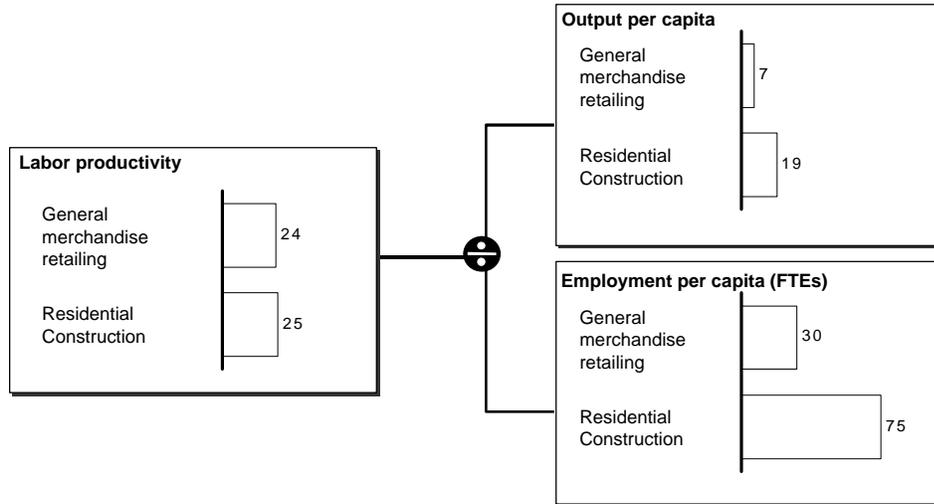


Source: Central Statistical Office; McKinsey analysis

Exhibit 30

POLISH GENERAL RETAIL AND RESIDENTIAL CONSTRUCTION LABOR PRODUCTIVITY, 1997

Indexed to US 1995 = 100

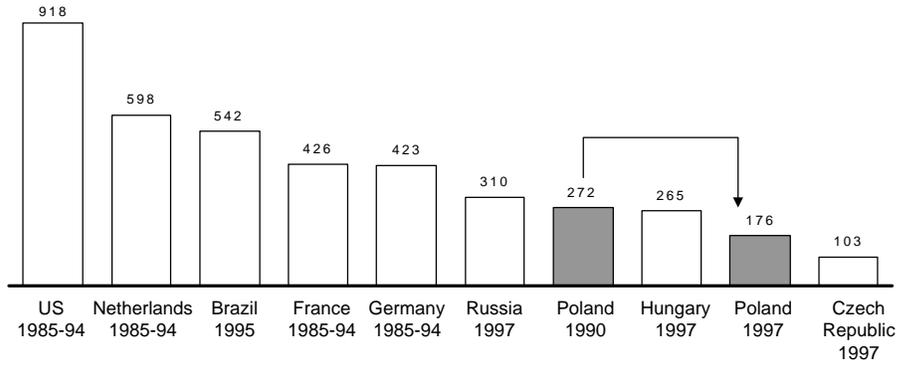


Source: GUS; McKinsey

Exhibit 31

INTERNATIONAL COMPARISON OF RESIDENTIAL CONSTRUCTION OUTPUT PER CAPITA*

Square meter build of new dwellings p.a. per 1,000 people, 1997



* Not quality adjusted
Source: INSEE, Baustatistisches Jakobuch; CBS; Bureau of the Census; Goskomstat; MGI Brazil; PlanEcon

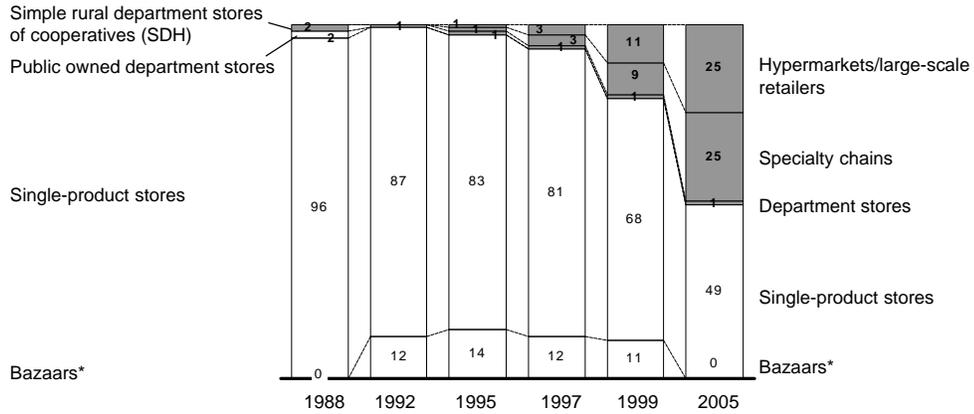
Exhibit 32

EVOLUTION OF FORMAT SALES SHARES IN GENERAL MERCHANDISE RETAILING

Percent

ESTIMATE

■ Modern formats



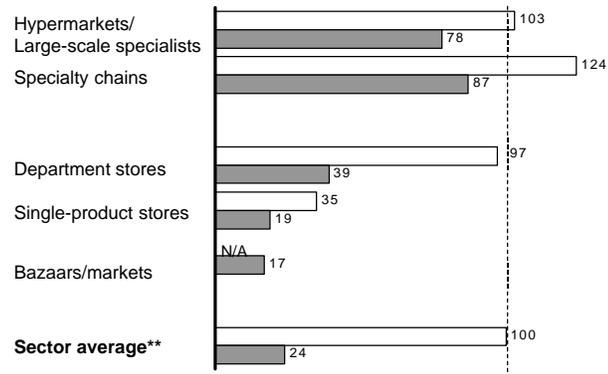
* Including kiosks and street vending
 Source: GUS; RWiK; SMG/KRC; Expert interviews

Exhibit 33

FORMAT PRODUCTIVITY IN GENERAL MERCHANDISE RETAILING

Indexed to US average (1992) = 100*

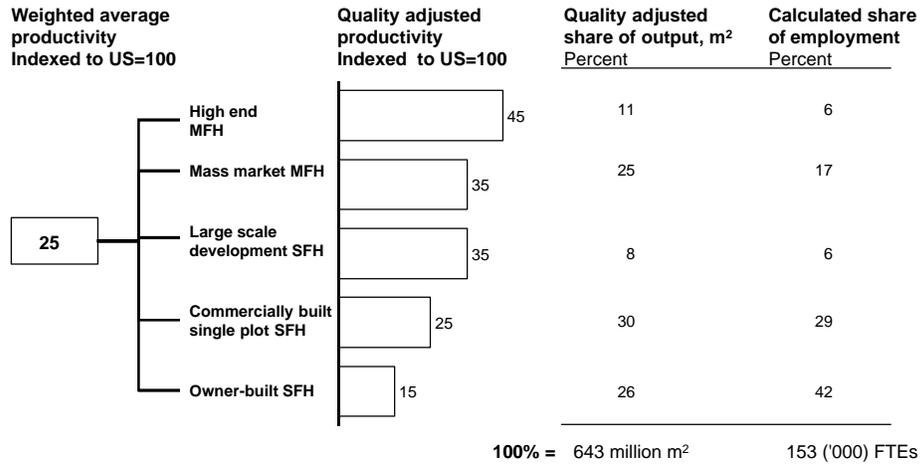
□ US 1992
■ Poland 1998



* 100 = 23,2 USD/h in prices of 1998
** Format productivity weighted by employment share
Source: MGI; Financial statements; Interviews, Surveys

FORMAT PRODUCTIVITY IN RESIDENTIAL CONSTRUCTION

ESTIMATE

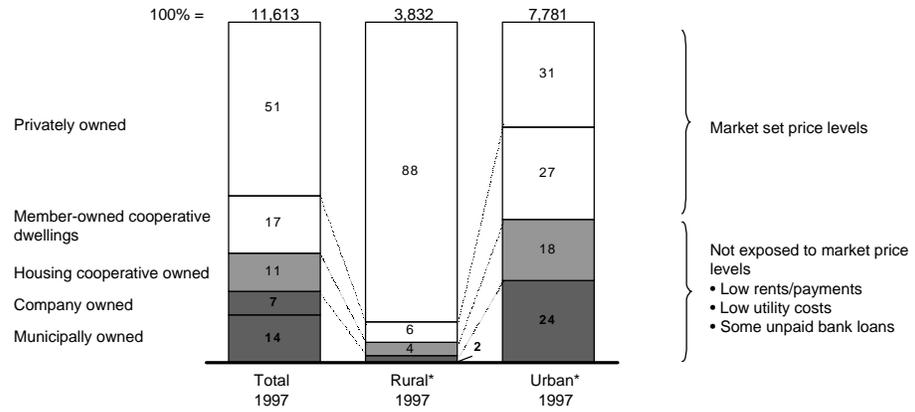


Source: MGI; Interviews, Surveys

BREAKDOWN OF HOUSING STOCK OWNERSHIP

Percent; thousand dwellings

ESTIMATE

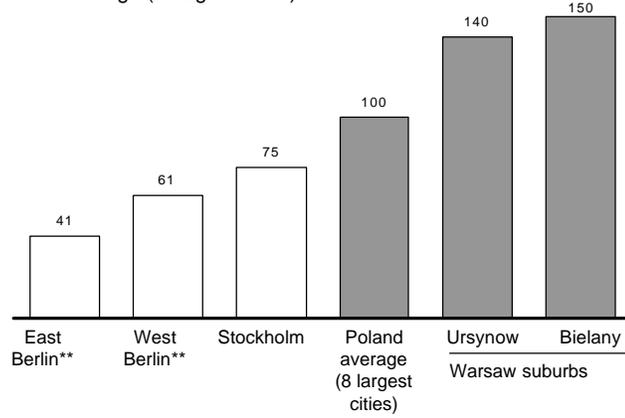


* Assumes share of member owned to non-member owned cooperatives is the same as for Poland overall
 Source: Central Statistical Office (GUS); State Office for Housing and Urban Development in Poland; Interviews

Exhibit 36

COST OF LAND FOR RESIDENTIAL USE RELATIVE TO GDP PER CAPITA, 1999*

Indexed to Poland average (8 largest cities) 1999 = 100



* GDP per capita at market exchange rate for 1996

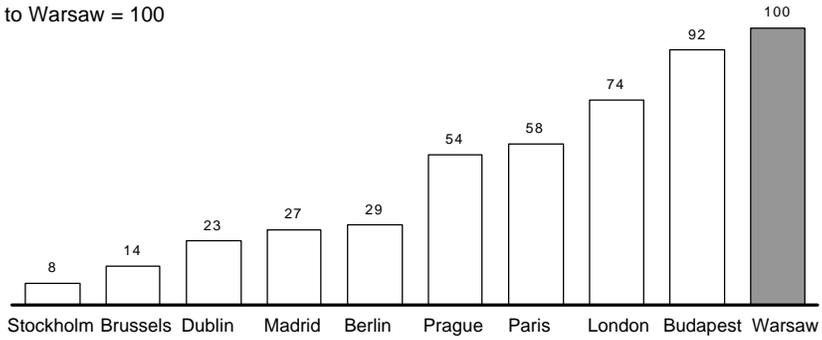
** Relative to average per capita GDP for Germany as a whole

Source: Henry Butcher International Real Estate & Associate Consultants; The Economist; Press search; RDM; Lokale Immobilien

Exhibit 37

RATIO OF PRIME RETAIL RENTS TO GDP PER CAPITA, 1999*

Indexed to Warsaw = 100



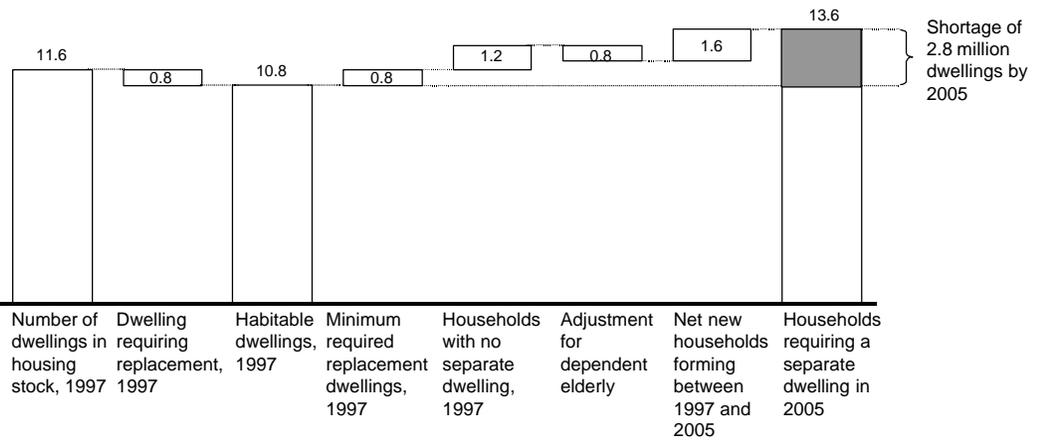
Rent USD/sqm/month	62	96	116	105	215	77	400	380	103	80
--------------------	----	----	-----	-----	-----	----	-----	-----	-----	----

* GDP per capita at market exchange rate for 1996
 Source: Jones Lang LaSalle; OECD

Exhibit 38

ESTIMATE OF THE DWELLING SHORTAGE IN RESIDENTIAL CONSTRUCTION UP TO 2005

Millions

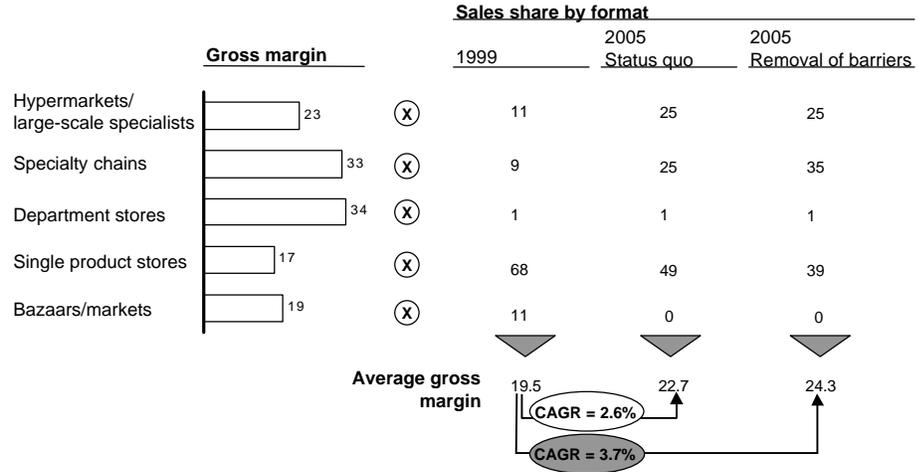


Source: GUS Statistical Yearbook, Household projection 1996-2020; US Aid

Exhibit 39

GROSS MARGIN EVOLUTION IN GENERAL MERCHANDISE RETAILING

Percent of sales

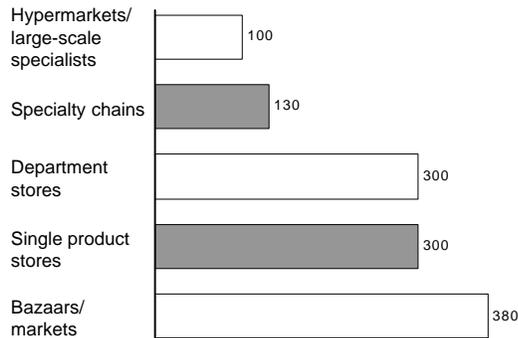


Source: Interviews; Financial statements; Surveys

Exhibit 40

HOURS WORKED PER SALES IN GENERAL MERCHANDISE RETAILING*

Indexed to hypermarkets = 100



* Hours worked/sales = Gross margin/productivity
 Source: Expert interviews; Financial statements; Surveys

Exhibit 41

AGGREGATE EMPLOYMENT OUTLOOK UP TO 2005 UNDER THE 6% GDP GROWTH SCENARIO
CAGR

	<u>Past performance (1994-98)</u> <u>(CAGR; Sector employment)</u>	<u>Estimated performance (1999-2005)</u> <u>(CAGR; Sector employment)</u>	<u>Comments</u>
MANUFACTURING	-1%	-4%	<ul style="list-style-type: none"> • Larger employment reduction due to faster productivity growth • Continuing past trend of job creation in services if barriers are not removed
SERVICES*	5%	5%	
NET	3%	1%	<ul style="list-style-type: none"> • Net employment creation between services and manufacturing
AGRICULTURE	-6%	-4%	<ul style="list-style-type: none"> • Workers will leave agriculture only to take new jobs as they become available • Resulting change in total employment
TOTAL ECONOMY**	1%	0%	

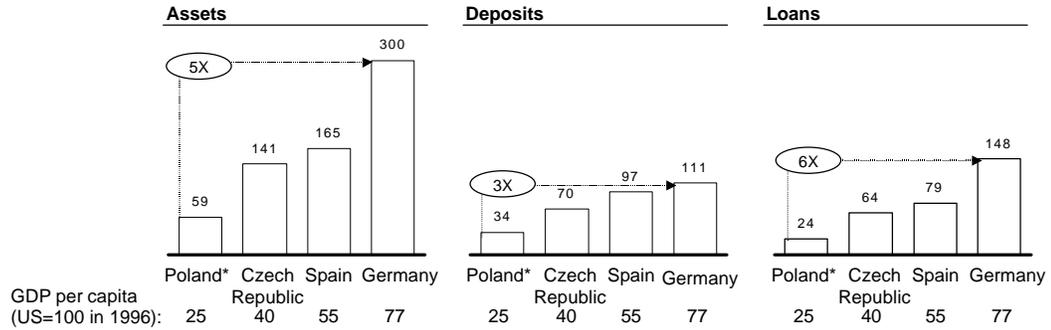
* Does not include government services.

