

# IV

## FINANCING ECONOMIC DEVELOPMENT



## 13

## FINANCING DEVELOPMENT FROM DOMESTIC RESOURCES

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## Introduction

The topic of financing development from domestic resources has two major aspects. The first concerns the ways in which **savings** can be encouraged in developing countries, because only if society is willing to save can resources be devoted to the production of capital goods. Saving is necessary to *fund* investment. In a primitive subsistence economy, without money or monetary assets, saving and investment will tend to be simultaneous acts, in the sense that saving and investment will be done by the same people, and saving will be invested in the sector in which the saving takes place. In a more sophisticated money exchange economy, however, there is no guarantee that saving will necessarily be converted into investment. With the existence of money and monetary assets, the act of saving becomes divorced from the act of investing. Those who want to do the investing may be different from those who want to do the saving, and the process of capital accumulation is likely to require financial and credit mechanisms to 'redistribute' resources from savers to investors. Indeed, with a banking system with the power to create credit, investment can take place *without* prior saving through the process of borrowing. In other words, saving funds investment, but does not necessarily *finance* it. Investment generates its own saving through increases in output and profits. In fact, in the early stages of development, savings may not be the major barrier to capital formation but rather an unwillingness or inability to invest.

Unwillingness to invest may stem from cultural attitudes or simply from a realistic assessment of the risks involved. In Chapter 5, we analysed why poor people may be risk-averse. The inability to invest, on the other hand, may result from shortages of cooperating factors of production (including foreign exchange), or lack of access to credit because of the underdeveloped state of the financial system. The second important aspect of financing development from domestic resources, therefore, has to do with the role of the banking and financial system in promoting and financing investment. **The financial system is important for encouraging saving, financing investment and allocating savings in the most productive manner.**

This chapter starts by distinguishing the different types of saving – voluntary, involuntary and forced – and then distinguishes the different analytical approaches to the finance of development, which have different policy implications. The **prior savings approach** focuses on policies to raise the level of voluntary and involuntary saving as a prerequisite for investment. The **Keynesian approach** focuses on incentives to investment that will generate its own saving. The **quantity theory approach** emphasizes the role of government in appropriating resources for development through monetary expansion and forced saving through inflation (the inflation tax).

Raising the level of voluntary and involuntary saving involves the use of monetary and fiscal policy. The chapter discusses the financial systems of developing countries, including the informal financial sector, which dominates in rural areas; the formal banking system and financial intermediaries, and the various forms of **financial repression** that exist, which, in recent years, have led to extensive programmes of **financial liberalization**. The case for and against financial liberalization, and the empirical evidence, is presented. The role of **microcredit** and **development banks** in helping people out of poverty is also examined.

We then consider fiscal policy and taxation, the tax effort of countries, and the need for fiscal reform to raise tax revenue as a proportion of GDP.

If voluntary and involuntary saving are inadequate for the development effort, inflationary policies that redistribute income between wages and profits, and between the private sector and the government, are alternative possibilities. The former possibility is the Keynesian approach to the finance of development, which argues that stimulating investment can generate its own saving by raising the level of income if the economy is operating below capacity, and by redistributing

income from wage earners with a low propensity to save to profit earners with a higher propensity to save if the economy is working at full capacity.

The latter possibility is the quantity theory approach to the finance of development (so named after the quantity theory of money). One of the ways a government can divert more resources to investment is to invest on society's behalf, financing the investment by expanding the money supply. At full employment, monetary expansion will be inflationary. The 'tax' on money consists of a reduction in the real purchasing power of money, and the real resources that holders of money must forgo to restore the real value of their money holdings (forced saving).

The dangers of inflationary finance are recognized, and the extensive empirical research on the relation between inflation and growth is evaluated.

## Forms of saving

There are three broad groups in society that save: the household sector, the business sector and the government. The household sector saves out of personal disposable income (personal saving), the business sector saves out of profits, and the government can save out of tax revenues if it spends less than it receives (that is, runs a budget surplus on current account). Household and business saving is sometimes referred to as **private saving**, while government saving is **public saving**. Each of the sectors' motives for saving will differ, and we shall consider the determinants of saving later in this chapter.

