

The Welsh Development Agency (WDA) was set up in 1976 'to attract high-quality investment, to help the growth of Welsh businesses and to improve the environment' (Figure 19.29). It saw as its main advertising points:

- a workforce that was skilled (although it needed retraining for the new-style high-tech industries)
- low labour costs, high productivity and good labour relations
- a well-developed transport infrastructure with modern road, rail and air links
- the availability of advanced factory sites with quality buildings at competitive rates
- a local market, and access to a national and the international market
- low rates and rents for firms wishing to locate in either the Development or Intermediate Areas (Figure 19.5)
- lower house prices and cost of living than south-east England
- the University of Wales with its five separate colleges
- the Welsh countryside, including the Pembrokeshire Coast and Brecon Beacons National Parks and 500 km of Heritage Coastline (including the Gower Peninsula), and the Pembrokeshire Coast footpath.
- the Welsh culture, including music, the performing arts and sport.

At the beginning of the 21st century, South Wales had a more varied and broad economic base than it had ever had before, with both manufacturing and inward investment growing at a faster rate than anywhere else in the UK. Of nearly 500 international companies that had located here, 150 were from North America (Ford and General Electric), 60 were German (Bosch) and 50 were Japanese (Sony, Figure 19.30; Aiwa, Matsushita and Hitachi). Other companies have come from France, Italy, Singapore, South Korea and Taiwan. The major types of new industry include aerospace and defence (six of the world's top ten companies including Airbus and BAE systems), car assembly (Bridgend), chemicals, electronics, medical devices, optical equipment, pharmaceuticals and telecommunications. A recent addition has been the Amazon (books) distribution centre at Swansea, which is expected to employ 1200 full-time and 1500 seasonal staff.

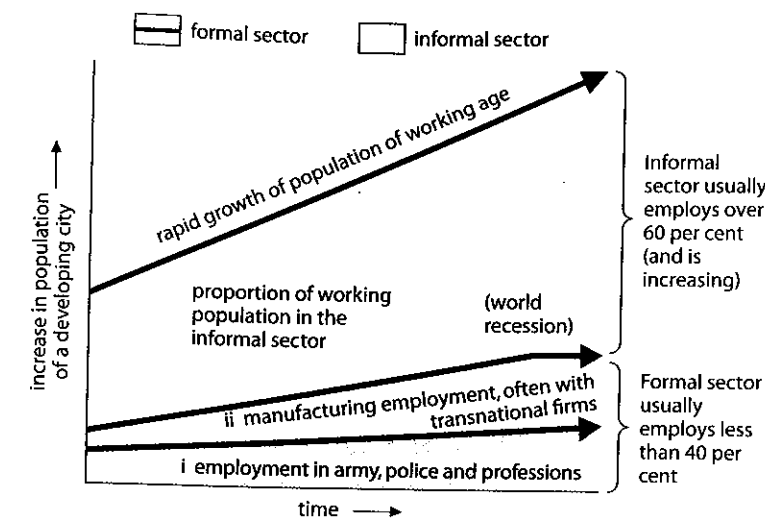


Figure 19.31
Growth in the informal sector

Industry in economically less developed countries

In cities in economically less developed countries, the number of people seeking work far outweighs the number of jobs available. As these cities continue to grow, either through natural increase or in-migration, the job situation gets continually worse. The UN estimates that in developing countries, on average, only about 40 per cent of those people with jobs work in the **formal sector** (Figure 19.31). These jobs, which are permanent and relatively well paid, include those offered by the state (police, army and civil service) or by overseas-run **transnational (multinational) corporations**, which are a major feature of globalisation (Chapter 21). The remaining 60 per cent – a figure which the UN claims is rising – have to seek work in the **informal sector**. The main differences between the formal and informal sectors are listed in Figure 19.34.