** No change "Government Services" employment assumed for the 1999-2005 period
Source: Central Statistical Office (GUS); McKinsey analysis

Exhibit 42

INTERNATIONAL COMPARISON OF BANKING SECTORS, 1997

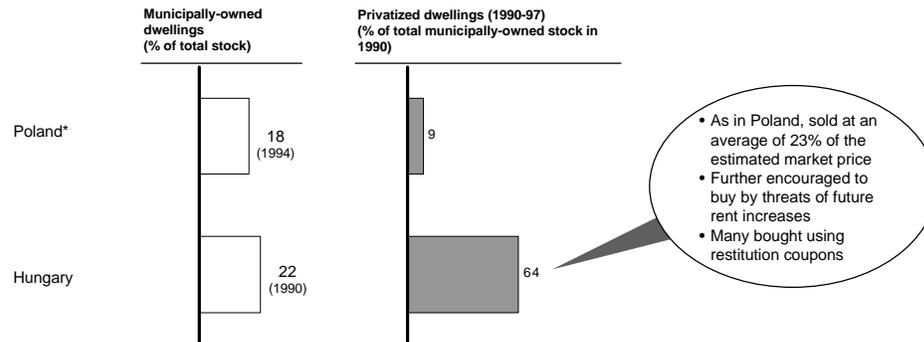
Percent of GDP



* Figures for 1998
 Source: McKinsey FFS database, EIU Viewswire, NBP

PRIVATIZATION OF MUNICIPALLY OWNED DWELLINGS IN POLAND AND HUNGARY

Percent

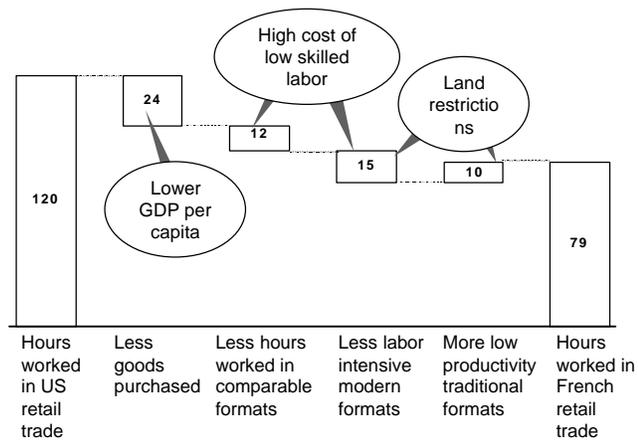


* Includes dwellings owned by Gminas only, excludes company owned and other state agency owned dwellings.
 Source: State Office of Housing and Urban Development Poland; Statistical Yearbook of Hungary 1997

Exhibit 44

HOURS WORKED IN RETAIL TRADE — FRANCE VS. US IN 1994

Hours worked in retail trade per working age population



Source: "Removing the Barriers to Growth and Employment in France and Germany", McKinsey Global Institute 1997

General Merchandise Retailing

EXECUTIVE SUMMARY

Industry overview. The general merchandising sector constitutes roughly 2% of the employment and GDP of Poland. Since 1988, shop operations have been privatized with the real estate often remaining in the hands of the government. The sector is still dominated by the traditional single-product stores, which have 67% market share. Bazaars, which emerged very quickly at the start of reforms, are now slowly declining with less than 11% market share. Since 1992 new modern formats have been developing rapidly – hypermarkets and high service specialty chains have reached 11% and 9% market share respectively.

Reasons for the productivity gap at the operational level. Average labor productivity of the sector in Poland is at 24% of the US level. The main reason for the gap is the lack of high productivity modern formats, which still account for only 20% market share in Poland, against 83% in the US.

The other reason is lower format to format productivity compared with the US. Modern retail formats are 25% less productive than in developed countries because they have yet to achieve sufficient chain scale and full training of their employees, notably store managers.

Industry dynamics. After a slow start in 1991, it took modern formats only 2 years to grow their sales share from 6% in 1997 to 20% in 1999, and they are expected to reach 50% market share by 2005, despite very low margins caused by high competitive intensity. Suburban shopping centers anchored around hypermarkets are attracting more and more customers, whereas customer traffic in most city centers is declining.

Remaining external barriers to even higher productivity and output growth. The good performance of the sector has to be attributed to the improved control of the gray market, friendly investment climate for foreigners and lack of restrictions on zoning. Nevertheless, the space available for high service specialty chains in city centers remains limited as the government is not making enough new retail space available and subsidizes heavily the rent of the existing single-product stores. The modern format mix is thus biased towards low service formats, which means less output and eventually fewer jobs in the sector. Our analysis also shows that these rent subsidies will not be sufficient to protect single-product stores from the competition of suburban shopping centers, which could lead to deserted city centers.

General Merchandise Retailing

This case study benchmarks the performance of the Polish general merchandise retail sector against that of the US. We have also drawn on the lessons learned from having previously studied this sector in France, Germany, The UK, and Russia.

We first give an overview of the sector, followed by our productivity estimates. We then analyze the productivity gaps at the operational level and discuss the industry dynamics as well as the external/regulatory impediments to even higher productivity and output growth. We conclude with a section on future outlook and policy implications for the sector.

INDUSTRY OVERVIEW

Industry definition

We define the sector as retailing of non-food products excluding cars/motor-vehicles, fuel, gas, pharmaceuticals/medicine, and cigarettes. General merchandise accounts for 23% of Polish retail sales (Exhibit 1). The sector represents a significant share of the economy in the US, generating around 5% of GDP and accounting for 5.4% of employment in 1998. In Poland, these numbers are much smaller, 2.6% and 1.6% (260,000 employees) respectively in 1997.

These gaps suggest a strong growth potential for output and, at least in the long run, for employment – the prospects for employment growth are discussed in detail in the last section of this chapter.

Scope of the study

Besides publicly available data sources (mostly GUS, IRWiK, financial statements and press articles), our study is based on expert and company interviews as well as on three bottom-up surveys. These surveys were indispensable to estimate market shares, gross margins, productivity, rents, wages and relative product price levels for the different retail formats.

In our surveys, we focused on the three largest product categories, namely clothing/footwear, consumer electronics/household appliances, and personal

care/hygiene products, which together account for 67% of general merchandise consumption in Poland (Exhibit 1). For the US, our data is based on the whole general merchandise retail sector. More details on how the surveys have been conducted can be found in the Appendix at the end of this chapter.

Format definition

For the purpose of this study, the sector has been segmented into five retail formats. The segmentation is based on different value propositions to customers along the dimensions of price, choice, service and convenience. Exhibit 2 shows that modern formats have clear and superior value propositions to customers. Hypermarkets offer low prices with more product choice, service and convenience than bazaars (the Polish name for open air markets). Specialty chains offer, for the same price, higher service levels and choices of products than the traditional Polish single-product stores. We define and characterize these formats in more detail below:

- ¶ **Hypermarkets/large-scale specialists.** There are already in Poland seven (foreign) hypermarket operators such as Carrefour, Allkauf and Tesco. These formats sell both food and non-food, with non-food accounting for around 30% of sales. These are large outlets (10,000m² to 30,000m²) and 80 of them have already been built on the outskirts of all major Polish towns. In addition to hypermarkets, there are also in most product categories, specialized large-scale discounters such as Adler, Reno, Castorama and IKEA. The only domestic player in that segment is Euro, which is selling household appliances and consumer electronics.
- ¶ **High service specialty chains.** Foreign chains such as Levi-Strauss, Big Star, Yves Rocher, and Adidas also dominate this segment with some chains having more than 100 outlets. Most of the specialty chains are considered to be high service and upper market, but chains targeting the middle and lower market are now developing such as Rossmann, Cottonfield, Carli Gry and But Hala. The specialty chains also include Polish companies such as Vistula and Opal. Most of these chains rely on both wholly owned shops and franchised outlets. The shops are usually small with selling areas of around 110 m². They are located either in city centers or suburban shopping centers, which are most often anchored around hypermarkets.
- ¶ **Department stores.** The only two department store chains operating in Poland are D. T. Centrum (main focus on clothing, 32 outlets) and EMPiK (main focus on media, 37 outlets), which, like single-product stores (presented below), were inherited from the previous regime and privatized (as chains). The department stores can be found in the center

of big cities. D. T. Centrum stores have 500-15,000 m² selling area, whereas EMPiK stores are around 1,000 sqm in size.

- ¶ **Single-product stores.** Single-product stores are scattered in the cities in loose concentrations. Most of them are the result of privatization of the former state-owned single product stores. They specialize in all products, ranging from second hand clothing to expensive jewelry. Single-product stores are usually very small with selling areas of around 80 m² and only 1-2 salespersons. Unlike high service specialty chains, these stores are operated as single units and they have typically less attractive interiors and depth of product choice.
- ¶ **Bazaars/markets.** Bazaars can be very big (the Stadion X-lecia in Warsaw has 300,000 m² and 4,000 stands) and they grew rapidly at the outset of market reforms. Most of them are located close to the Western and Eastern borders of Poland mostly involved in the wholesale of clothing to foreigners. Markets, in contrast, serve only retail purposes and sell everything from food and cheap clothing to new computers. Markets are smaller and are typically located next to the main streets and within residential areas. Both markets and bazaars consist of various small structures ranging from tables to tiny metal huts. We have also included in that format category, kiosks and street vending, which are usually located on broad pavement spots with high customer traffic.

Industry and format mix evolution

The consumption of general merchandise products has been roughly constant as a percentage of GDP (13%) since the start of the economic recovery in 1992. This reflects the fact that both the share of total consumer consumption in GDP and the share of general merchandise consumption in total consumer consumption have remained stable (Exhibit 3).

In 1988, still in the communist era, general merchandise retail was dominated by public-owned formats. Public-owned single-product stores accounted for 93% of sector sales. Public-owned department stores (D. T. Centrum) in towns of more than 100,000 inhabitants made up another 2%. In rural areas, department stores were run by cooperatives called SDH with about 2% market share. Private single-product stores had only 3% of the market.

With the end of communism, the sector changed dramatically (Exhibit 4). In 1992 the cooperative department stores went bankrupt despite heavy subsidies. In personal care, some of the public-owned single-product shops were directly taken over by employees; in many cases the former shops were closed down. New private single-product stores were opened in the former public-owned

shops, which were then up for rent. At the same time many bazaars and markets developed everywhere; they could be set up quickly with only minimal investment.

After 1992, modern formats (hypermarkets and specialty chains) developed rapidly – they already had 20% of the market in 1999. The first foreign entrants were Levi-Strauss and Adidas in 1991 and Makro Cash&Carry in 1992. Bazaars started to decline as they began to face tough price-based competition from hypermarkets. Specialty chains entered Poland at around the same time. They had a slow start since it was difficult to find suitable place in city centers (explained later) and many of them traditionally sold products that were considered to be upper market in Poland and which only few Poles could afford.

The new suburban shopping centers in Poland consist almost entirely of one hypermarket with about 50 specialty chain outlets in surrounding trade galleries. The US model of a shopping center, which consists of a department store surrounded by hundreds of specialty chain outlets, is not present in Poland. This is explained by the fact that US-type shopping centers developed before the hypermarket concept was invented, and this concept has proved to be superior (more productive) to the traditional department stores, especially for poorer countries. According to the expansion plans of existing players, the number of suburban shopping centers in Poland should increase by more than 50% over the next 2 years, reaching about 130 centers by 2001 (Exhibit 5).

PRODUCTIVITY PERFORMANCE

Approach for measuring labor productivity

We define labor productivity as sales times retail gross margin per hours worked by retail employees.

$$\begin{aligned} \text{Productivity} &= \frac{\text{Sector value added}}{\text{Number of hours worked}} \\ &= \frac{\text{Sales} \cdot \text{Gross margin}}{\text{Number of hours worked}} \\ &= \frac{\text{Sales} - \text{COGS (Cost of goods sold)}}{\text{Number of hours worked}} \end{aligned}$$

Since the official statistics in Poland do not provide data on gross margins or on employment specified according to our detailed definition of formats, we had to conduct our own original surveys to estimate market shares and format-specific productivity.

The Polish value added measured in zloty has been converted into US dollars using our estimate of the purchasing power parity (PPP) exchange rate for the retail sector. This exchange rate makes equivalent the value added of two identical stores in Poland and in the US (same products, similar service level, similar location and throughput). The overall sector labor productivity was then obtained by averaging the individual format productivity weighted by each format's share of employment – see the Appendix at the end of this chapter for more details.

Overall productivity results

In 1998, the productivity in Polish general merchandise retail was 24% of the US level and significantly lower than in many other countries (Exhibit 6). In Poland, modern formats are two to three times more productive than any of their domestic competitors and only about 25% less productive than their US counterparts (Exhibit 7).

Although Poland has much more modern formats than Russia (20% versus 8% market share), its labor productivity is slightly lower than in Russia. This is because Bazaars, the dominant format in Russia with 65% share of employment, have slightly higher productivity than single-product stores, which are the dominant format in Poland. The other reason for the slightly higher productivity in Russia is that modern formats do not account for a large enough share of employment to make a big difference on the overall sector's productivity – modern formats account for only 8% of employment in Poland and less than 3% in Russia.

Going forward, the key determinant of productivity will be the share of modern formats. The situation in Poland is thus much more favorable than in Russia, since modern formats are both more present and expanding faster.

REASONS FOR THE PRODUCTIVITY GAP AT THE OPERATIONAL LEVEL

The sector productivity in Poland is 76% less than in the US. There are two factors causing this gap: a lower market share of modern, high productive formats and lower format to format productivity. These factors account for 51 and 25 percentage points respectively. In other words, the main reason for the low productivity is the unfavorable format mix.

Unfavorable format mix

Despite their rapid growth, modern formats account only for 20% sales share in Poland compared with 83% in the US. In terms of employment shares, which determine these formats' contribution to the overall sector productivity, it is only 8% in Poland versus 70% in the US. The big difference of market shares accounts for 51 percentage points of the sector productivity gap. The difference is particularly big for specialty chains, which have only 9% market share in Poland against 61% in the US (Exhibit 8).

Lower format to format productivity

As mentioned above, 25 percentage points of the sector productivity gap originate from lower format to format productivity in Poland compared with the US.

- ¶ Modern retail stores operated by foreign companies (the vast majority of them) are set up according to best practice layout and equipment level and are supposed to be operated according to the best practices. The throughput and service levels per store are in many cases comparable to the ones achieved in the West. Despite this, modern formats in Poland are still less productive because of the smaller size of the chains and lower skills of employees. These two factors are expected to disappear in a few years for existing firms, with continued expansion and on-the-job-training.
- Scale matters because it allows reduced fixed costs (e.g. overhead and advertising) and more efficient supplier logistics. This minimum efficiency scale is around 20 outlets for hypermarket operators and 50 outlets for specialty chains – most chains have around 10 outlets today in Poland.
- Employees in all formats have a relatively low retail skill level and there is no pool of experienced workforce on the job market. This is particularly true for store managers, which is today the main bottleneck in Poland. In the West, store managers are typically coming out of the ranks, and trained on the job. Store managers are, in particular, key to ensuring that best practice operational procedures are being followed on the shop floor. One example of such a shortcoming was that workers in a hypermarket were pushing pallets instead of pulling them. The lack of store managers should quickly be solved as the pool of talent from which to pick them increases with the growth of each modern retail chain.

- The other operational factors leading to lower productivity are less important. They include smaller consumer baskets leading to more counseling and checking out times per sales, and higher theft rates, which lead to a bigger number of security personnel in Poland as compared to the US.
- ¶ Traditional Polish formats (single-product stores, bazaars and department stores) have even lower productivity than the traditional US counterparts ('Mom and Pops' and department stores) because of poorer organization of functions and tasks, and lower customer traffic.
- Staffing levels in D. T. Centrum are very high. Many of their stores are still not organized as a collection of specialty clothing areas, as is now customary in best practice department stores.
 - Customer traffic is low in many single-product stores and bazaars because of poor product offering, inadequate service levels and unattractive premises and, in some cases, location.

INDUSTRY DYNAMICS

After a slow start in 1991, it took modern formats only 2 years to grow their sales share from 6% in 1997 to 20% in 1999. Today, the existing modern retail chains grow quickly and new players continue to enter Poland, like in recent months, Intersport, Deadly's Foot and Lacoste.

Competitive intensity is also high; retail margins, even for the popular hypermarkets, are very low. Hypermarkets keep investing more as they seek to achieve minimum efficiency scale as chains, and to push other traditional formats out. All hypermarket operators plan to continue expanding – they will open about five new hypermarkets each next year (shown previously on Exhibit 5). This is a remarkable positive example of how favorable market conditions led to investment from best practice foreign companies, without leading to a situation where they 'milk' the country by repatriating high profits.

City centers so far have been losing the competition for shoppers against the large retail complexes, which are located in the outskirts and suburbs of cities. This trend accelerates with the growing availability of cars, and hypermarkets have put in place free shuttle services. In comparison, the speed of change in city centers is slow; a few new buildings are being built in leftover open spaces and some are being refurbished, but in general city center retail fails to expand or modernize. We will explain below why, despite being deserted, many city center single-product stores do not drop out of business and free up attractive space for more successful shops, specialty chains in particular.

REMAINING BARRIERS TO A FAVORABLE SECTOR DEVELOPMENT

In this sector, Poland has achieved a better performance than most other developing countries. Compared to Russia, for example, it has achieved far better control on equal tax enforcement and counterfeit issues, which by providing an almost leveled playing field, made Poland a more attractive destination for foreign investment.

Nonetheless, several issues remain to be solved, notably the distortions affecting the market for city center retail space, which not only limit productivity growth, but also output and, eventually, employment growth in this sector, as well as affect urban development in Poland.

Lack of retail space for high service specialty chains in city centers

We discuss in turn the nature of the problem and its negative consequences.

¶ **Nature of the problem.** The market for retail space in city centers is distorted and constrained as a result of incomplete privatization. Much of the real estate in city centers is still owned by local governments (Gminas). The first problem is that potentially attractive space is not made available for development. The second is that existing tenants of single-product stores enjoyed heavily subsidized rents at only 20% the free market rate, with in most cases, a legal prohibition on subletting. Attempts to raise rent prices resulted in riots and in strong lobbying against it and, as experienced by the Warsaw City government in 1997, usually failed. Buildings are being privatized very slowly, often because exclusive purchase rights have been given to tenants who cannot afford to buy the shop. Public tenders are complicated, opaque, long and often require personal deals or good relations, to such an extent that many foreign firms do not bother to participate.

As a result, the free rental market for attractive city center retail space is limited to the few privately owned buildings; shops for new entrants like specialty chains are scarce and therefore very expensive. A country comparison shows that, relative to GDP per capita, Warsaw has the highest retail rents among the main European capitals (Exhibit 9). Franchising single-product stores is only a partially available alternative to specialty chains, because single-product store managers are in most cases either lacking the adequate skills or the will (because of the rent subsidies) to engage into constraining and binding franchise agreements.

¶ **Negative consequences.** The first serious consequence of these restrictions is that they will eventually constrain output and employment growth in the retail sector. They may in the short term protect low value jobs in single-product stores, but in the long term these shops are condemned to lose the battle against suburban modern formats. The rent subsidy is not enough to compensate for the productivity gap; they will keep losing market share as a consequence of an inferior price/service proposition. That would eventually leave Poland with a modern format mix biased towards low service hypermarkets and large-scale specialists, as can already be observed. These formats will be able to control the space they make available around them for specialty chains and charge high prices for it, benefiting from the city center price umbrella.

The second consequence of these restrictions is that city centers are running the risk of being deserted. City centers, which already suffer from insufficient town development and poor traffic infrastructure (e.g. lack of parking lots), are becoming increasingly less attractive for shoppers relative to the large retail complexes being developed outside the city. The town of Radom is an unfortunate illustration of this dynamic.

Less important barriers

Other and less important factors are slowing down the evolution of the sector.

¶ **Bureaucracy around the land allocation process for suburban retail developments.** In Poland, the development of a shopping center takes more than 3 years compared to 2 years in the US. The critical steps in setting up a shopping center (hypermarkets) are: getting the land plot contract, getting the building permit (change of use in official master plan, general permit WZiZT, detailed building permit), and construction (Exhibit 10). The length of the steps varies considerably and depends on many external factors – e.g. the ownership structure of the land and the status of the land in the official master plan. It is in many instances a risky business with unpredictable outcome. The main difficulties are around securing the land plot and changing its official use in the government master plan. The ownership of a land plot is often unclear, and the official documentation in many parts of Poland remains incomplete. Finding out the legal status or the owners of a plot takes a long time and is not always possible. This is aggravated by the gaps in re-privatization law, as many official processes are not standardized and the plans at local governments are usually not

computerized increasing the time required by officials to process requests.