As far as the nature of saving is concerned, three broad types may be distinguished: voluntary, involuntary and 'forced'. The nature of these types of saving is fairly self-explanatory:

- **Voluntary savings** are savings that arise through voluntary reductions in consumption out of disposable income. Both the household and the business sector may be a source of voluntary savings.
- **Involuntary savings** are savings brought about through involuntary reductions in consumption. All forms of taxation, social insurance contributions and schemes for compulsory lending to governments are traditional measures involving involuntary reductions in consumption.
- **Forced saving** is when consumption may be reduced because of rising prices (some inflation-induced saving may be voluntary, some involuntary), which may happen for a number of reasons. People may spend the same amount in money terms, but because prices have risen, this means they spend less in *real* terms (money illusion). People may want to keep the *real* value of their holdings of money constant, so they accumulate more money as prices rise – **the real balance effect**. Also, inflation may redistribute income to those with a higher propensity to save, such as profit earners.

For a variety of reasons, which will be considered below, inflation is likely to be a natural concomitant of development, but it can also be deliberately induced by governments financing budget deficits at full employment by monetary expansion. This is the idea of **inflation as a tax on money**. It should also be remembered that if an economy is at less than full employment, there can always be more saving by activating unemployed or underemployed resources, provided not all the increase in output is consumed.

Domestic savings for investment can also be supplemented from abroad. Private foreign investment is a direct source of capital formation and provides a direct addition to domestic investment. It can also be a source of savings by stimulating income and employing previously underutilized resources. Borrowing from abroad also provides resources for investment by

enabling imports to exceed exports, which shows up as investment in excess of domestic saving in the national accounts. Foreign assistance may be from multilateral or bilateral sources and may take a variety of forms, ranging from loans at commercial rates of interest to outright gifts of goods and services and technical assistance (see Chapter 14). Remittances from abroad also augment domestic saving.

Finally, a country's commercial policy can stimulate savings and release resources for investment purposes. Trade itself, and an improvement in a country's terms of trade, can provide additional resources for investment if the resulting increase in real income is not fully consumed. Likewise, policies to restrict imports of consumption goods can release additional resources for investment, provided that domestic saving is not reduced by the purchasing power released being switched to home consumption goods.

The amount that countries save and invest as a proportion of their gross domestic product (GDP) differs enormously, affected by differences in the ability and willingness to save and invest. Some countries dissave, consuming more than they produce. Some countries save more than they invest domestically, which means they are investing abroad, and other countries invest more than they save, which means they are net importers of capital. The experience in different areas (continents) of the world is shown in Table 13.1. The first thing to notice is that the savings ratio is much lower in low-income countries than in richer countries, but the savings ratio does not continue to rise for ever as countries grow richer. The ratio peaks in the upper middle-income countries and then declines. The weighted average savings ratio in low-income countries is 16% of GDP compared with 31% in middle-income countries and 21% in high-income countries.

The second important observation is the enormous disparity in savings performance between continents, particularly between the high savings ratios of the highly successful East Asian and Pacific countries (which include China) and the much lower savings ratios in the less successful economies of Latin America, the Caribbean and sub-Saharan Africa. The ratio in East Asia and

**Table 13.1** Investment and savings as a percentage of GDP

	Gross capital formation % of GDP 2014	Gross savings % of GDP 2014
<b>Low income</b>	28	16
<b>Middle income</b>	31	31
Lower middle income	27	29
Upper middle income	32	32
<b>Low and middle income</b>	31	31
East Asia and Pacific	42	45
Europe and Central Asia	21	16
Latin America and Caribbean	21	18
Middle East and North Africa	30	..
South Asia	30	31
Sub-Saharan Africa	22	16
<b>High income</b>	20	21

Source: World Bank, 2015.

Pacific (45%) is more than double that of Latin America and the Caribbean (18%) and nearly triple that of sub-Saharan Africa (16%). The question that naturally arises is: Did high savings precede rapid growth in East Asia, or did rapid growth generate its own high savings ratio? Some might argue that it was policies to stimulate saving that were important, including financial liberalization. Some might say it was policies to stimulate investment, partly through control of the banking system, that generated growth and therefore saving. Others might say it was the deliberate involvement of the government in generating and reallocating new resources.