Transnational (multinational) corporations

A transnational, or multinational, corporation is one that operates in many different countries regardless of national boundaries. The headquarters and main factory are usually located in an economically more developed country. Although, at first, many branch factories were in economically less developed countries, increasingly there has been a global shift to the more affluent markets of Europe, North America, Japan and South Korea. Transnationals (TNCs) are believed to directly employ nearly 50 million people worldwide and to indirectly influence an even greater number. It is estimated that the largest 300 TNCs control over 70 per cent of

Advantages to the country	Disadvantages to the country
Brings work to the country and uses local labour	Numbers employed small in comparison with amount of investment
Local workforce receives a guaranteed income	Local labour force usually poorly paid and have to work long hours
Improves the levels of education and technical skills of local people	Very few local skilled workers employed
Brings inward investment and foreign currency to the country	Most of the profits go overseas (outflow of wealth)
Companies provide expensive machinery and introduce modern technology	Mechanisation reduces the size of the labour force
Increased gross national product/personal income can lead to an increased demand for consumer goods and the growth of new industries and services	GNP grows less quickly than that of the parent company's headquarters, widening the gap between developed and developing countries
Leads to the development of mineral wealth and new energy resources	Raw materials are usually exported rather than manufactured locally, and energy costs may lead to a national debt
Improvements in roads, airports and services	Money possibly better spent on improving housing, diet and sanitation
Prestige value (e.g. Volta Project)	Big schemes can increase national debt (e.g. Brazil)
Widens economic base of country	Decisions are made outside the country, and the firm could pull out at any time
Some improvement in standards of production, health control, and recently in environmental control	Insufficient attention to safety and health factors and the protection of the environment

Figure 19.32

Advantages and disadvantages of transnational (multinational) corporations

world trade (compared with only 20 per cent in 1960) and produce over half of its manufactured goods. The largest TNCs have long been car manufacturers and oil corporations but these have, more recently, been joined by electronic and high-tech firms. Several of the largest TNCs have a higher turnover than all of Africa's GNP in total.

Transnationals, with their capital and technology, have the 'power' to choose what they consider to be the ideal locations for their factories. This choice will be made at two levels: the most suitable country, and the most suitable place within that country. The choice of a country usually depends on political factors. Most governments, regardless of the level of economic development within their country, are prepared to offer financial inducements to attract transnationals which they see as providers of jobs and a means of increasing exports. (Sony, Figure 19.30, was reputed to have been offered better inducements to locate at Bridgend rather than in Barcelona.) Many governments of economically less developed countries, due to a greater economic need, are prepared to impose fewer restrictions on transnationals because they often have

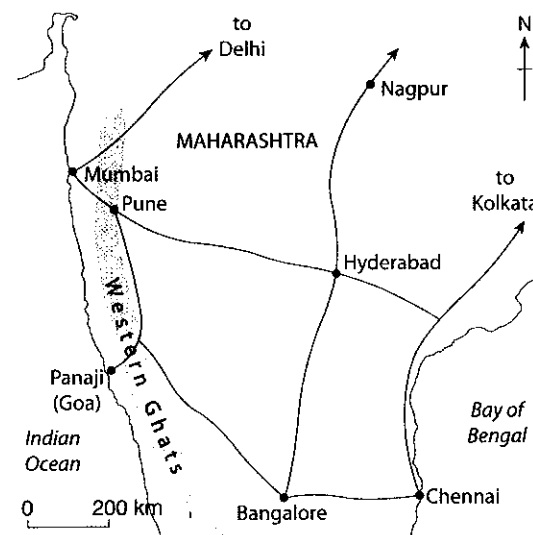
to rely on them to develop natural resources, to provide capital and technology (machinery, skills, transport), to create jobs and to gain access to world markets (Places 88). Despite political independence, many poorer countries remain economically dependent (neo-colonialism) on the large transnationals (together with international banks and foreign aid). Some of the advantages and disadvantages of transnational corporations to developing countries are listed in Figure 19.32.