¶ **Unequal tax enforcement.** There has been a marked improvement in the enforcement of taxes across all retail formats with the introduction of special fiscal cash registers, the introduction of VAT in 1993 and the lowering of corporate taxes. As a result, the shares of shadow output and employment have been contained at about 20% and 8% respectively – it is easier and more rewarding to conceal output than employment. Unlike in Russia, a chance has been given to modern formats to compete on price with bazaars and markets, which have been the main tax evaders.

¶ **Counterfeits.** Again much progress has been achieved in that area. Today, brand producers work closely together with custom officers and police forces and train them in how to identify fake brands. In addition, they use special advertising campaigns to raise public awareness, attach holographic signs on their products and have formed a cooperation in Poland called Pro-Marka to coordinate their efforts. More is left to be done as counterfeiting is still a way for some bazaar/market stands and single-product stores to gain undue competitive advantages. The main targets of counterfeits are Western brands in jeans (Levi-Strauss, Big Star, Diesel) and sport clothing (Adidas, Nike, Reebok). Up to 80% of jeans and sport-clothing sales are estimated to be counterfeit, most of which are illegally imported from the Middle East, mainly Turkey. Counterfeiting also affects the electronics retailing market with a market share of roughly up to 20%. Most of the counterfeits can be found in bazaars (about 30% of their sales); for single-product stores, probably not more than 5% of sales have to be attributed to counterfeits.

Improved enforcement of taxes and serious attempts at cracking down on counterfeits have been important in attracting foreign investors and in limiting the growth of bazaars, which are now declining. This is in marked contrast to the situation in Russia, where bazaars are still thriving and where large-scale modern formats cannot compete on price with them. Modern Polish retailers also benefit as, unlike in Russia, large foreign investments are being made in the suppliers' industry. This allows modern retailers in Poland to increasingly cut out the wholesalers and importers, and cooperate, out of common interest, with foreign suppliers and the police to help law enforcement on VAT, counterfeits, and smuggled products.

¶ **Corporate governance.** The main reason why D. T. Centrum, the major department store chain, cannot optimize staffing levels and hours worked is the clause against layoffs until 2001, agreed upon as part of the privatization contract.

FUTURE OUTLOOK AND IMPLICATIONS

Productivity should continue, even with no changes in economic policies, to grow rapidly as modern formats continue to expand and improve their own productivity through increased scale and on-the-job-training. Output and employment growth in the sector will depend on both the overall GDP growth, which drives the growth of consumption, as well as on the extent to which retail space is made available for high service specialty chains in city centers.

Future productivity growth rate

As mentioned above, the effect of the format mix on the sector productivity gap is much more important, so we will base our following productivity growth estimates on the change of format mix only.

Based on the evolution of format mix, the productivity growth over the last few years has been quite high – estimated at around 9% per annum.

Under current conditions and expansion plans, it is estimated that hypermarkets and specialty chains will have 25% market shares each in 2005. This evolution implies a productivity growth rate of 7% per annum for the sector going forward. Productivity growth could be even higher if the barriers to the growth of specialty chains in city centers are removed. Although it is impossible to determine how much more market share specialty chains would be able to capture, we believe it is significant on the basis that they have captured more than 60% market share in the US. We estimate 10% productivity growth based on the fact that their market share would increase from 25% in the ‘status quo’ scenario to 35% under the ‘removal of barriers’ scenario (Exhibits 11 and 12).

Future output growth rate

The output (value added) growth of the general merchandise sector depends on the growth of sales as well as on the evolution of gross margins.

- ¶ The share of general merchandise sales is expected to remain constant at 13% of overall GDP in the future. This is based on the fact that both the share of consumer expenditures in GDP and the share of general merchandise expenditures in consumer expenditures have been constant in recent years at 64% and 20% respectively (see Exhibit 3). Furthermore, these levels are quite similar to the ones in more developed countries (Exhibit 13).
- ¶ Gross margin, on the other hand, should continue to grow as the format mix evolves towards higher gross margin retail outlets; even hypermarkets have a higher gross margin than single-product stores.

This evolution reflects the fact that, with increasing wealth, people spend increasing proportions of their money on retail services instead of the product itself. Based on the expected evolution of format mix, the gross margin of the entire retail sector should grow at around 3% per annum under the 'status quo' scenario, and at 4% per annum if high service (high margin) specialty chains are no longer constrained in city centers (Exhibit 14).

Hence, if the overall GDP continues to grow at 6% a year, the retail sector would grow at around 9% a year under the current conditions, or even at 10% a year if all the barriers are removed.

Employment implications

Employment in general merchandise retail is very low compared with more developed countries. These countries have achieved higher employment levels than Poland, despite being at, or near to, best practice productivity levels (Exhibit 15). This is explained by the fact that beyond a certain productivity level, productivity tends to grow at a slower rate than output in this sector. Although the share of general merchandise sales remains roughly constant as a percentage of GDP for countries above Poland's GDP per capita, the service component (retail gross margin) increases as richer consumers demand higher service levels per goods purchased. We will expect employment growth in the Polish retail sector to pick up significantly in about 10 years once it has caught up productivity wise (Exhibit 16) – the detailed analytical steps and assumptions can be found in the Appendix.

For the short run, our estimates for productivity and output growth in the Polish retail sector suggest that keeping the barriers in place would be better from an employment point of view. This is because, under the 'no barriers scenario', specialty chains replace single-product stores in city centers. Every time that happens, retail output (gross margin) doubles but hours worked per retail sales halve (Exhibit 17), reflecting the fact that specialty chains are four times as productive as single product stores.

Concluding from this, that the 'status quo' scenario is preferable would be short sighted for the following reasons:

- ¶ Firstly, the 'status quo' scenario protects low value existing jobs at the expense of new high value jobs. Modern retailers typically employ young and low skilled workers, and are thus key to help solve the burning social issue of youth unemployment.
- ¶ Secondly, the growth of modern formats helps create new jobs in related sectors such as construction (needed to build or refurbish the new stores) and software services – modern retailers are among the

largest users of software services for inventory management and consumer research purposes.

- ¶ Thirdly, promoting output growth in the retail sector will, by itself as well as through positive spillover effects into related sectors, contribute to higher overall GDP growth – which is one of the key conditions for creating jobs in retail.
- ¶ Finally, in the long run, once single-product stores will be mostly gone (which is inevitable given their productivity handicap), the employment level in the sector will be determined by the relative share of high service specialty chains vis-à-vis hypermarkets and large-scale specialists.

France and Germany are already paying the output and employment price of conservative and shortsighted economic policies restricting the healthy evolution of modern formats. We have, in a previous study¹, systematically analyzed the large employment gap between these two countries and the US – the following three factors explained it (Exhibit 18):

- ¶ Firstly, because of problems in other sectors, the GDP/consumption levels were lower in France and Germany than in the US.
- ¶ Secondly, the cost of low skilled labor made the provision of low value services (e.g. bag packing) uneconomic in France and Germany and differentially penalized the labor intensive high service specialty chains.
- ¶ Finally, land was more expensive and difficult to find for specialty chains than for hypermarkets/large scale specialists.

Policy implications

The main goal of the Polish government should therefore be to remove all the remaining barriers to higher productivity and output growth in the retail sector, notably the ones which are limiting the growth of specialty chains in city centers. In addition, Poland should avoid in the future repeating the mistakes done by other European countries in this sector.

We suggest the following reforms:

- ¶ **Privatization of retail locations owned by local governments.** The downtown market for retail space needs to be freed up to ensure a healthy development and to give city centers a chance to compete with suburban shopping centers as a retail location. Since raising the rent

¹ “Removing barriers to growth and employment in France and Germany“, McKinsey Global Institute, 1997.

level of government owned buildings failed in the past due to strong resistance by lobby groups, one way to solve the issue is to privatize government real estate. The process of privatization should be speeded up, and the bidding process should become more transparent to allow modern retailers to participate, while remaining fair to the existing tenants, by making sure, for example, that they are compensated for past investment in the store. As a result of these changes, some single-product stores may shut down in response to new competition from more productive specialty chains entering city centers. If necessary, the government could find explicit ways to compensate those retailers who go out of business and cannot find alternative employment.

- ¶ **Speeding-up the process of buying land and getting building permits.** This is especially important since suburban retail developers are helping to correct the city center market failure by providing space to many specialty chains – to which they should be encouraged as much as possible. The local governments should designate land plots for retail use proactively, standardize processes and computerize master plans and ownership documentation. In addition, the government should close the gaps in the recent re-privatization law for land plots to allow predictable and quick legal procedures.

Moreover, the Polish government should not repeat the mistakes made by governments in other European countries that cost many jobs:

- ¶ **Setting up new suburban shopping centers should not be more regulated than today.** The government should oppose all such ideas that were discussed recently: there should be no restrictions in the number or size of large suburban shopping centers. Limiting the number of new shopping centers would stop the development of the sector – as happened in France following the 1995 law ‘Loi Raffarin’, which effectively froze the opening of new large retail formats. Limiting the size of shopping centers would stop the development of specialty chains in the suburbs, where there would be no more room for them around hypermarkets. This is also what happened in France following the 1973 law ‘Loi Royer’, which considerably slowed down the development of shopping centers and failed to stop the rapid growth of standalone hypermarkets (Exhibit 19).
- ¶ **The cost of low skilled labor should not be increased.** The official minimum wage should not be increased and the 44% social contributions paid by employers on top of the minimum wage should be reduced. The high French minimum wage is forcing employers to cut off low value services, such as bag packing. For example, Toys’R’ Us employs 30% less workers in its French stores than in its identical American stores. The cost of low skilled labor is not yet constraining

modern retailers in Poland, but it could soon (Exhibit 20). Increasing the income of low skilled workers should be done through direct contributions to the workers paid by the government instead of raising the minimum wage. Positive examples of such 'market friendly' social policies include the Earned Income Tax Credit in the US, and the Working Family Allowance in the UK.

Appendix: Sources and Methodology

MARKET SHARE BY FORMAT

In May 1999, our consumer survey was conducted with the help of SMG/KRC, a Polish market research company. A random sample of 1,028 people was used that was representative for the Polish population between 15 and 75 years of age. The respondents were selected by means of systematic random choice taking into account regions and location sizes, sex and age.

Respondents were personally interviewed about the distribution of their expenditures on each of the three product categories studied (clothing/footwear, consumer electronics/household appliances and personal care/hygiene) across different formats as per our definitions, which allowed us to construct Exhibit 4. The share of hypermarkets, specialty chains and department stores was compared with bottom-up sales data and corrected accordingly when necessary.

PRODUCTIVITY BY FORMAT

Our retail store survey was conducted with the help of the international market research agency AC Nielsen in summer 1999. A sample of 60 retail outlets in Warsaw, Krakow and Slupsk was constructed. In order to derive labor productivity, the managers of the outlets (or outlet chains respectively) were personally interviewed on sales, gross margin and hours worked. In addition, data on wages and rents was obtained.

Hypermarkets and department stores were not covered directly in the retail survey because they did not feel comfortable in disclosing information in that way. The data for these formats was obtained through interviews conducted by McKinsey consultants as well as from other sources (dedicated databases, financial statements, press articles and expert interviews).

OVERALL PRODUCTIVITY

The sector productivity was calculated as the average of format productivity weighted by the format's share of the sector's employment.

$$\begin{aligned}
\text{Sector productivity} &= \frac{\text{Sector value added}}{\text{Sector employment}} \\
&= \frac{\sum_{\text{Formats}} \text{Format value added}}{\text{Sector employment}} \\
&= \frac{\sum_{\text{Formats}} \text{Format productivity} \cdot \text{Format employment}}{\text{Sector employment}} \\
&= \sum_{\text{Formats}} \text{Format productivity} \cdot \frac{\text{Format employment}}{\text{Sector employment}}
\end{aligned}$$

The employment shares were derived from each format's sales share and productivity.

This retail PPP is the exchange rate equaling the gross margins of two identical stores in the US and Poland for which we can establish that the service levels and throughputs (value added) are the same. We have calculated such PPPs for a number of US and European modern retailers present in Poland and found very consistent estimates for the retail PPP.

This retail PPP can then be used for converting the value added of Polish specific formats, such as single-product stores and bazaars. This method is based on the observation that the Polish retail market is extremely competitive, which means that the relative levels of value added rightly reflect the relative values provided by each format to the customer.

LONG TERM EMPLOYMENT DYNAMIC

The tables below detail our assumptions for estimating the long term employment dynamic in the Polish retail sector in the scenario where all the barriers are removed and Poland's GDP continues to grow at 6% a year throughout the considered period. Although the numbers are illustrative, they are useful in understanding the main forces behind the employment performance in the retail sector as GDP grows. The summary results can be find in the main body of the text on Exhibit 16.

Format mix evolution

	Sales mix (%)				Employment mix (%)			
	1999	2005	2010	2015	1999	2005	2010	2015
Hypermarkets	11	25	35	35	4	13	21	25
Specialty	9	35	45	55	4	24	36	50
Single product	69	40	20	10	77	63	43	25
Bazaars	11	0	0	0	15	0	0	0

Format productivity evolution

	Format productivity (indexed to US=100)		
	Up to 2005	After 2005	Gross margin
Hypermarkets	78	90	23
Specialty	87	100	33
Single product	19	19	17
Bazaars	17		19

Implied evolution in retail output

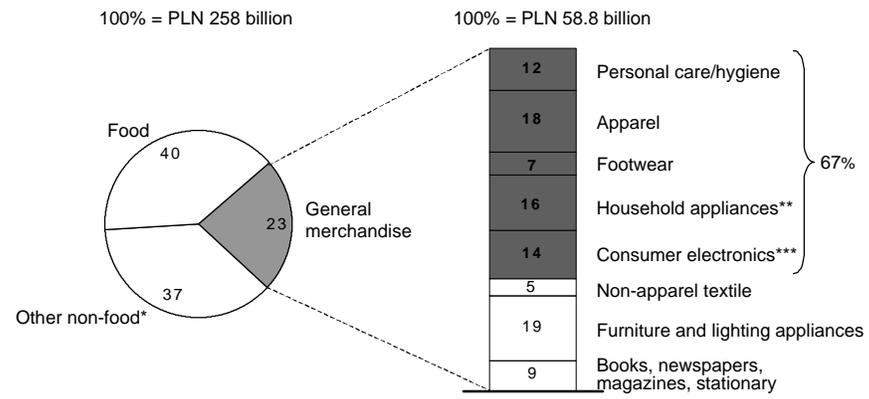
	1999	2005	2010	2015
GDP growth scenario				
6% GDP growth	100	177	258	367
4% GDP growth	100	158	210	270

Implied evolution in retail employment

	1999	2005	2010	2015
GDP growth scenario				
6% GDP growth	100	99	98	113
4% GDP growth	100	89	80	84

Exhibit 1
RETAIL SALES SPLIT, 1997
 Percent

■ Basis for surveys on format mix



* Mostly motor-vehicles and fuels
 ** Microwaves, fridges, etc.
 *** Radios, TVs, etc.
 Source: GUS

Exhibit 1

COMPARISON OF CUSTOMER VALUE BY OUTLET FORMAT

● High
○ Low
■ Main customer value

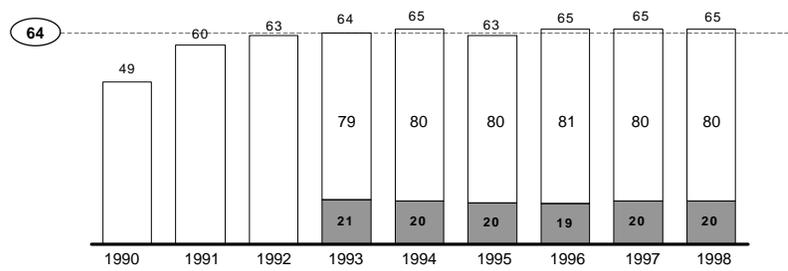
Format type	Relative price level*	Depth of products	Service level	Convenient location
Hypermarkets/large-scale specialists	100	●	●	●
Specialty chains	110	●	●	●
Department stores	130	●	●	●
Single product stores	110	●	●	●
Bazaars/markets	N/A**	●	○	●

* Indexed to hypermarkets = 100, price of the same goods
 ** Lack of comparable products (price levels are generally low)
 Source: McKinsey

POLISH CONSUMER EXPENDITURES, 1990-98

In percent of GDP

■ Share of general merchandise

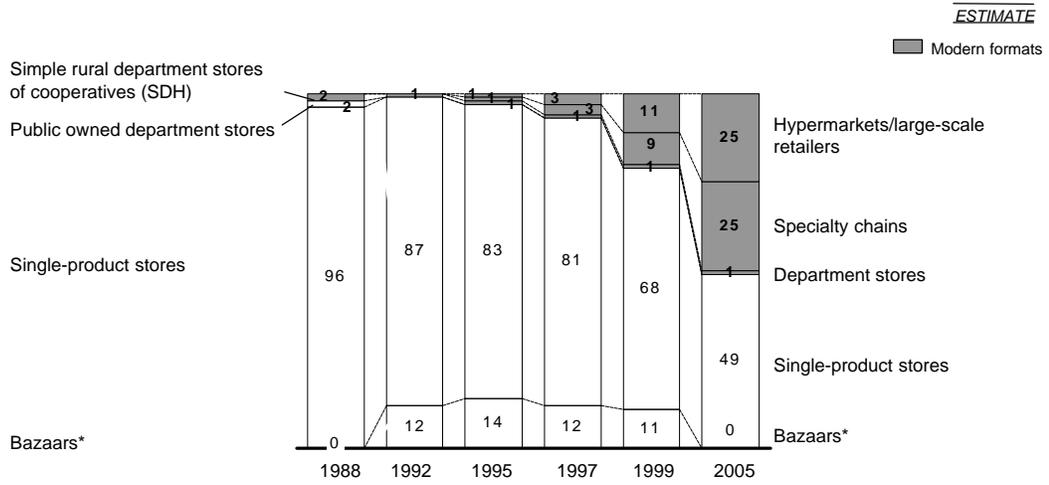


Source: OECD; Central Statistical Office (GUS)

Exhibit 4

EVOLUTION OF FORMAT SALES SHARES IN GENERAL MERCHANDISE RETAILING

Percent



* Including kiosks and street vending
 Source: GUS; RWIK; SMG/KRC; Expert interviews

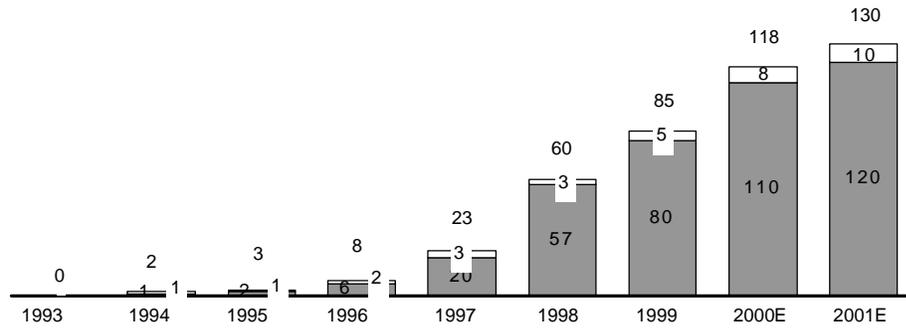
Exhibit 5

EVOLUTION OF SHOPPING CENTERS

Number of operating shopping centers

ESTIMATE

■ Anchored around hypermarkets
□ Other types of shopping centres

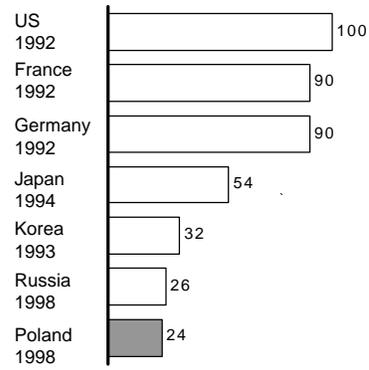


Source: Expert interviews

Exhibit 6

LABOR PRODUCTIVITY GENERAL MERCHANDISE RETAIL

Indexed to US average (1992) = 100*

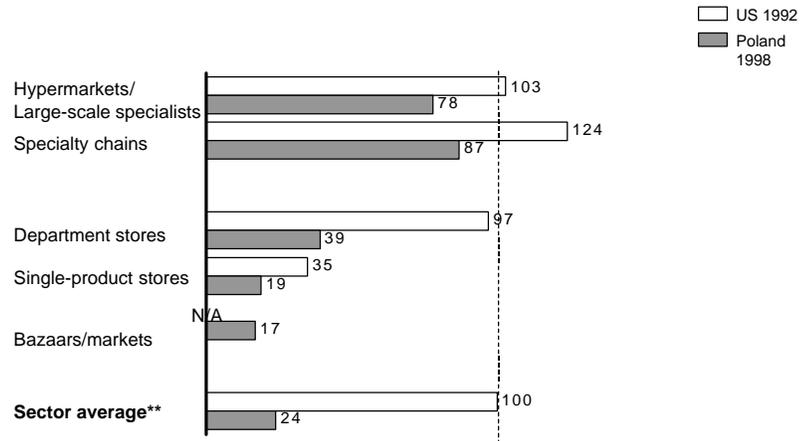


* 100 = 23,2 USD/hour in prices of 1998
Source: MGI

Exhibit 7

FORMAT PRODUCTIVITY IN GENERAL MERCHANDISE RETAILING

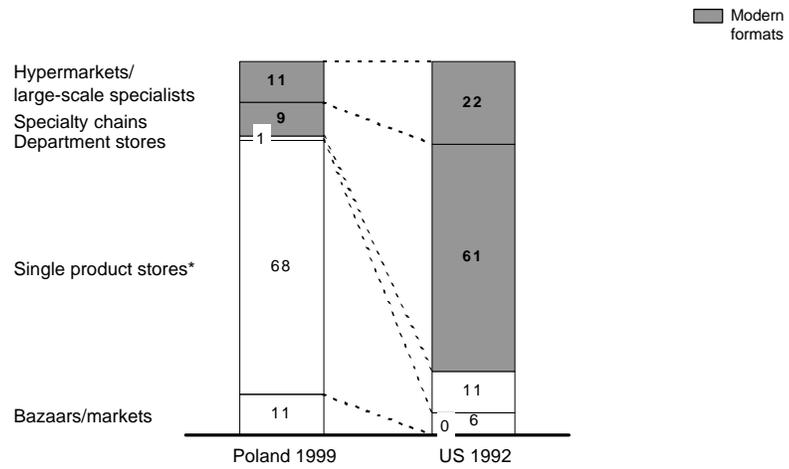
Indexed to US average (1992) = 100*



* 100 = 23,2 USD/h in prices of 1998
** Format productivity weighted by employment share
Source: MGI; Financial statements; Interviews, Surveys

Exhibit 8

FORMAT SALES SHARES – COMPARISON POLAND VS. US
Percent

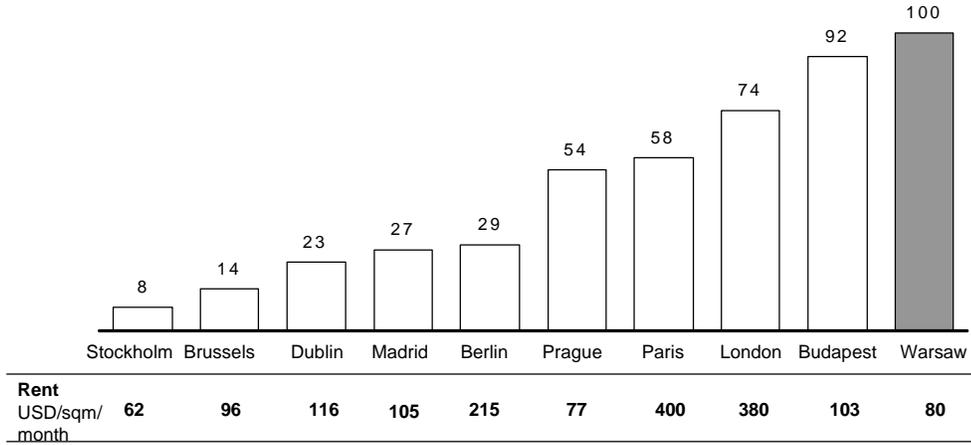


* Including kiosks, small wholesalers and groceries
Source: MGI

Exhibit 9

RATIO OF PRIME RETAIL RENTS TO GDP PER CAPITA, 1999*

Indexed to Warsaw = 100

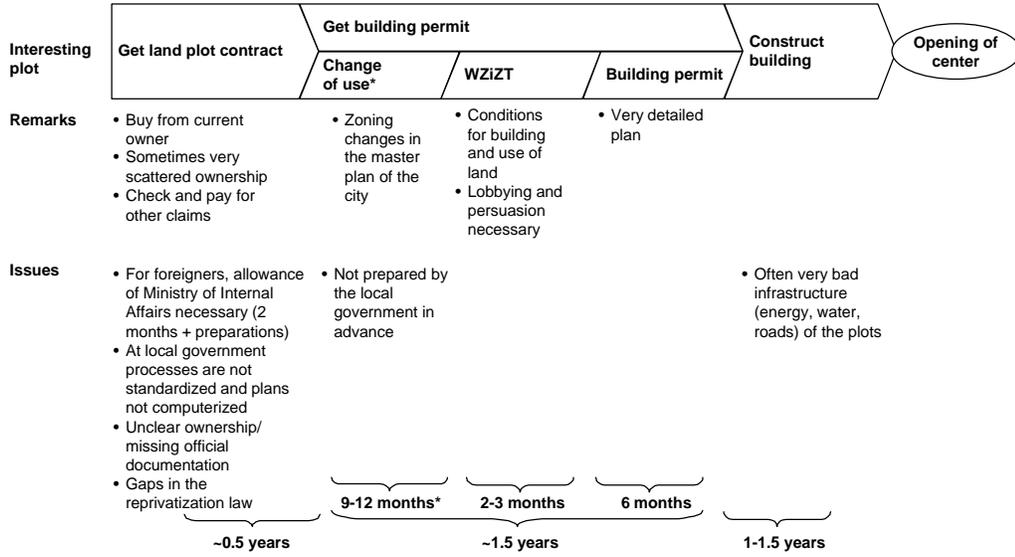


* GDP per capita at market exchange rate for 1996
Source: Jones Lang LaSalle; OECD

Exhibit 10

PROCESS OF SETTING UP A SHOPPING CENTER

ESTIMATE



* Only if necessary
Source: Expert interviews

Exhibit 11

FUTURE EVOLUTION OF FORMAT SALES SHARES

ROUGH ESTIMATE



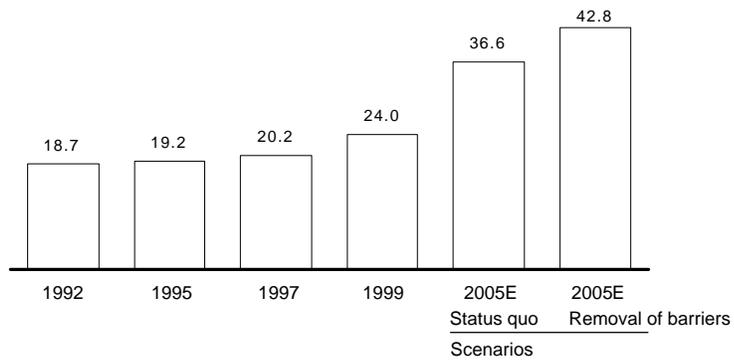
Source: Expert interviews; MGI

Exhibit 12

PRODUCTIVITY EVOLUTION

Indexed to US average (1992) = 100

ESTIMATE

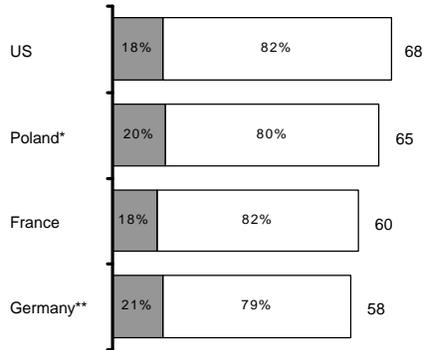


Increase from previous year (%)	1992-95	1995-97	1997-99	1999-2005E Status quo	1999-2005E Removal of barriers
	0.9	2.6	9.0	7.3	10.0

* Estimates are based on the change of format sales mix assuming constant format productivity
 Source: MGI

COUNTRY COMPARISON OF CONSUMER EXPENDITURES, 1997
Percent of GDP

■ Expenditures in general merchandise



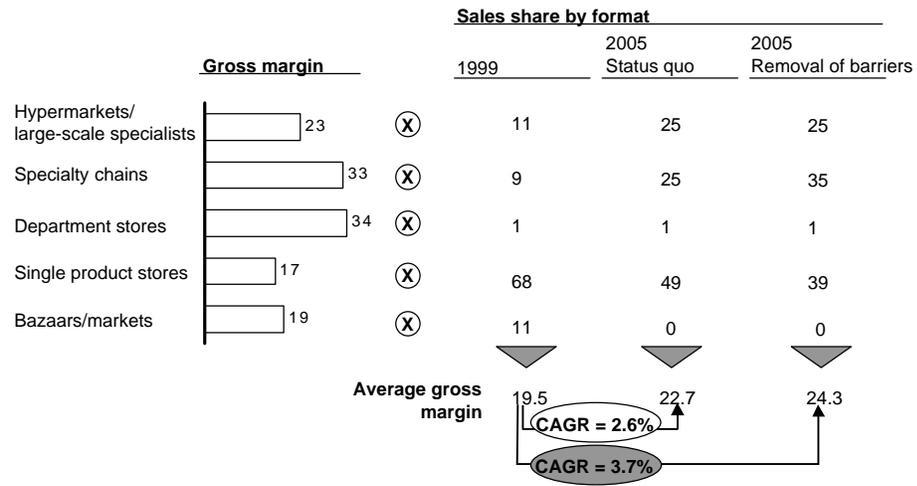
* Data for 1998

** Data for 1993

Source: OECD, Central Statistical Office (GUS); Statistisches Bundesamt; INSEE; US Consumer Expenditure Survey

Exhibit 14

GROSS MARGIN EVOLUTION
Percent of sales

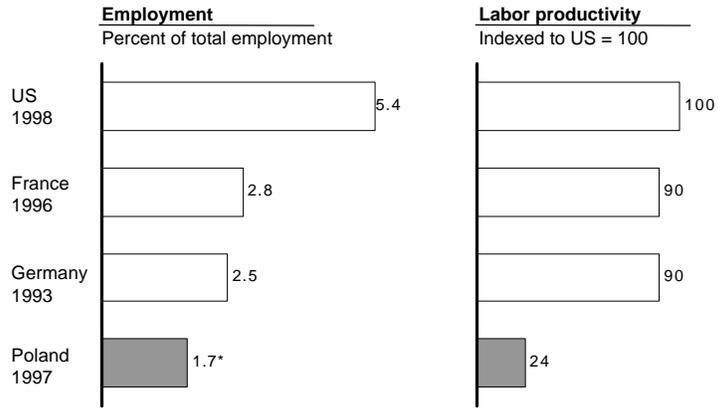


Source:

Interviews; Financial statements; Surveys

Exhibit 15

EMPLOYMENT AND PRODUCTIVITY



* Includes estimates of shadow employment (8% of official sector employment)
Source: Central Statistical Office (GUS); Statistisches Bundesamt; INSEE; US Census Bureau; "Removing barriers to growth and employment in France and Germany" (MGI, 1997)

Exhibit 16
LONG TERM EMPLOYMENT DYNAMIC IN RETAIL
 CAGR

ILLUSTRATIVE

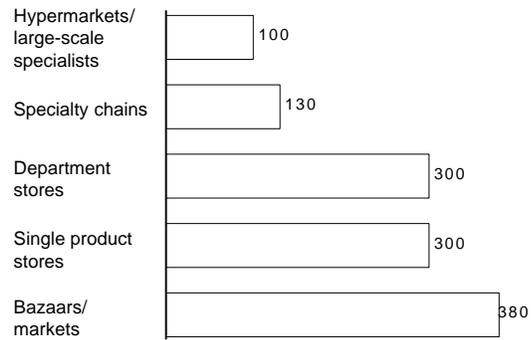
	<u>1999-2005</u>	<u>2006-2010</u>	<u>2010-2015</u>	<u>Comments</u>
Output growth	10%	8%	7%	<ul style="list-style-type: none"> • Assuming overall 6% GDP growth • Slow relative decline due to end of gross margin catching up
Productivity growth	10%	8%	4%	<ul style="list-style-type: none"> • Strong productivity growth to be expected until 2010 as modern productive formats replace single product stores • Marked leveling off thereafter
				
Employment growth	0%	0%	3%	<ul style="list-style-type: none"> • Employment will grow driven by GDP once the productivity catching up is over

Note: Please refer to the Appendix for the detailed analytical steps and assumptions
 Source: MGI

Exhibit 17

RETAIL HOURS WORKED PER SALES*

Indexed to hypermarkets = 100

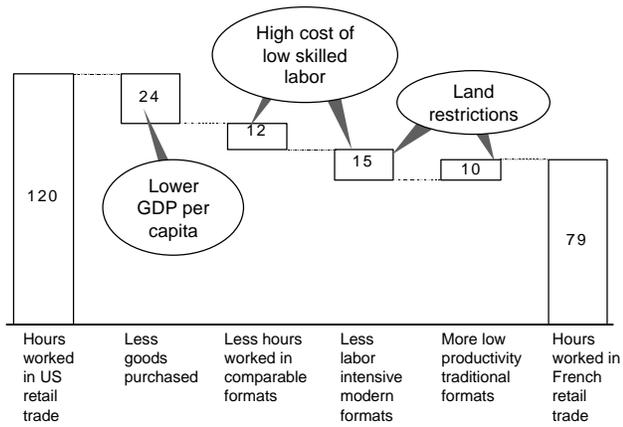


* Hours worked/sales = Gross margin/productivity
Source: Expert interviews; Financial statements; Surveys

Exhibit 18

HOURS WORKED IN RETAIL TRADE — FRANCE VS. US IN 1994

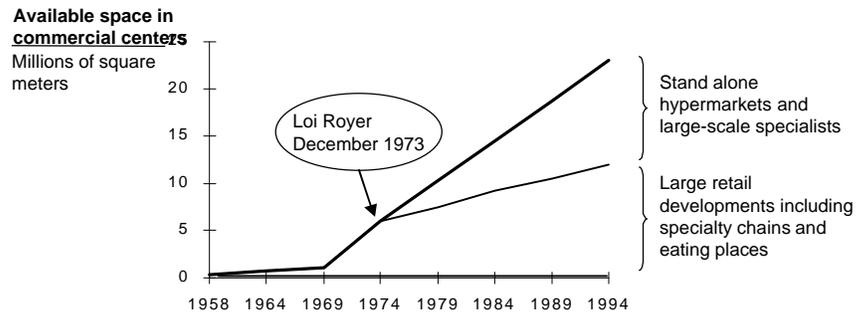
Hours worked in retail trade per working age population



Source: "Removing the Barriers to Growth and Employment in France and Germany", McKinsey Global Institute 1997

Exhibit 19

IMPACT OF THE LAW "LOI ROYER" ON CONSTRUCTION OF COMMERCIAL CENTERS IN FRANCE



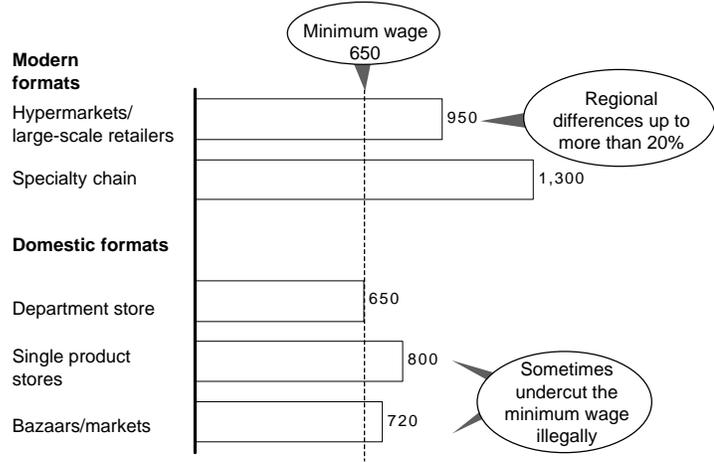
Source:

CNCC; Interviews

Exhibit 20

AVERAGE GROSS WAGES FOR SALESPEOPLE*, 1998
PLN/month

ESTIMATE



* Full-time employees
Source: Survey; Expert interviews

Residential Construction

EXECUTIVE SUMMARY

Industry overview. The Polish residential construction sector is small. It constitutes about 1% of total employment in Poland and output of new residential space per capita is low, at around 20% of US levels. Moreover, there is a current housing shortage that is set to worsen, as a generation of 'baby boomers' enters the housing market for the first time, and much of the current housing stock is in poor condition. Output of residential construction consists of either multi or single family housing. MFH makes up around 30% of total square meter output and is built in urban areas. SFH makes up the remainder of total output and is mainly built one house at a time on single plots in both rural and urban areas – there are very few large-scale urban developments. Since 1989, the few large functional Polish construction entities have been restructured into firms that compete by region and perform a range of general construction functions. Poland does not have a well-developed special trades industry. Many small construction entities of fewer than 20 people perform non-specialized roles.

Reasons for the productivity gap at the operational level. The average labor productivity of the sector in Poland is 25% of the US level. The main reasons for the productivity gap are inefficient organization of functions and tasks, labor capacity underutilization and the small scale of projects, particularly in SFH. These three factors explain over two thirds of the total productivity gap.