Transnationals, having selected a country, then have to decide where to locate within that country. If the country is economically developed, the location is likely to be where financial

inducements are greatest, land values are low, transport is well developed, and levels of skill and unemployment are high (Japanese companies in South Wales, page 572). If the country is economically less developed, the location is more likely to be in the primate city (page 405), especially if that city is also the capital or the chief port. A capital city location, with an international airport, allows quick access to the companies' overseas headquarters; and a port location enables easier export of manufactured goods. Should several transnational companies locate in the same area, the multiplier effect (page 569) is likely to result in the development of a core region (Places 98, page 618).

Places 88 Pune, India: a hub for transnationals

Figure 19.33
Location of Pune in India



Pune, a city of 5 million inhabitants, lies 150 km south-east of Mumbai in the western coastal state of Maharashtra. It is known as the 'Oxford of the East', as it has nine universities, and 'The Detroit of India' due to the presence of numerous global car TNCs. Its rapid industrial growth has partly been due to congestion, pollution, lack of space and exceptionally high property prices in nearby Mumbai (population 18.2 million), as well as to its own advantages.

Pune has good transport links, especially with the port and financial centre of Mumbai. It is also on the 'Golden Quadrilateral', a four-lane expressway that links Bangalore, Chennai, Kolkata, Delhi and Mumbai, as well as being on a main rail line and having its own airport. Its climate is healthier than

that of Mumbai, being 650 m above sea-level, which makes it less humid, and, lying in the rain shadow to the east of the Western Ghats, it receives only 650 mm of rain a year compared with Mumbai's 2200 mm (Figure 9.57).

Pune's universities produce large numbers of skilled graduates and Mercedes-Benz founded an international school for professional people from overseas. The state of Maharashtra is viewed positively as a manufacturing and commercial centre as it is less prone to industrial strikes and corruption which affect other parts of India. Other favourable factors that are important when trying to attract TNCs include its good health care service and a reliable supply of water and electricity.

Pune has also benefited from the setting up, in 1960, of the Maharashtra Industrial Development Corporation (MIDC) which offers business incentives that include exemptions from electricity duty and stamp duty, refund on Octroi (a tax applied to goods entering and leaving an area) and special financial help, together with interest rate subsidies for the textile industry – incentives that are not available in Mumbai. Among the TNCs that have located in and around Pune are automotive corporations (Daimler-Chrysler, Fiat, General Motors, Mercedes-Benz, Skoda, Tata Motors and Volkswagen), electrical companies (Panasonic, Philips, Siemens and Whirlpool), technology centres (Barclays, HSBC and John Deere) and outsourcing call centres (Next and British Gas).

'This sector covers a wide variety of activities meeting local demands for a wide range of goods and services. It contains sole proprietors, cottage industries, self-employed artisans and even moonlighters. They are manufacturers, traders,

The informal sector

A large and growing number of people with work in developing countries have found or created their own jobs in the informal sector (Figure 19.34).

	Formal	Informal
Location	Employee of a large firm	Self-employed
	Often a transnational	Small-scale/family enterprise
	Much capital involved	Little capital involved
	Capital-intensive with relatively few workers; mechanised	Labour-intensive with the use of very few tools
	Expensive raw materials	Using cheap or recycled waste materials
	A guaranteed standard in the final product	Often a low standard in quality of goods
	Regular hours (often long) and wages (often low)	Irregular hours and uncertain wages
	Fixed prices	Prices rarely fixed and so negotiable (bartering)
	Jobs done in factories	Jobs often done in the home (cottage industry) or on the streets
	Government and transnational help	No government assistance
	Legal	Often outside the law (illegal)
	Usually males	Often children and females
of Job	Manufacturing: both local and transnational companies	Distributive (street peddlers and small stalls)
	Government-created jobs such as the police, army and civil service	Services (shoe cleaners, selling clothes and fruit)
		Small-scale industry (food processing, dress-making and furniture repair)
Advantages	Uses some skilled and many low-skilled workers	Employs many thousands of low-skilled workers
	Provides permanent jobs and regular wages	Jobs may provide some training and skills which might lead to better jobs in the future
	Produces goods for the more wealthy (food, cars) within their own country so that profits may remain within the country	Any profit will be used within the city: the products will be for local use by the lower-paid people
	Waste materials provide raw materials for the informal sector	Uses local and waste materials