Industry dynamics. In the construction of MFH, large Polish firms are increasingly competitive with each other and with the few international entrants. Firms are consolidating with regional entities and implementing best practice operations in the acquired companies. They are also seeking to employ managers with best practice experience. In SFH, however, there is very little domestic competitive intensity or exposure to best practice since SFH is mainly single plot and dominated by small local firms.

Remaining external barriers to higher productivity growth and output growth. Although productivity has been growing in MFH construction, it has not grown in SFH. In the absence of specific policy changes, these trends are expected to continue. There will be some output growth due to increased demand as income rises and access to mortgage credit is increased. However, significant barriers to both productivity and output growth remain; these are constraining both job

creation in the sector and the number of new dwellings built. The barriers fall into two main categories: barriers to demand growth, and barriers preventing the provision of suitable land for large-scale SFH projects. The most important barrier to demand growth is that around 40% of existing urban dwellers are making payments on existing dwellings at below market levels: either through low rents paid for local authority owned apartments, or through low monthly payments on former state-owned cooperative buildings. Several barriers prevent the provision of large-scale land plots suitable for SFH developments. The most important are the lack of incentives for local authorities to provide sites, and the high cost and time involved in equipping the site with required utilities infrastructure. If barriers to both demand and land provision are removed, output could grow by over 10% per year and employment, by around 6% per year, for the next 5 years. This would create over 90,000 new jobs and correspond to 950,000 new dwellings by 2005.

Residential Construction

INDUSTRY OVERVIEW

We have selected the residential construction sector as a case study because of the combination of two facts: firstly, residential construction per capita is low compared to international benchmarks and to past output levels in Poland, and secondly, the need for new housing is great and is set to grow

Output in 1997 was approximately half the average level built during the 1980s, in terms of new dwellings, and two thirds in terms of square meters. This translates to 176 m² per 1,000 people (including completed but unregistered construction). This is over five times lower than per capita output in the US and nearly three times lower than per capita output in Brazil, which has a similar level of per capita GDP (Exhibit 1).

Employment in the construction of new dwellings is approximately 1% of total employment and 13% of construction employment. It is estimated at 153,000 (including gray sector employees and a full time equivalent number of owner builders). Compared to international benchmarks, Polish employment in residential construction as a whole is also low (Exhibit 2).¹

The current housing stock is low relative to countries with similar per capita GDP. The Polish population has much less living space per capita than Hungary, which has similar per capita GDP (Exhibit 3). The 1997 housing shortage was 1.2 million homes² and it is set to worsen (Exhibit 4). Demographic changes will mean the formation of 1.6 million new households by the year 2005 due to a growing proportion of people aged 20-35. The problem is compounded by the current condition of many Polish dwellings. The Urban Institute Consortium estimated in 1997 that 820,000 dwellings needed to be immediately demolished.³

¹ We have examined productivity, output and employment in new residential construction throughout the case. However, for the purpose of international comparisons it is necessary to include employment in housing renovation since detailed information is not available.

² The shortage of dwellings is measured as the difference between the number of dwellings and the number of separate households, adjusted for the number of dependent elderly.

³ *Building on progress: the future of housing finance in Poland*. Prepared by the Urban Institute Consortium for USAID/Warsaw, May 1997.

The price level of new and existing housing relative to GDP per capita is high when compared to other countries. The rental price per square meter for apartments in the center of Warsaw is about the same as prices in Stockholm, London, Paris and Berlin using current exchange rates. However, around 30% of dwellings are owned by the government or old era cooperatives, with rents and monthly payments set at a fraction of market price.

INDUSTRY SEGMENTATION

New residential output is made up of both multi and single family housing – MFH and SFH (Exhibit 5). The construction industry consists of a large number of fragmented construction firms and 142 entities employing more than 500 people. Large firms are restructured former state-owned companies, and new, fast-growing Polish companies. These firms perform a broad range of construction functions in building MFH and some large-scale SFH developments. Most small companies are generalist, building SFH one by one. Specialized companies are beginning to flourish in the market by complementing the general contractor services of large firms.

Multi family housing makes up approximately 30% of total meter squared output. Output has grown over the last few years, notably by 22% between 1996 and 1997, after having collapsed in the early 1990s after a marked reduction in state funding of new construction. MFH can be grouped into two distinct segments: high end MFH and middle market MFH.

High-end MFH is built by best practice international firms in urban areas. Large Polish firms are beginning to enter this segment. Mass market MFH is built by a wide variety of domestic companies: both large, restructured companies and smaller generalist firms.

Single family housing makes up the remaining 70% of square meter output and can be grouped into three distinct segments. These are large scale developments of SFH where a number of houses are built on any one site, single plot single family houses built in by commercial entities, and single plot single family houses built ‘brick by brick’ in rural areas mainly by ‘owner-builders’.

Large developments of SFH are a new segment in the market, but there are signs that its growth is tailing off (discussed later). Polish general contractor firms build these types of developments, with some subcontracting to small specialist firms. They are built mainly in the suburbs of large cities.

Commercially built single plot SFH are built in urban and suburban areas by small general contractor firms and by groups of specialist contractors. Output rose in this segment for several years since 1990, mainly because of tax breaks on new residential construction expense. However, since many of the ‘new rich’,

who had most to benefit, have already taken advantage of the tax break, output in this segment is expected to level off or decline.

'Owner-builder' single plot SFH are built in rural areas by the owner himself helped by friends or family, with perhaps some subcontracting of specialist tasks. This segment has also been growing steadily since 1990, partly encouraged by tax breaks. For similar reasons, output is expected to remain constant.

APPROACH

In the rest of the case we use output and employment data to estimate productivity levels, then investigate the reasons behind low productivity, output, and employment in the residential construction industry as a whole, and the differences between segments. We use this information to develop three possible scenarios of future output and employment growth. In conclusion we make a set of recommendations to policy makers to help increase productivity and output growth in the sector.

The first step is to estimate total output, in square meters, and total employment in FTEs, and obtain an aggregate estimate for productivity in the sector. This estimate was confirmed by a large number of company-specific estimates, which also gave us segment-specific productivity. The difference in productivity between Poland and the US provides a framework within which we identify the operational causes of low productivity. Using this set of causal factors we then investigate the external causes of low productivity and hence, the barriers to productivity growth. High productivity leads to lower output costs that can translate to lower prices and output growth. We also investigate the root causes of additional barriers to output growth. We complete the case by assessing the impact on productivity, output and employment of three different policy scenarios.

PRODUCTIVITY PERFORMANCE

We estimate labor productivity in the Polish residential construction industry to be at around 25% of the US level, within a range of 20-30%. Estimates are based on the combination of aggregate data, survey responses and company interviews. It is necessary to give a range of estimates since exact data was unavailable; we use an average estimate of 25% of US levels. Despite the breadth of our range, the figures show Poland to be far ahead of Russia, at similar levels to Brazil and trailing the US and Western European countries (Exhibit 6).

Productivity performance varies significantly between the MFH and SFH segments, whereas in the US, the productivity level of MFH and SFH output is broadly similar. Polish MFH productivity is around 35% and anecdotal evidence suggests that it is growing at a reasonable rate. SFH productivity is lower, at 20-25%, with very few large-scale (more productive) developments, and productivity growth is stagnating.

Our **aggregate productivity estimate** is based on estimates of quality adjusted total output and employment (Exhibit 7):

- ¶ Total output was 5.5-6.5 million quality adjusted square meters:
 - Quality adjusted registered output in 1997 was 5.5 million square meters.
 - We have made adjustments to include unregistered output, estimated to be between 0 and 1 million quality adjusted square meters in 1997.
 - Since the absolute number of square meters does not capture quality differences, we have weighted the output according to average quality differences between Polish and US output. This was done by estimating how the average Polish SFH would be priced per square meter in the US, relative to market average in the US, and comparing each segment average to the average Polish single family house. Price per square meter within the same geographical area was used as a proxy for quality differences.

- ¶ Total employment in 1997 in new residential construction was estimated to be approximately 153,000 FTEs. This is 1% of the total labor force.
 - The size of official employment in residential construction was calculated from GUS statistics on total employment in the construction sector and is based on applying productivity estimates to output numbers. It includes the assumption that residential construction labor is 50% as productive as non-residential construction labor and that labor employed in new construction is as productive as labor employed in residential renovation. These assumptions are based on international comparisons and may be explained by lower capital intensity, less modularity in design, smaller scale and less skill, on average, at OFT (the Organization of Functions and Tasks – defined in next section).
 - The FTE number of ‘owner-builders’ is 40,000. This figure was calculated by taking the output of rural SFH dwellings and dividing it by an average productivity of 15% of US levels (based on

interviews). Since up to 50% of tasks may be subcontracted, we have adjusted the implied number of FTEs downward to avoid double counting employed workers.

- Gray sector employment has been estimated using GUS information about the number of gray sector employees in construction, together with information from company and expert interviews. Gray sector workers are estimated to be equivalent to 24% of officially employed workers, or 18,000 FTEs.
- The number of hours worked in one year by each FTE is estimated to be 1,575, based on GUS information on hours worked per week adjusted for holidays and sickness. By using FTE employment, we have corrected for seasonal differences in employment. Nonetheless, it should be noted that construction is a very seasonal industry and some entities virtually cease operation over the winter months.

To estimate labor productivity from the 'bottom-up' for each segment, we used project specific data from over 20 survey responses and over 30 company interviews. The average productivity of the overall market using segment measures, weighted by employment share, is 25% of the US weighted average (Exhibit 8). The segment-based results can be summarized as follows:

- ¶ **MFH:** high end MFH had a productivity level of 45% of the US; while mass market MFH was at 35%. Weighting by employment share gives an overall level of 37% of US levels.
- ¶ **SFH:** if built within large-scale programs, the experience from the US shows that SFH can be at least as productive as MFH. However, large scale SFH developments in Poland were only at 35% of US productivity; single plot commercially built SFH were at 25% and owner-builder SFH were at 15%. Weighting by employment share gives an overall estimate of 20% of US levels.

OPERATIONAL FACTORS EXPLAINING THE PRODUCTIVITY GAP

The 63 point productivity gap for MFH and 80 point gap for SFH are caused by a combination of several operational factors. The most significant factors are the organization of functions and tasks (OFT), labor capacity utilization and the small-scale of projects. The exhaustive set of operational factors is defined in Exhibit 9⁴ and explored below. Exhibit 10 shows the overall breakdown of operational level causes of the productivity gap. Please see the Appendix for a

⁴ Since there are close links between several factors, the definitions are not mutually exclusive.

detailed breakdown of the factors by segment (Exhibits 28 and 29 in the Appendix).

¶ **Inefficient OFT** explains approximately 20 points of the productivity gap to US residential construction.

Many companies run over time and over budget because tasks have to be redone, or take longer than planned. This is primarily a problem for smaller companies who have less experience at planning project budgets on a 'time per task basis'. In addition, the overall planning process is often sub-optimal due to factors outside managers' control (these factors will be discussed in more detail in the next section).

- Tasks often take longer than planned because employees face the wrong incentives and are poorly managed. Since many are employed on a fixed hourly wage, some employees achieve very little during the 8 hour contracted day in order to delay work to when they can earn overtime (Exhibit 11).
- Poor scheduling is often due to the fact that builders have little time between winning a contract and starting work, so projects are poorly planned in advance. Another reason, specific to MFH, is caused by the fact that construction is financed in installments according to the number of stories of building completed. Companies therefore tend to build as high as they can as quickly as they can. If they were to build roads and other infrastructure first, the time taken overall would be shortened.

There is some evidence that OFT is improving on average, especially within large companies building MFH, because of better management and experience of operating efficiently at short notice. Large Polish companies building MFH often operate an incentives system whereby 5-7% of any saving earned by finishing the project within the scheduled time and budget will be passed on to the site manager. The site manager is at liberty to redistribute this incentive among his team of workers as he sees fit. Companies are also seeking to employ managers with international experience. In one large MFH producer, all senior level managers have US experience, and all site managers have worked in construction in Germany.

¶ **Labor capacity under utilization** explains 18 points of the productivity gap. Unexpected delays during the planning process and during actual construction waste many labor hours: both blue and white collar.

- *Bureaucratic delays.* One construction company manager in Warsaw mentioned that during a large MFH construction project, all construction work came to a halt for several weeks because of a

minor administrative discrepancy between an infrastructure provider company, the local authority and the investor. Many other interviewees commented that this was a common occurrence.

- *Financing delays.* Since most construction work is funded through installments by a group of individual investors or by a single individual, and not by company credit, the construction companies are often delayed by the lack of funds to pay suppliers. Full time company employees are often idle waiting for the next installment to arrive.

¶ **The limited use of specialized trade** accounts for around 10 points of the total productivity gap. This factor is linked to OFT and the small-scale of projects. If specialists do not perform tasks, each task typically takes longer to complete and may be of a lower quality level. Tasks that could be performed in parallel by different groups of subcontractors may be performed in sequence by a single group of generalists.

Our survey responses and interviews suggest that, on average, a low proportion of all construction tasks are performed by specialists, either within any one firm or by sub-contractors (Exhibit 12). This is due to a lack of reliable special trade companies, especially outside the Warsaw area. At current activity levels, large companies have a stable enough order flow to be able to build long term relationships with existing special trade companies. However, their number is not increasing since, at current activity levels, smaller general contracting companies cannot guarantee regular work to new special trades companies. Despite the fact that smaller companies would prefer to subcontract work, since they could then manage their own irregular work flow more effectively, a lack of specialized firms prevents them from doing so.

Evidence from company interviews suggests that the use of subcontractors depends on the existence of high quality and reliable special trades companies within a geographic area. The number of subcontractors depends on the level of overall activity and the regularity of construction work. If the level of activity were to increase, the number of special trade companies would rise as current employees realize they could be guaranteed regular work at a higher remuneration, and so leave the employ of the generalist firm to form new specialized companies.

Large mass-market firms in urban areas are sometimes able to subcontract up to 60% of tasks either to specialist companies within the same group or to independent companies. One Warsaw general contracting company mentioned that on a recent project they used

between 2 and 30 special trade subcontractors on the site on any one day.

- ¶ **Small scale** and **low capital intensity** together explain 5 points of the total productivity gap in MFH and as much as 20 points of the total gap in SFH.

The vast majority of Polish SFH are built on single plots, compared to only 25% in the US; this hinders productivity through the loss of economies of scale. Even within the MFH segment, buildings are typically smaller than in the US. For example, many Polish apartment buildings are built in 'filling plots', that is, between existing buildings. In the construction of small scale MFH buildings and single plot SFH:

- There are fewer opportunities for laborers to repeat the same tasks and less to be gained from using specialized capital equipment.
- Often, required capital equipment does not even fit on to the site. One construction manager in the Warsaw area commented that even for smaller MFH projects, as well as for most single plot SFH projects, they were unable to use excavators simply because there was no room on site.

- ¶ Other, less significant, factors leading to low productivity are the **limited use of DFM** and **the low skill level** of the average blue-collar worker. Each of these factors explains 5 points of the total gap.

- Codes and regulations on building and plot design, input materials, and a general lack of cost awareness training in the building sector, mean that dwellings are not designed in a cost conscious and innovative manner.
- On average, the Polish construction worker is less productive than a US worker, even though after the same training and experience, both perform at the same level. This may be because employees are new to the job, or have been badly trained. Since labor skill is a function of training and experience, as activity levels increase and the level of competitive intensity rises, the average skill level will increase.

INDUSTRY DYNAMICS

MFH: competition is increasing in the MFH segment with the emergence of large national players and the appearance of international best practice firms, leading to productivity growth. Due to the difficulties associated with developing large scale SFH (explained later), SFH construction is still a very local business, and has no exposure to best practice firms.

¶ **Productivity in MFH construction has been increasing.** Large firms are consolidating with smaller regional players and implementing productivity improvements in the acquired businesses.

¶ **Domestic competitive intensity** within the MFH segment has been increasing in recent years. Large construction firms from the communist era were privatized by breaking up geographically diverse, but functionally specialized, companies into regional entities. These companies took several years to recover from this restructuring and the reduction in state funding. There were significant layoffs over the period 1989 to 1994; up to 80% of the labor force was laid off in some large companies. These companies then typically moved into other construction roles within a specific region (including the developer role) and began to compete with each other.

The recovery was prolonged by the lack of multi-functional expertise in companies that had previously performed specialized roles. In particular, the role of 'developer' was new to many companies, and required a set of new skills. Hence, as demand began to increase, competitive intensity in actual on-site construction work for large firms and for small sub-contractors began to increase. However, the lack of overall project management and developer skills created bottlenecks in the construction process leading to capacity underutilization, poor OFT and other operational problems. This situation is improving. The number of residential developers in Warsaw has doubled in the last 2 years to over 40 firms.

These improvements are coupled with an increase in the number of small specialist firms of less than 20 people, to whom specific tasks are sub-contracted. As mentioned previously, the number of new specialized companies grows as activity levels rise overall. Hence, this growth is greatest in Warsaw and other major cities where new construction of MFH is growing fastest.

¶ **Exposure to best practice** is increasing. The level of FDI as a percentage of business investment has been lower than the average level in manufacturing; however in 1998 it increased dramatically. In 1997 there were only 23 Western contractors operating in Poland, mostly in industrial and commercial construction. Recently, several of these international companies have broadened their scope to residential construction recently either by building directly, or by investing in Polish residential-building companies. In addition, several large Polish companies have reported seeking to recruit people with Western experience.

¶ There is some evidence of a **‘non-level’ playing field** for new entrants to regional markets. Local authorities interpret building codes in different ways and it takes time to learn local idiosyncrasies. This can act as a barrier to new entry and is one reason why large firms are consolidating with existing regional players rather than expanding from one central base. There is also some evidence that in local bidding processes, authorities give preference to local firms, prompted by a concern for local employment. However, the ‘non-levelness’ in this area in Poland exists only on an informal, case specific basis. This contrasts to Russia where systematic distortions of bidding and building processes effectively prevent all new entry.

SFH: single-plot SFH are typically built by individuals or small companies where there are immovable barriers to productivity growth and limits to competition. Until the share of output of large-scale developments of SFH is allowed to grow, and large, best practice, companies enter this segment in a significant way, this situation will persist. Instead, there are signs that output in this sector will fall. For example, the company with the largest share of the Warsaw market is withdrawing from this type of SFH to concentrate on MFH.

OUTLOOK FOR PRODUCTIVITY, OUTPUT AND EMPLOYMENT GROWTH: 3 SCENARIOS

We now investigate the barriers in the external environment that cause the low level of current productivity, output and employment, and thus, hinder the growth of each of these variables, especially in the SFH segment – the preferred form of housing in most countries. In the following scenarios we describe three possible growth paths, providing illustrative estimates of growth rates. The first scenario sets out what may happen if policy makers take no specific action: we outline here the current barriers to productivity and output growth. The second and third scenarios demonstrate the potential benefits to be had from sequential implementation of specific policies to remove the current barriers. For each subsequent scenario we provide some growth rate comparisons with countries that we have previously studied.