Figure 19.34
Differences between 'formal' and 'informal' sectors

Places 89 Nairobi, Kenya: *jua kali* workers

Jua kali means 'under the hot sun'. Although there are many smaller *jua kali* in Nairobi, the largest is near to the bus station where, it is estimated, over 1000 workers create jobs for themselves (Figure 19.34). The plot of land on which the metal workshops have been built measures about 300 m by 100 m. The first workshops were spontaneous and built illegally as their owners did not seek permission to use the land, which did not belong to them. As more workshops were set up and the site developed, the government was faced with the option of either bulldozing the temporary buildings, as governments had done to shanty settlements in other developing countries, or encouraging and supporting local initiative.

transporters, builders, tailors, shoemakers, mechanics, electricians, plumbers, flower-sellers and many other activities. The [Kenyan] government have recognised the importance of these small-scale *jua kali* enterprises [Places 89] and a few commercial banks are beginning to extend loans to these new entrepreneurs who are themselves forming co-operatives. There are many advantages in developing these concerns. They use less capital per worker than larger firms; they tend to use and recycle materials that would otherwise be waste; they provide low-cost, practical on-the-job training which can be of great value later in more formal employment; and, as they are flexible, they can react quickly to market changes. Their enterprising spirit is a very important national human resource.'

Central Bank of Kenya

The governments of several developing countries now recognise the importance of such local ventures as Kenya's *jua kali* which, apart from creating employment, provide goods at affordable prices. India, for example, encourages the growth of co-operatives to help family concerns, under the 'Small Industries Development Organisation', by setting up district offices that offer technical and financial advice. Under its Development Plans, the manufacture of 600 products will be exclusively reserved for small firms and family enterprises.

Children, many of whom may be under the age of 10, form a significant proportion of the informal-sector workers. Very few of them have schools to go to and, from an early age, they go onto the streets to try to supplement the often meagre family income. They may try to earn money by shining shoes or selling items such as sweets, flowers, fruit and vegetables.

Realising that the informal workshops created jobs in a city where work was hard to find, the government opted to help. The Prime Minister himself became personally involved by organising the erection of huge metal sheds which protected the workers from the hot sun and occasional heavy rain.

Groups of people are employed touring the city collecting scrap. The scrap is melted down, in charcoal stoves, and then hammered into various shapes including metal boxes and drums, stoves and other cooking utensils, locks and water barrels, lamps and poultry water troughs (Figure 19.35). Most of the workers are under 25 and have had at least some primary education. The technology



Figure 19.35
Jua kali workshops

Intermediate (appropriate) technology

Dr E.F. Schumacher developed the concept of **intermediate technology** as an alternative course for development for poor people in the 1960s. He founded the Intermediate Technology Development Group (ITDG) in 1966, now renamed Practical Action, and published his ideas in a book, *Small is Beautiful* (1973). Schumacher himself wrote:

'If you want to go places, start from where you are.

If you are poor, start with something cheap. If you are uneducated, start with something relatively simple.

If you live in a poor environment, and poverty makes markets small, start with something small.

If you are unemployed, start using labour power, because any productive use of it is better than letting it lie idle.

In other words, we must learn to recognise boundaries of poverty.

A project that does not fit, educationally and organisationally, into the environment, will be an economic failure and a cause for disruption.'

In 1988 the ITDG stated that:

'Essentially, this alternative course for development is based on a local, small-scale rather than the national, large-scale approach. It is based on millions of low-cost workplaces where people live – in the rural areas – using technologies that can be made and controlled by the people who use them and which enable those people to be more productive and earn money.'

These ideas challenged the conventional views of the time on aid. Schumacher said:

'The best aid to give is intellectual aid, a gift of useful knowledge ... The gift of material goods

they use is appropriate and sustainable, suited to their skills and the availability of raw materials and capital. Most of the products are sold locally and at affordable prices.