Scenario 1: status quo

Even if the government takes no specific action, that is, maintains the status quo, we estimate productivity growth over the next 5 years of 4% in MFH and roughly 2% in SFH. Output growth may be as high as 5% in MFH and 2% in SFH. These numbers compare with an assumed underlying GDP growth rate of 6% per year. We do not believe that output growth in new housing will grow as

fast as GDP in this scenario because of current demand distortions caused by the large share of current dwellings for which monthly rents/payments are below market levels. Indeed, meter squared output of housing in 1997 was lower than in 1993, despite an average GDP growth rate of 6% between these years. This growth in housing output corresponds to over 640,000 new dwellings by 2005⁵; just under one quarter of the total number of 2.8 million new dwellings required by this year, as identified in Exhibit 4. During this year 36% of output will be MFH (compared to 31% today). Since output will grow only marginally faster than productivity, there will be virtually no employment growth in the sector.

Productivity growth will be greater in MFH construction than in SFH, continuing current trends. The mechanism for faster productivity growth in MFH is the increased activity of large Polish firms in this segment, consolidation of the industry through acquisition and increased exposure to best practice. These productivity improvements will be passed on in lower prices, as firms become more competitive, leading to demand growth. The development of the mortgage industry will facilitate demand growth, especially as developers begin to build relationships with mortgage-issuing banks (Exhibit 13). By contrast, in SFH, limited productivity growth restricts potential price reductions and hence output growth in this segment.

However, significant barriers to productivity, particularly in SFH construction, and to output growth, for both SFH and MFH, will remain. These will continue to limit the potential number of new dwellings and new jobs in the industry.

We discuss these barriers in detail below, in order of importance:

- ¶ The main factor limiting output growth is the large number of households that are not currently exposed to market level pricing. This, together with other factors, makes investment in new housing unattractive.

Demand for new dwellings is low because around 40% of urban dwellings incur monthly accommodation charges below market levels, either through the payment of low rents to the Gmina, or through the payment of low monthly fees to former state-owned cooperative boards (Exhibit 14). This makes investment in new housing particularly unappealing, even for those that may be able to afford it, since it competes on a 'non-level' playing field with the existing housing stock.

- ¶ The limited availability of suitable large land plots and the subsequent high land cost hinders productivity and output growth in SFH in

⁵ For the purposes of estimating output growth, we have used quality adjusted square meters for consistency with the rest of the case. However, we have also estimated the total number of dwellings built, unadjusted for quality, in order to estimate the achievable reductions in the housing shortage.

particular by constraining the number of large-scale developments. This keeps the prices of any new SFH high and channels new demand towards MFH. A manager of a large Warsaw construction firm told us that for two current projects, the cost of the land and infrastructure provision makes up over 30% of the total investment cost for a large development of SFH, compared with up to 20% for a MFH project. This is despite the fact that the MFH project is located nearer to the city center. High land prices, relative to per capita GDP, for suburban land with access to nearby infrastructure indicates that suitable land is in short supply (Exhibit 15). If utilities infrastructure is not located nearby, the cost and time involved in its provision (particularly electrical infrastructure) are huge.

- There are **no incentives for local authorities** to make suitable sites available. Political pressure on Gminas, by definition, comes from those who are already housed within the Gmina. The low rate of direct property taxes also means there is little financial incentive for the Gmina to attract new inhabitants, since it would lack the funds required to build new infrastructure, schools, and so on. Although the flow of funds from the central government to local authorities is partially driven by the number of inhabitants in the local area, the incremental flow is insufficient to cover new investment in social infrastructure.

Hence, it is a time consuming and uncertain process to change the city plan to designate an area for residential development. In a separate process, it is often difficult to reclassify agricultural land. These problems are compounded by the fact that since the recent administrative reforms the process is not clear, even to those involved. Hence, land for housing is often in short supply and that which does exist is sub-optimal. One example of this is that in suburban areas, much of the potential new housing land is the space between existing buildings – in ‘filling plots’ as mentioned earlier. This limits the scale of any new project:

- There is a general consensus that it can take up to 2 years to reclassify land from agricultural to residential.
- Urban plan designers are obliged to designate a specific function to every piece of land. The delays and uncertainties involved in changing this somewhat arbitrary designation can prompt investors to go elsewhere.
- We attended a meeting of representatives of the building authorities of a Gmina and a Powiat with a group of construction companies. They could not decide between them on the correct

processes and procedures for purchasing a plot when posed with a hypothetical case.

- **Unclear ownership status** means that even if land is suitable for residential construction, development may be hindered due to unresolved restitution claims. There is also the threat of new claims on the land; this becomes increasingly relevant closer to the centers of big cities. In East Germany, it is 9 years since the deadline for submitting claims and only 70-75% of cases have been decided (Exhibit 16). This is without the complication of having sold some state assets to new investors prior to receiving claims, which has often happened in Poland.
- **Suburban land ownership is highly fragmented.** So, even if suitable land is available, it is difficult to consolidate a large plot. For example, on the outskirts of big cities, agricultural land is owned in strips to allow each narrow plot direct access to infrastructure. If large consolidated sites are not available to buy from the Gmina or State Treasury, the purchase of a plot suitable for an efficiently designed housing development can involve negotiations with many different land owners (Exhibit 17).
- **Electricity providers have little incentive** to help develop large housing projects, meaning electricity infrastructure is expensive and its provision involves extensive bureaucratic negotiation. Several developers remarked that they were unable to debate conditions and prices with the electricity companies, but were obliged to sit and wait for their decision to be made.

In contrast, investors reported that connection to other types of infrastructure was less of a bureaucratic nightmare. Water and sewerage infrastructure is owned by the local authority, rather than a third party. Telecoms companies compete with each other to provide new infrastructure, in areas outside Warsaw, and gas companies realize that they are competing with electricity as a source of energy (Exhibit 18).

- **Reimbursement for initial infrastructure investment by subsequent users is uncertain.** The required utilities' infrastructure can cost up to 20% of the total investment cost of a large scale SFH development in the suburbs of a major city (Exhibit 19). The only reason why any developer would consider paying this cost is in the hope that subsequent investors will connect to the infrastructure for which he has paid and reimburse some of the initial cost.

Although this procedure does happen, it is fraught with difficulty partly because the infrastructure built by the initial investor passes

back to ownership of the infrastructure company. Negotiations over this type of reimbursement often take many months. One large construction company and developer described this as the 'first mover disadvantage' of building in an undeveloped area (Exhibit 20).

¶ A third set of less significant barriers limit productivity and output growth; these are issues relating to the ease and efficiency of the actual construction process for both MFH and SFH. As firms gain experience they are able to learn ways to work around these barriers. So, their removal will have greater impact on SFH where firms, and the individuals involved, typically have less expertise. MFH producers are often able to work around these current barriers by acquiring local knowledge through local acquisitions and transferring expertise to the acquired companies:

- **Unnecessary red tape** hinders productivity by creating uncertainty about when the project can start, and through bureaucratic delays during the process (Exhibit 21).
- **Excessive codes and regulations** hinder productivity by limiting DFM. These include the burdensome process of new building materials certification, the requirement to use Polish architects (who are often less cost conscious) and regulations on plot and building layout that can limit the efficient use of space.

Scenario 2: removal of demand barriers

One of the most important steps the government can take is to remove the mechanisms through which current tenants are sheltered from market level pricing. This non exposure to market prices currently distorts downward demand for new housing. The provision of new housing is essential to the standard of living, and although the removal of subsidies may lead to a transfer away from other sectors to housing, two effects will offset the size of the transfer. Firstly, there are net economic gains to be had from removing the distortionary effects of the low current rents and payments. In addition, the resulting output growth in this sector can contribute to achieving some of the potential in the economy represented by current excess labor capacity. Greater demand could mean that output growth over the next 5 years becomes 10% in MFH and 5% in SFH. Productivity growth will increase to 5% in MFH, prompted by higher activity levels, and remain at 2% in SFH. This will translate to the building of up to 780,000 dwellings by 2005, corresponding to 28% of the total housing needed by that year. In this year, 40% of meter squared output will be MFH (compared to 31% in 1997). The greater differential between output and productivity growth implies higher job growth leading to the creation of up to 40,000 new jobs

by

2005 – a 28% increase in employment in the sector. These output growth rates seem reasonable given the actual housing shortage, and compared to the 10% growth rate experienced in Hungarian residential construction between 1994 and 1997, despite unfavorable demographics and high land prices.

Since MFH construction is already more productive, and less expensive per square meter to build, once demand is freed up it will flow towards MFH. As large firms build more output, average OFT, capacity utilization, use of special trades, scale and capital intensity will all improve. Thus productivity will increase incrementally.

Nonetheless, remaining barriers to productivity growth still limit potential output and job growth, particularly in the construction of large-scale SFH. These barriers are all the issues relating to suitable land availability together with the red tape and codes and regulations.

Scenario 3: removal of remaining barriers to productivity and output growth

To realize all the potential of this sector, the government must remove the remaining barriers to productivity and output growth, particularly in SFH, together with the previously described removal of barriers to demand growth. If this is done, output growth over the next 5 years could become 9% in MFH and 12% in SFH. Productivity growth will remain at 5% in MFH and increase to 5% in SFH, prompted by higher activity levels. Up to 950,000 dwellings will be built by 2005 under this scenario, corresponding to one third of the total shortage. In this year, 73% of meter squared output will be SFH. There will be net job growth since output will grow much faster than productivity, particularly in SFH. Up to 92,000 new jobs will be created in total, representing a total growth of 60% in employment in this sector by 2005.

Productivity and output growth in SFH can be achieved by encouraging the provision of large land plots, with the required infrastructure, so that a larger share of SFH output is built in large developments. Productivity growth can be further improved in both segments by reducing red tape and burdensome codes and regulations. These productivity estimates are comparable with the productivity growth achieved in Korea between 1985 and 1995, where productivity in MFH construction grew at around 5% per year in an environment with very few barriers to productivity growth. The rationale for faster output growth in SFH is that when all market distortions are removed, people in all other studied countries have demonstrated a preference for SFH. The current proportion of SFH in Poland is lower than in other countries except Russia (Exhibit 22), and might be expected to move towards a larger share,

particularly if more affordable SFH creates additional new demand from people who would not seek to replace current MFH with new MFH.

SUMMARY POLICY RECOMMENDATIONS AND IMPLICATIONS

Policy recommendations

The recommendations of the previous analysis fall into three groups: policies to increase demand, policies to encourage the provision of suitable development sites and policies to increase productivity in the construction process.

- ¶ **Remove subsidies** to municipally-owned and cooperative-owned dwellings, and **reevaluate the ownership status** of tenants currently living in former state-owned cooperatives.

The removal of subsidies to state agency owned dwellings could be achieved through the privatization of remaining state-owned dwellings, or by bringing rents to market levels. Subsidies could be replaced with needs-based support for low-income households.

The ownership status of the 39% of all cooperative dwellings that are not fully owned by individual members needs to be clarified. At present, these cooperative boards cannot raise payments or evict tenants in order to sell the dwelling at market prices; neither does the tenant have any ownership rights over the dwelling. He or she only has the 'right to live in the dwelling', and this right cannot be sold freely. While the tenant is able to buy the dwelling at below market rates, he or she does not have an incentive to do so because the NPV of future monthly payments is typically less than the purchase price.

For the 180 thousand cooperative dwellings where the ownership status is unclear because of old, unpaid loans, restructuring the debt portfolio by forgiving interest payments and supporting regular repayments of the principal will facilitate the aim of individual tenant ownership by speeding up the repayment process. However, transferring the portion of the total debt burden on cooperative boards to individual tenants would allow more tenants to freely sell apartments more quickly.

These policies will improve output growth by, effectively, removing the disincentive for new housing investment. In Hungary, the privatization of the existing housing stock was rapid (Exhibit 23), and the country saw significant output growth after the initial collapse in the early 1990s. As was the case in Poland, apartments were sold at an average of 23% of market value and could be purchased using restitution

vouchers, or paid for in monthly installments. The output of new dwellings in Hungary grew by 10% per year between 1994 and 1997, despite the absence of mortgage credit.

- ¶ Provide **incentives for local authorities** to make available more suitable sites. Given adequate financial incentives, local governments could encourage large-scale investment by classifying large sites for housing and by funding infrastructure. The current incentive structure could be improved by increasing property tax, or by increasing the amount of central government funding for the number of housing units in each region. Currently, local authorities receive approximately 10% of their income from property related taxes, in the US the figure is nearer 25%. Each property owner pays a rate equivalent to less than 0.1% of the property value in direct property tax but in the US, the rate can be as high as 3% of property value. Moreover, the total current property revenues received by local authorities are insufficient to cover the maintenance costs of the existing Gmina-owned housing (Exhibit 24).

This policy will increase output growth of large scale SFH by allowing SFH construction to be more productive on average and by reducing land costs.

- ¶ **More effective regulation of utility companies' local monopoly power**, or increased competition between utility companies. Stronger regulation of utility infrastructure providers, particularly the 33 regional electricity companies, will decrease the ability of these companies to cause delays to building developments, and to drive up construction costs. This may be achieved by the standardized connection tariffs introduced this year within each region. These are set rates, based on distance and capacity, for providing new infrastructure and for connecting to existing infrastructure. These rates are monitored by the energy regulator. However, there is still significant variation by region indicating that some ambiguity remains for investors and developers.

This policy will increase output growth of large scale SFH by allowing SFH construction to be more productive on average and by reducing land costs.

- ¶ Clearly **define roles of various authorities** at the local and central level. This policy will be easier to implement if the incentive structure faced by authorities is aligned, as mentioned above. This might be achieved by conducting a detailed review of the building process in each region. Recommendations need not include changes to the system, but should rather emphasize the standardization and

streamlining of existing procedures. Ensuring process transparency and official accountability are also key. Areas requiring particular attention include the urban planning and land classification procedures. The Szczecin urban plan provides a good example of a flexible plan that can be supportive of new housing development (Exhibit 25). The building permit procedure can be streamlined by allowing investors to deal with only one person at the local authority – a ‘one stop shop’. The materials certification process also needs to be reviewed.

This policy will impact output growth of large-scale SFH, improving the average productivity level of the SFH segment. In addition, it will improve productivity growth in both MFH and SFH by removing redundant red tape.

- ¶ **Decrease tenant rights** relative to the property rights of the owner or investor. This could be achieved by pushing through the debated legal reforms of allowing landlords to evict tenants (even during the winter) and granting full repossession rights to banks following mortgagee defaults. Those unable to afford housing should qualify for a needs-based direct subsidy through the extended Housing Allowance Program.

This policy will increase demand by facilitating access to mortgage finance and also by encouraging housing investment for rental purposes.

- ¶ **Help smooth the process of restitution claims.** The uncertainty and inertia caused by existing and potential restitution claims could be lessened by devoting significant resources to the computerization of the land registry, as in East Germany. Current claims can be resolved at the same time as computerization, and future claims processes will be made easier if the history of land ownership is readily accessible.

This policy will increase output growth (over the long term) through productivity driven price reductions and directly, by reducing the ‘riskiness’ of investment. It will also help improve productivity by reducing delays to the construction process.

Implications

Exhibit 26 summarizes the output and employment implications of the three scenarios. All three are feasible outcomes in comparison with the residential construction industries of other countries. Even scenario 3 appears reasonable in terms of output and employment growth, and conservative in its end point. Under output growth rates of 9% per year in MFH and 12% in SFH, the

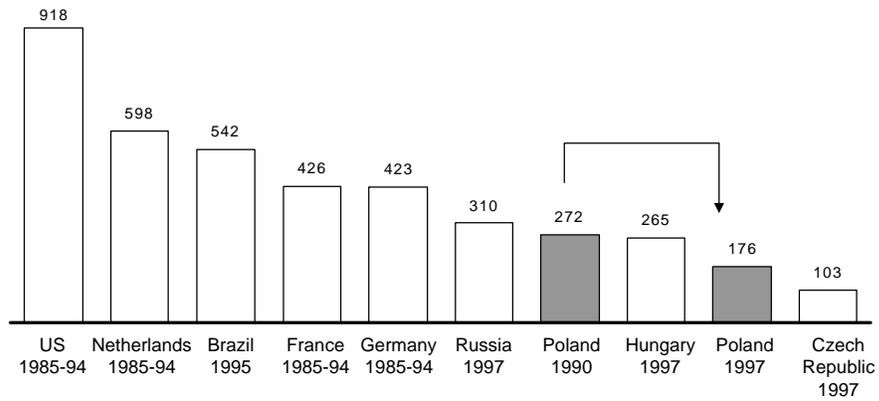
cumulative number of around 950,000 new dwellings built up to 2005 fulfils only one third of the forecast dwelling shortage by this year, of 2.8 million

Employment in new housing construction in scenario 3 rises from around 1% to 1.7% of total employment by 2005. This end point is not ambitious in comparison to international benchmarks. If we assume the same ratio between new construction and renovation as there is now, this takes total employment in housing construction to around 2% of the workforce. In the US, 3% of the workforce is employed in this area; in Korea it is 3.2% and in Brazil it is as high as 5.2% (Exhibit 2)

Forecast output per capita under our scenarios is also low when compared to international benchmarks. The 1997 Hungarian figure of 265 provides a realistic lower bound for our estimates, since the population in Hungary is in absolute decline. In comparison to the 1995 figure for the US of 918m² per 1,000 people, and the 1995 Brazilian figure of 542, the estimate in scenario 3 of 395m² per 1000 people for Poland in 2005 is low (Exhibit 1).

Exhibit 1

INTERNATIONAL COMPARISON OF RESIDENTIAL CONSTRUCTION OUTPUT PER CAPITA*
Square meter build of new dwellings p.a. per 1,000 people, 1997

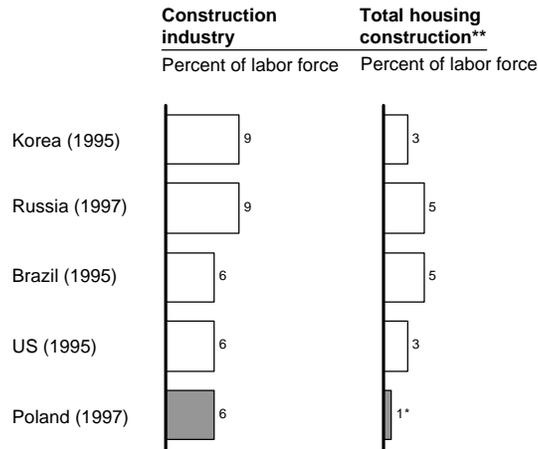


* Not quality adjusted
Source: INSEE, Baustatistisches Jakobuch; CBS; Bureau of the Census; Goskomstat; MGI Brazil; PlanEcon

Exhibit 2

CONSTRUCTION AS A SHARE OF GDP AND LABOR FORCE

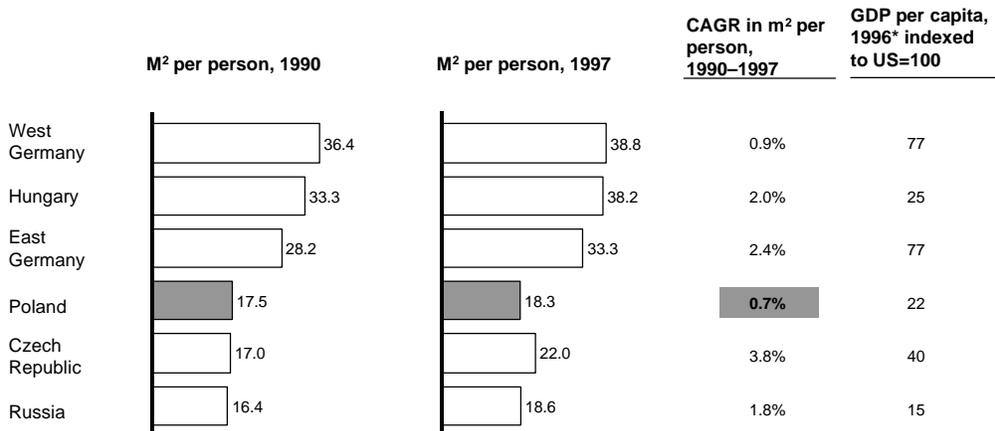
%



* Estimate
 ** Includes employment in renovation
 Source: MGI reports; GUS; Team analysis

Exhibit 3

SQUARE METERS OF HOUSING SPACE PER PERSON, 1990 AND 1997

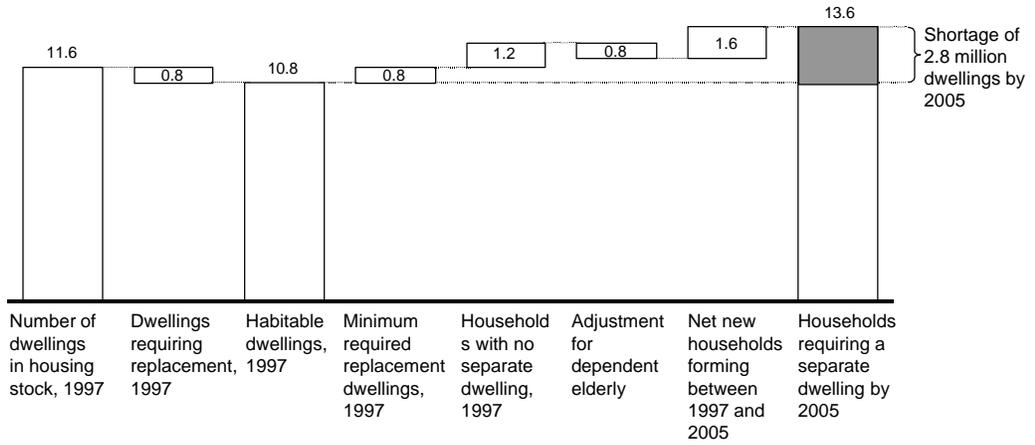


* PPP adjusted
 Source: National Statistics; The Economist

Exhibit 4

ESTIMATE OF THE DWELLING SHORTAGE UP TO 2005

Millions



Source: GUS Statistical Yearbook, Household projection 1996-2020; USAID

Exhibit 5

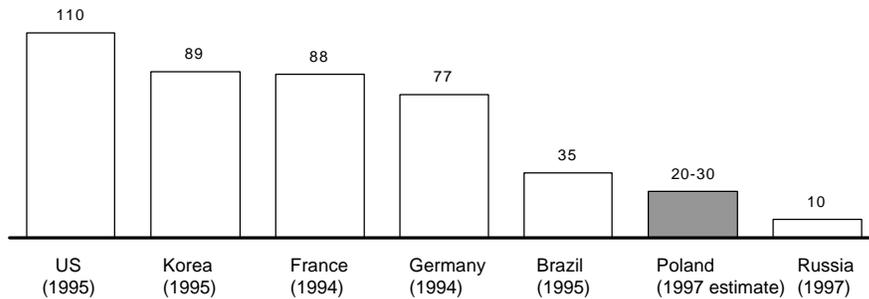
SEGMENTATION OF RESIDENTIAL CONSTRUCTION OUTPUT

Segment	Share of m2 output* 1997%	Share of employment*	Output trend	Constructed by	Financed by	
MFH	High end MFH	11	6	<ul style="list-style-type: none"> New segment on market Growth in Warsaw and other major cities over the past 5 years 	<ul style="list-style-type: none"> International best practice firms moving into residential construction from other types of construction Increasingly, by large Polish firms 	<ul style="list-style-type: none"> Installments paid by individual private investors
	Mass market MFH	25	17	<ul style="list-style-type: none"> Dramatic in early 1990s due to removal of state funding. Gradual increase of since 1994 	<ul style="list-style-type: none"> Large Polish firms, either restructured and privatized entities, or new firms 	<ul style="list-style-type: none"> Traditionally by state funded cooperatives, now through installments by private cooperatives and private investors
SFH	Large scale SFH developments	8	6	<ul style="list-style-type: none"> New segment on market Gradual growth in suburban areas over the past 5 years 	<ul style="list-style-type: none"> Large Polish firms, either restructured and privatized entities, or new firms 	<ul style="list-style-type: none"> Mainly in installments by groups of individuals
	Commercially built single plot SFH	30	29	<ul style="list-style-type: none"> Built in urban areas, increasing since 1990 (notably by 30% between 1990 & 1997 due to tax breaks on residential construction) 	<ul style="list-style-type: none"> Small general contractor firms or groups of specialized sub-contractors hired by a general manager or by the investor himself 	<ul style="list-style-type: none"> Individuals on a "pay as you go" basis
	"Owner-builder" single plot SFH	26	42	<ul style="list-style-type: none"> Built in rural areas, partially helped by tax breaks 	<ul style="list-style-type: none"> Owner of house with help from family/friends, may also involve some subcontracting of specialized tasks 	<ul style="list-style-type: none"> Individuals on a "pay as you go" basis

* Estimates
Source: Interviews; GUS; IGM

Exhibit 6

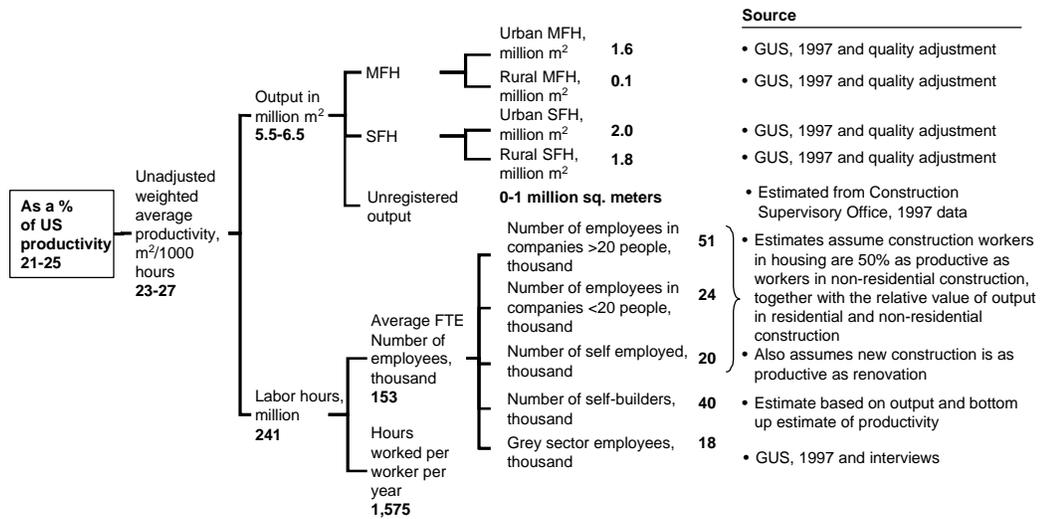
OUTPUT OF NEW RESIDENTIAL CONSTRUCTION PER 1000 LABOR INPUT HOURS
Square meters



Source: MGI reports; GUS

Exhibit 7

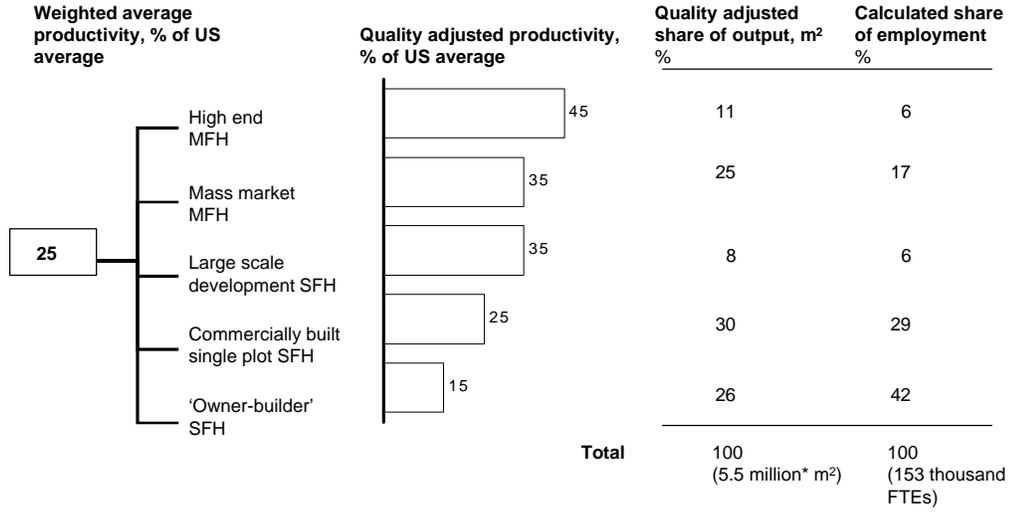
TOP DOWN CALCULATION OF QUALITY ADJUSTED LABOR PRODUCTIVITY



Source: GUS; Interviews; Team analysis

Exhibit 8

FORMAT-BASED ESTIMATES OF LABOR PRODUCTIVITY



* Excludes unregistered output
 Source: GUS; Interviews; Survey data; Team analysis

Exhibit 9

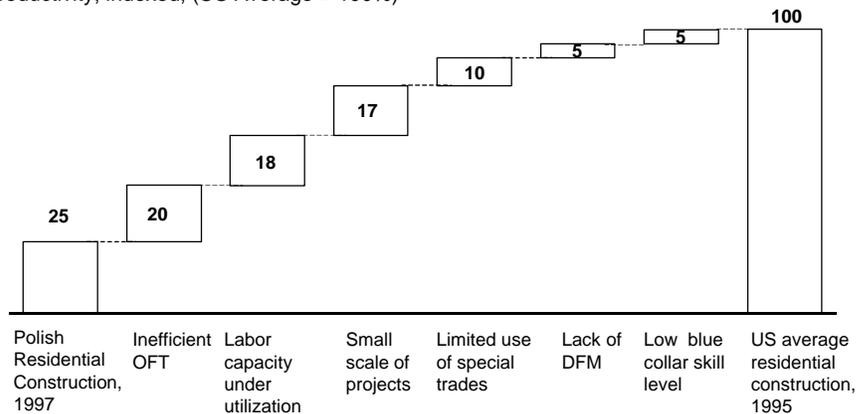
DEFINITION OF ORGANIZATIONAL FACTORS DETERMINING PRODUCTIVITY LEVEL

Factor	Definition
OFT (organization of functions and tasks)	Refers to the extent to which activities are planned in advance, and on a day to day basis, for the efficient use of human and capital resources. Factors that may affect the ability to carry out effective OFT are poor management skills, unpredictable time horizons and the worker's incentive structure
Small-scale projects	Are defined as projects that are below minimum efficient scale either in the size of the building or in the number of buildings built on any site (20 units of apartments or houses). This issue manifests itself in fewer economies of scale in design planning, management activity and infrastructure provision. It is also seen in reduced opportunity for the use of specialized labor able to perform tasks in parallel, and the under utilization of capital
Labor capacity under utilization	Refers to idle labor time caused by unexpected delays which halt the overall construction process. Delays are typically caused by bureaucratic procedures and/or interruptions to the flow of financing of the construction project
Limited use of specialized trade	Means that generalists perform specific tasks that in the US are performed by trained experts. Hence, each task is performed less productively, the quality level achieved in each task may be lower, and tasks are not performed in parallel but in sequence by the same generalists, lengthening the overall construction process
Labor skills and trainability	Refers to the current and potential skill exhibited in the pool of labor from which a construction company selects employees. Firms can either train employees from scratch which takes time, or employ ready trained construction workers who may have learned bad habits
Design for manufacturing (DFM)	Is the adoption of efficient building design by using an optimal site layout, then using standard, interchangeable and cost competitive materials
Low levels of capital intensity	Exist if labor is substituted for equipment due to the relative cost of each input. The absolute amount of capital equipment in use may be lower than in the US, or the equipment in use may be outdated and ineffective

Exhibit 10

COMPONENTS OF THE PRODUCTIVITY GAP IN POLISH RESIDENTIAL CONSTRUCTION

Productivity, indexed, (US Average = 100%)

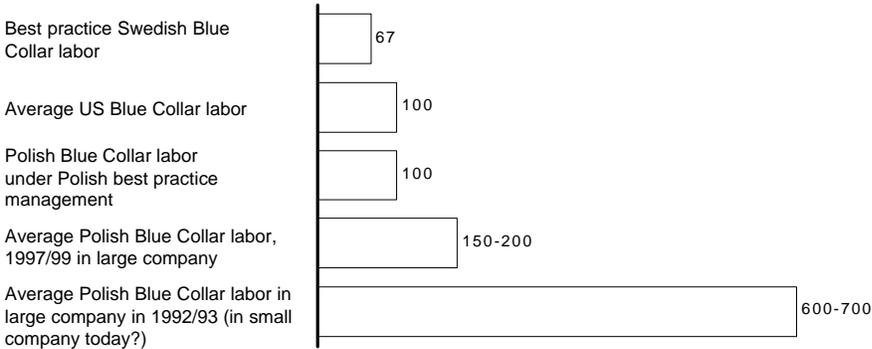


Source: Interviews; Team analysis

Exhibit 11

TASK SPECIFIC LABOR PRODUCTIVITY: TIME TAKEN TO BUILD E.G. 10 SQUARE METERS OF BRICK WALL

Indexed, (US Average = 100%)



Source: Interviews with international and large Polish construction firms

Exhibit 12

USE OF SPECIAL TRADE SUB-CONTRACTORS IN THE CONSTRUCTION PROCESS

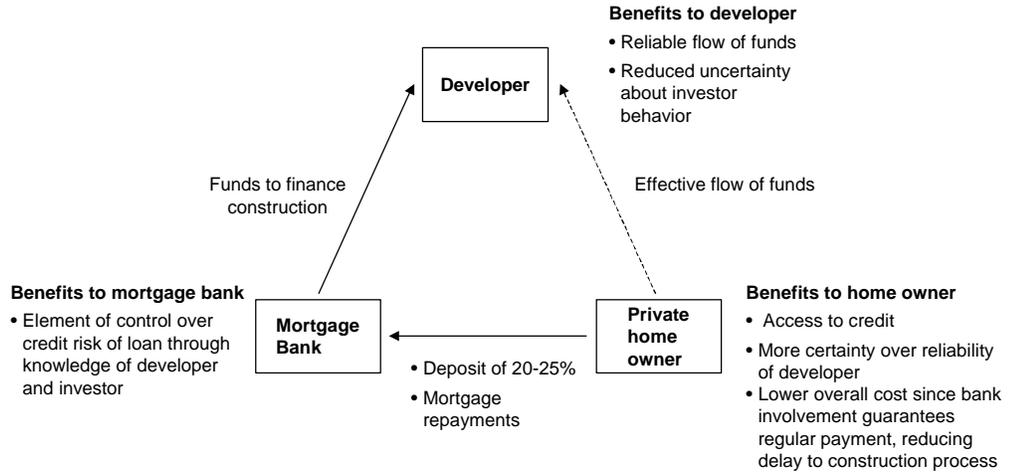
	U.S. average	Best practice international firm in Poland	Large average Polish construction firm building MFH or large developments of SFH	Small average company building MFH or large plot SFH	'Owner-builder' SFH
Electrical installations	Yes	Yes	Yes	Yes	Yes
Other installations • Gas • Sanitation	Yes	On occasion (if investor/developer can find high quality subcontractor)	Yes (either within group, or to third-parties)	Infrequently (general contractor may subcontract)	Infrequently (investor may hire small subcontractor)
Building work • Excavation • Foundations • Walls • Roofing • Windows/doors	Yes	No (typically the quality level required prevents this)	On occasion (either within group or to third-parties)	No (typically performed by the general contractor)	Infrequently (investor may hire small subcontractors)

■ Source of difference to US

Source: Interviews

Exhibit 13

MUTUALLY BENEFICIAL INTERACTION BETWEEN DEVELOPERS, BANKS AND INDIVIDUAL INVESTORS

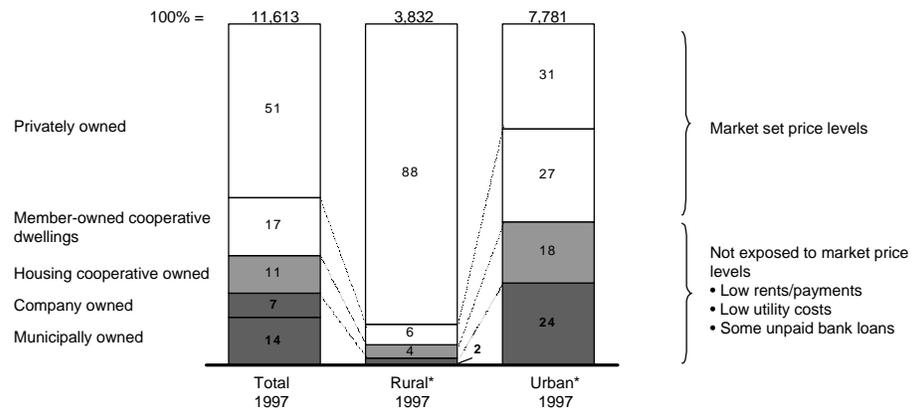


Source: Interviews

BREAKDOWN OF HOUSING STOCK OWNERSHIP

Percent; thousand dwellings

ESTIMATE

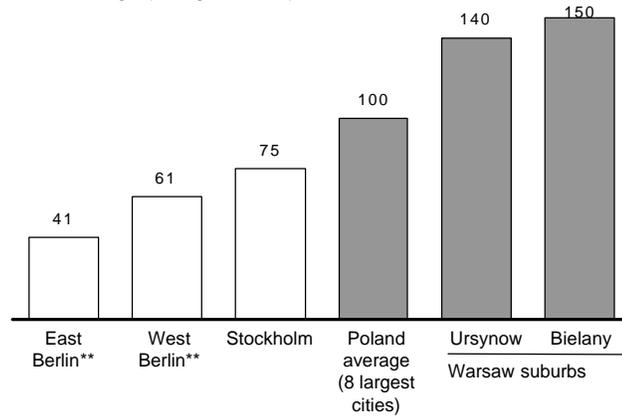


* Assumes share of member owned to non-member owned cooperatives is the same as for Poland overall
 Source: Central Statistical Office (GUS); State Office for Housing and Urban Development in Poland; Interviews