It is estimated that there are approximately 600 000 people engaged in 350 000 small-scale *jua kali* enterprise units in Kenya. This figure needs to be compared with the 180 000 recorded as employed in large-scale manufacturing and the 2.2 million total in all areas of the non-agricultural economy. *Jua kali* form, therefore, a most significant part of the total employment picture.

makes people dependent, but the gift of knowledge makes them free – provided it is the right kind of knowledge, of course.'

To illustrate this he quoted an old proverb:

'Give a man a fish and you feed him for a day; teach him how to fish and he can feed himself for life.'

The first part of this might be seen as the traditional view of aid where 'giving' leads to dependency. The second part, 'teaching', is a move in the direction of self-sufficiency and self-respect. Schumacher added a further dimension to the proverb by saying: 'teach him to make his own fishing tackle and you have helped him to become not only self-supporting but also self-reliant and independent'.

In most developing countries, not only are high-tech industries too expensive to develop, they are also usually inappropriate to the needs of local people and the environment in which they live. Examples of intermediate, or **appropriate technology** as it is now known (Places 90), include:

- labour-intensive projects; since, with so many people already being either unemployed or underemployed, it is of little value to replace workers by machines
- projects encouraging technology that is sustainable and the use of tools and techniques designed to take advantage of local resources of knowledge and skills
- the development of local, low-cost schemes using technologies which local people can afford, manage and control rather than expensive, imported techniques
- developing projects that are in harmony with the environment.

Practical Action (formerly known as ITDG – see page 576) is a British charitable organisation that works with people in developing countries, especially those living in rural areas, by helping them to acquire the tools and skills needed if they are to raise themselves out of poverty and meet the UN's Millennium Development Goals (page 609). Practical Action helps people to meet their basic needs of food, clothing, housing, energy and jobs. It also uses, and adds to, local knowledge by providing technical advice, training, equipment and financial support so that people can become, in Schumacher's words, 'more self-sufficient and independent' (page 576). Although Practical Action operates globally, the following examples are taken from Kenya. They are all:

- suitable for the local environment (local raw materials and climate)
 - appropriate to the wealth, skills and needs of the local people.
- 1 Improved building materials include roofing tiles that are made from a mix of cement, sand and water (and sometimes a pigment if a different colour is required). They are left in their moulds for a day to cure (but not to dry), placed in a reservoir of water for a week and finally covered with plastic, as a protection against the hot sun, and allowed to dry slowly for three weeks. They are cheaper than commercially produced tiles, as they do not need firing, and lighter (Figure 19.36).
 - 2 In another scheme, lime and natural fibres are added to soil to produce 'soil blocks'. Soil is important because it can be obtained locally, can easily be compressed and, once heated,

retains its heat. Soil blocks are replacing the more expensive concrete blocks and industrially produced bricks.

- 3 Other projects have helped to improve ventilation and lighting in existing houses. Traditionally, most Kenyan women cooked on wooden stoves in houses that had no chimneys and few windows. The result was a smoky and unhealthy atmosphere. To reduce reliance on wood and charcoal, which may be difficult and/or expensive to obtain, and to improve living conditions, Practical Action has helped to train potters to produce two types of improved cooking stoves (Figure 19.37): the *mandaleo* for wood-burning stoves in rural areas, which are made from ceramic; and the *jiko* for charcoal-burning stoves in urban areas, which are made from recycled scrap metal, often in *jua kali* workshops (Places 89), to which potters add a ceramic lining. The new stoves, based on traditional designs, reduce smoke, improve women's health and pay for themselves within a month. They also reduce the amount of time rural families have to spend collecting firewood (page 543) and the cost that urban families have to pay for charcoal, and help to conserve a rapidly declining natural resource.
- 4 Practical Action has also helped the Maasai improve their houses. This has been done by adding a thin layer of concrete reinforced with chicken wire over the old mud roof; adding a gutter and downpipe which leads to a water barrel (saving a likely long trek to the nearest river, Figure 21.11); and adding a small window and chimney cowl to make the inside of the house lighter and less smoky, which improves health.

Figure 19.36
Roofing tiles



Figure 19.37
New cooking stoves