Exhibit 15

COST OF LAND FOR RESIDENTIAL USE RELATIVE TO GDP PER CAPITA, 1999*

Indexed to Poland average (8 largest cities) 1999 = 100



* GDP per capita at market exchange rate for 1996

** Relative to average per capita GDP for Germany as a whole

Source: Henry Butcher International Real Estate & Associate Consultants; The Economist; Press search; RDM; Lokale Immobilien

Exhibit 16

PROCEDURE FOR LAND RESTITUTION CLAIMS IN EAST GERMANY

Claim Deadline

13 October 1990 (German)
31 March 1991
(Foreigners)

Decision Process

- Land owner had priority over current tenants. In establishing who was the rightful land owner,
 - In most cases , land was state owned i.e. had not been recently sold to a third party
 - If plot owned by another party, agency had the power to decide - one person was given everything
 - In decision process, agency gave priority to the person who could commit to investment plans
- To sell land now, have to show that the claims procedure has been gone through

Current Status

- 70-75% of cases have been decided
- Initial delays in the sorting of claims led to need for large resources to deal with the backlog
- Computerization of land registry has made the process easier

Source: Interview with German Grundbuch

Exhibit 17

FRAGMENTED PRIVATE LAND OWNERSHIP – EXAMPLE OF TWO WARSAW SUBURBS

Fragmented land ownership

- In Roszyn and Biatotenka, 60-70% of the land is owned privately in fragmented strips
- Strips are between 40 meters and are 1 km in length: on average 150m
- Strips are between 4 meters and 90 meters in length: on average 15 to 20 meters

Effects

- Obtaining a site for a large scale housing development is time consuming and costly
 - To build a minimum efficient scale development (of 20 single family houses) involves negotiation with at least 4 farmers
 - For one retail development, the owner of the middle strip of a large plot sold his land for USD 100 psm, rather than the USD 30 psm received by the first seller

Source: Gmina interviews

Exhibit 18

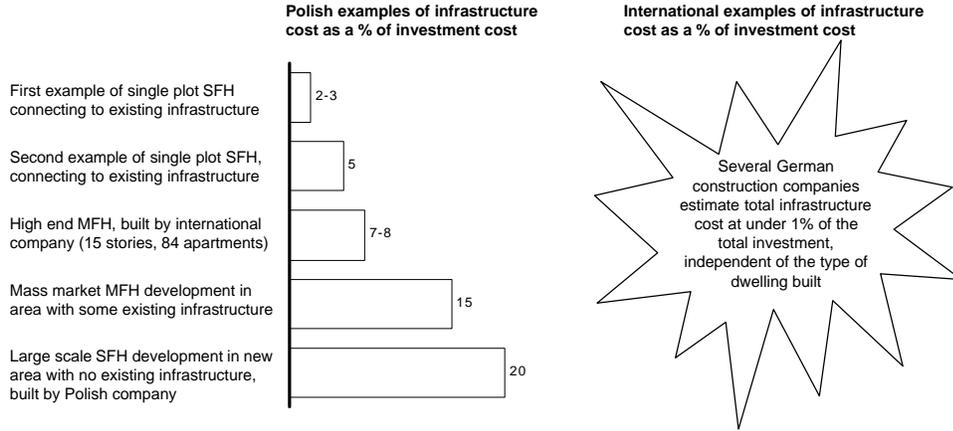
COMPETITION IN THE PROVISION OF DIFFERENT INFRASTRUCTURE MEDIA

	<u>Telecoms</u>	<u>Gas</u>	<u>Water/sewerage</u>	<u>Electricity</u>
Ownership of existing infrastructure	TP SA – state national incumbent	PGNiG* - state national incumbent	Municipal operators owned by gminas/poviats	33 state-owned regional distribution companies
Existence of competition at the local level	✓ (e.g. Netia, Szeptel, Telefonika Lokalna)	✓ (From substitutability of electricity)	✗	✗ (Since gas cannot fulfil all functions required of electricity)
Consistency of behavior across regions	?	✓ (Natural monopoly of PGNiG)	?	✗
Effectiveness of regulatory body	✓	✗	?	✗ (only partial)
Changes to regulatory framework under debate	✓ (New communication law under debate)	✓ (In initial stages- new tariffs and restructuring plan of PGNiG under way)	✗	✓


Increasingly burdensome to new residential construction

* Polskie Gornictwo Naftowe i Gazownictwo
 Source: Interviews; Press search

UTILITIES INFRASTRUCTURE* COST AS A % OF INVESTMENT COST



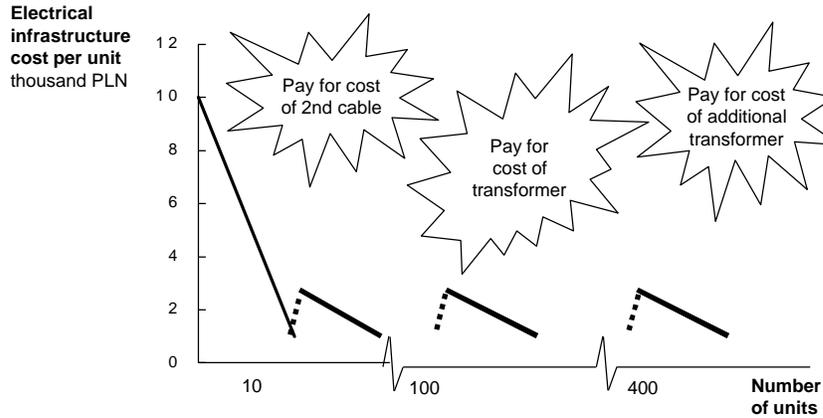
* Water, gas, electricity
 Source: Interviews with international and large Polish construction firms; Pisacare Information Services GmbH

Exhibit 20

Per unit electricity infrastructure cost is minimized at stages of just under 100 units, then just under 400 units, if building in a new area is between these thresholds the first mover allows subsequent investors to free ride on his investment in infrastructure – this may discourage development of some new areas

EXAMPLE OF FIRST MOVER DISADVANTAGE – LARGE DEVELOPMENTS OF SFH

ILLUSTRATIVE



Source: Interview with large Polish company

Exhibit 21

ADMINISTRATIVE PROCEDURES IN THE CONSTRUCTION PROCESS

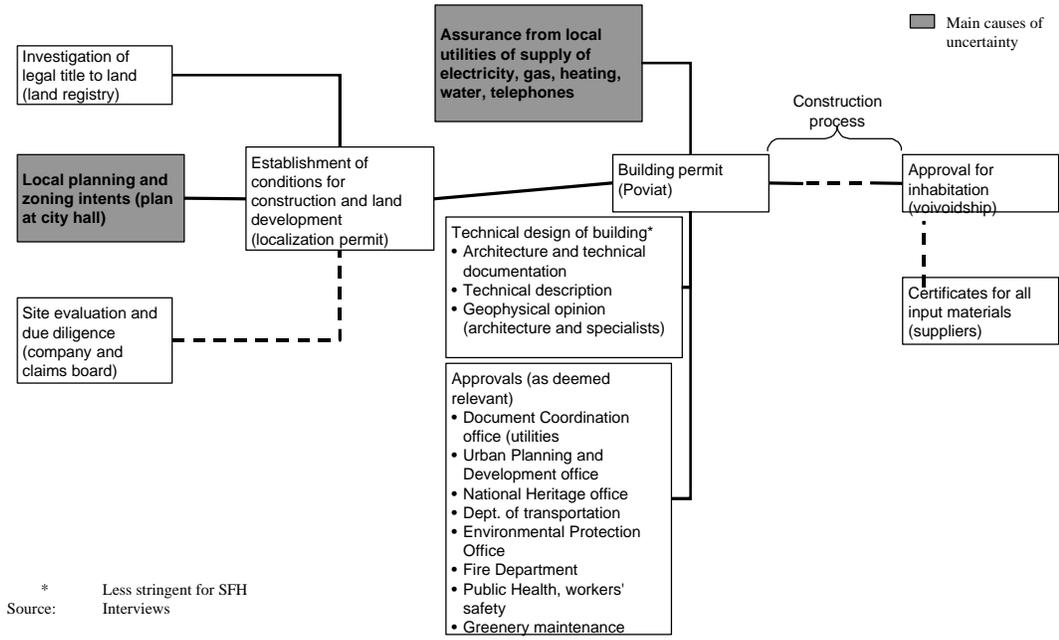
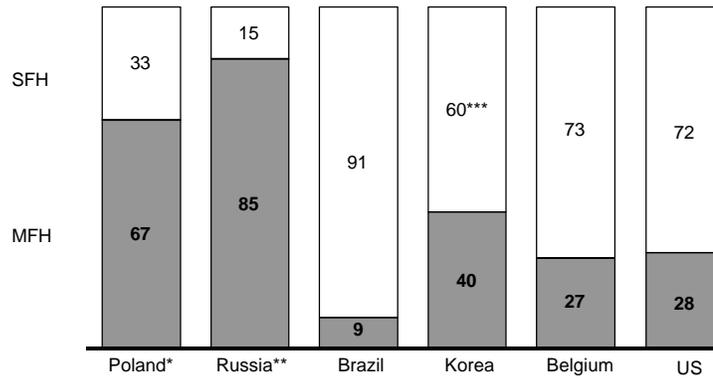


Exhibit 22

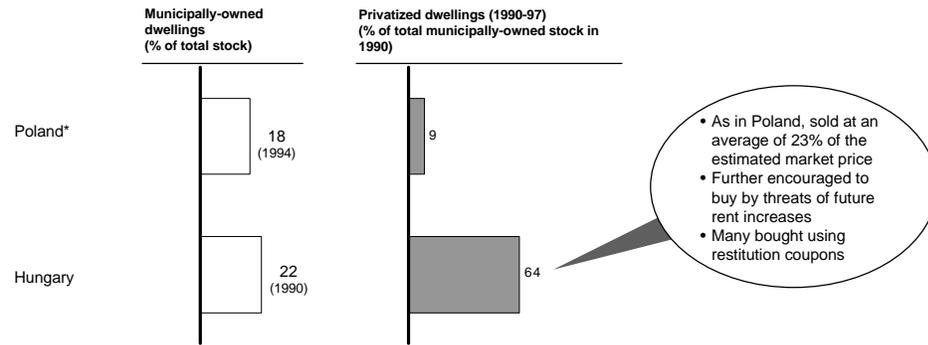
COMPARISON OF THE POLISH HOUSING STOCK MIX COMPARED TO OTHER COUNTRIES
 1995, Percent



* Urban dwellings vs. non-urban dwellings
 ** Percentage of households living in multi-family vs. single-family houses
 *** Including town houses and apartments in private houses (10% of total)
 Source: Goskomstat; MGI Brazil Report; Korean National Statistics Office; Polish Central Statistical Office, Belgian National Statistics Office

PRIVATIZATION OF MUNICIPALLY OWNED DWELLINGS IN POLAND AND HUNGARY

Percent

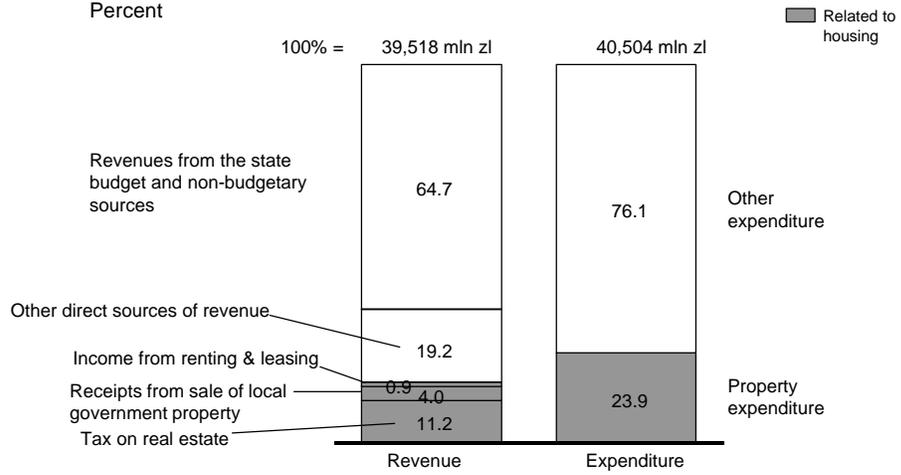


* Includes dwellings owned by Gminas only, excludes company owned and other state agency owned dwellings.
Source: State Office of Housing and Urban Development Poland; Statistical Yearbook of Hungary 1997

Exhibit 24

STRUCTURE OF CONSOLIDATED LOCAL AUTHORITY REVENUE AND EXPENDITURE, 1997

Percent



SZCZECIN URBAN PLAN - OUTLINE OF IDEA

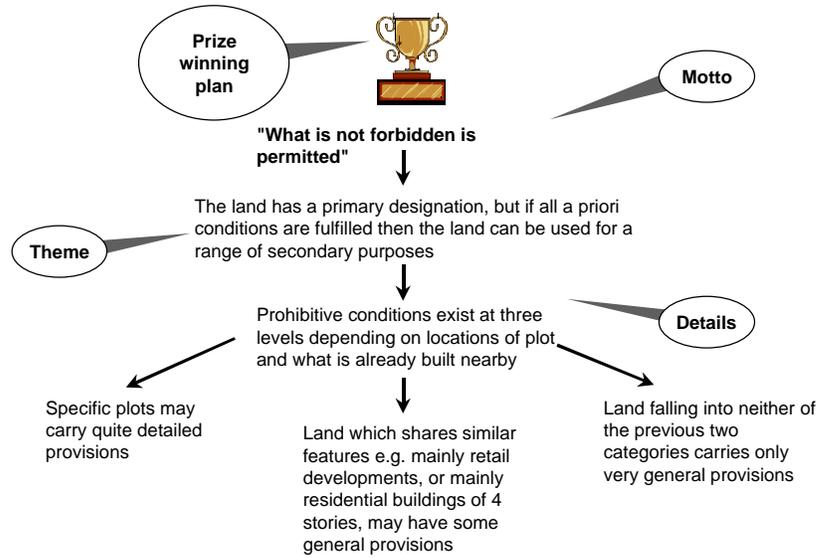
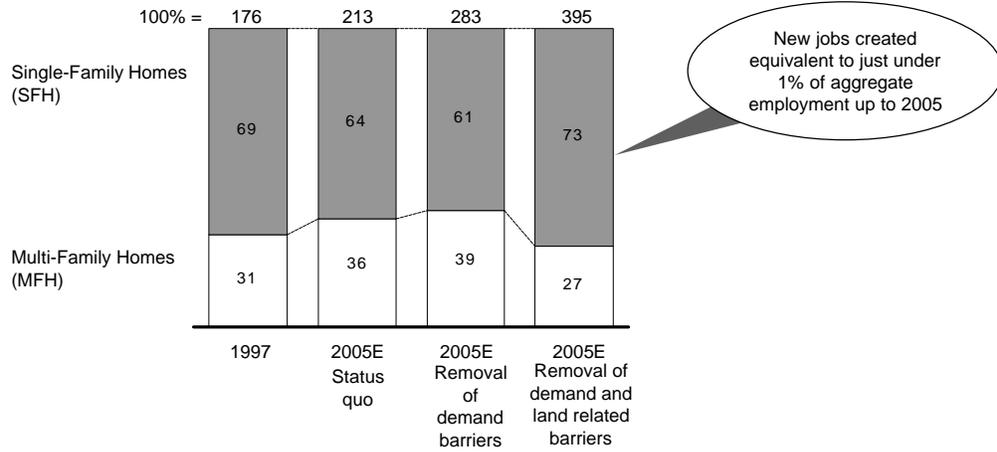


Exhibit 26

FUTURE EVOLUTION OF FORMAT SHARE OF OUTPUT IN RESIDENTIAL CONSTRUCTION

Percent; quality adjusted square meter output, per 1000 people

ESTIMATE



Source: Central Statistical Office (GUS); McKinsey analysis

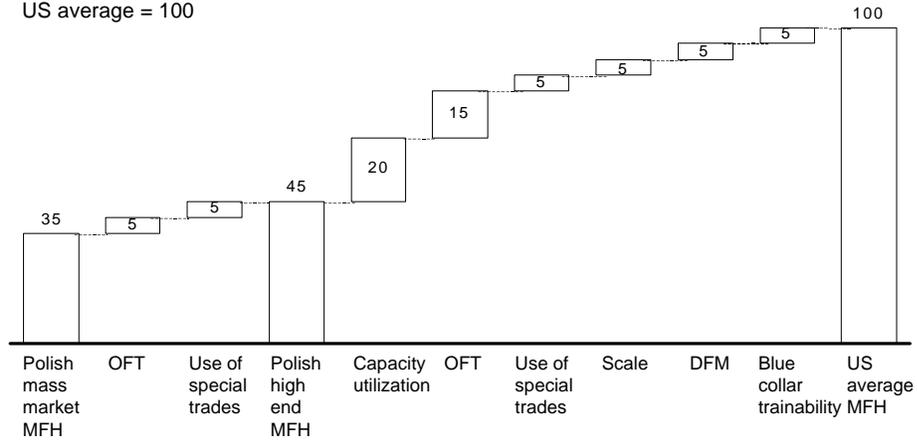
Appendix

Exhibit 28

Operational productivity in Polish MFH is 37% of that in the US, the biggest causes of this gap are poor OFT and labor capacity under utilization

COMPONENTS OF THE PRODUCTIVITY GAP IN MFH

US average = 100



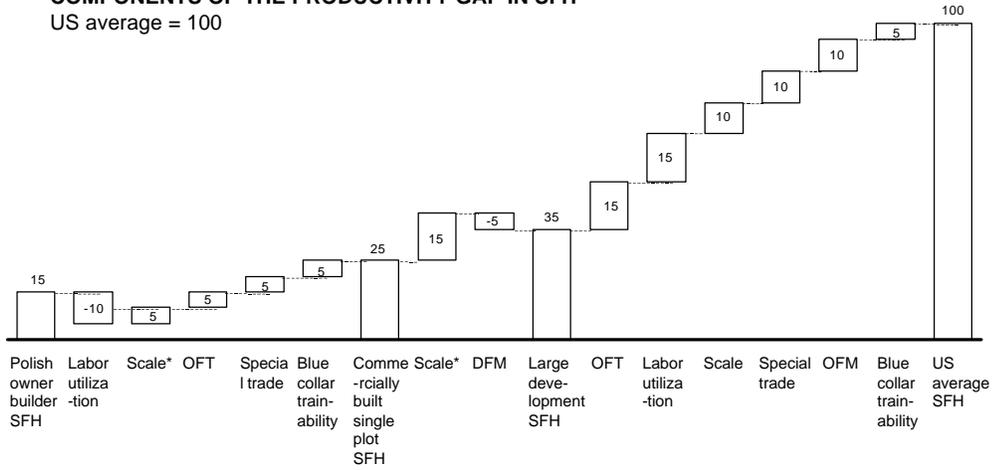
Source: Team analysis

Exhibit 29

Operational productivity in Polish SFH is 20% of that in the US, the biggest causes of this gap being small scale, poor OFT and low use of special trades

COMPONENTS OF THE PRODUCTIVITY GAP IN SFH

US average = 100



* Including capital intensity
Source: Team analysis