There is no easy answer to the question, but the different replies that might be given highlight the differences in the three broad analytical approaches to the study of financing development from domestic resources, which we will use as the organizing framework for the rest of the chapter. The three approaches are as follows:

- The **prior savings approach** to the financing of development, which stresses the importance of prior savings for investment and the need for policies to raise the level of savings either voluntarily, involuntarily, or both. The approach is classical in conception, emphasizing saving as a prerequisite of investment. The approach is also characterized by a strong aversion to inflation and a belief that saving will readily find investment outlets.
- The **Keynesian approach**, which rejects the idea that saving determines investment and argues instead that the encouragement of investment will generate its own saving, either through increases in output if resources are unemployed, or through income redistribution from groups with a low propensity to save to groups with a higher propensity to save as a result of inflation if resources are fully employed.
- The **quantity theory approach**, which emphasizes the role of government monetary expansion in appropriating resources for development through forced saving or the inflation tax. (The approach gets its name from the quantity theory of money, which predicts that increases in the quantity of money will always lead eventually to increases in the price level.)

If developing countries are characterized as fully employed in the Keynesian sense (with no spare capacity in the consumption goods industries), both the Keynesian and the quantity theory approach to the financing of development will involve inflation. Plans to invest in excess of plans to save at full employment will drive up the price level, and so will monetary expansion by government. In this sense, there is an important practical, as well as a theoretical, difference between the prior savings approach and the other two approaches. In the prior savings approach, the resources released for investment come from voluntary and involuntary saving and no inflation is involved. In the Keynesian and quantity theory approaches, the resources are partly released through the process of inflation, by income redistribution from classes with low propensities to save to those with higher propensities to save, and by inflation as a 'tax' on money, which redistributes resources to government.

## The prior savings approach

In classical theory, saving and investment are one and the same thing. All saving finds investment outlets through variations in the rate of interest. Investment and the development process are led by savings. It is this classical view of the development process that underlies such phrases in the development literature as the 'mobilization of savings for development', and also underlies the policy recommendation of high real interest rates to encourage voluntary saving. Lewis's influential classical model of the development process, which was considered in Chapter 5, stresses the importance for development of reinvesting the capitalist surplus.

The level of saving and the ratio of saving to national income in developing countries are likely to be a function of many variables affecting the ability and willingness to save. The main determinants of the **capacity** or **ability to save** are the average level of per capita income, the rate of growth of income, the distribution of income between rich and poor, and the age composition of the population (or dependency ratio). In turn, the **willingness to save** depends mainly on monetary factors, such as the rate of interest, the range and availability of financial institutions and assets (financial deepening), and the rate of inflation. Differences in cultural attitudes towards saving may also be important, but are not easily measured.

### The capacity to save

Income is the major determinant of the capacity or the ability to save. It was Keynes who first introduced into economics the idea of the consumption function (and therefore savings function), making consumption and saving primarily a function of income rather than a function of the rate of interest, as in classical theory. Saving as a function of income is known as the Keynesian **absolute income hypothesis**. We can derive the savings ratio as a function of the level of per capita income (PCY) in the following way. If we write the Keynesian savings function as  $S = -a_0 + b_0(Y)$ , where  $b_0$  is the marginal propensity to save and  $-a_0$  represents dissaving (or positive consumption) when income is zero, and divide by the population level ( $P$ ), we have:

$$S/P = -a_1 + b_1(Y/P) \quad (13.1)$$

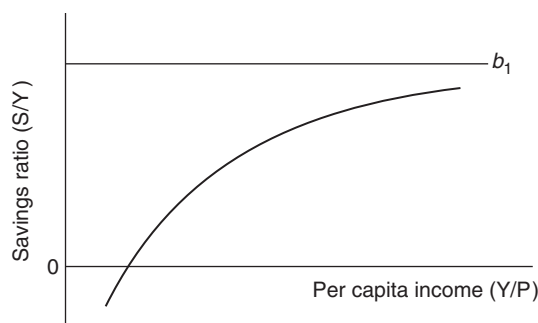
Then, to obtain an expression for the savings ratio, multiply equation (13.1) by  $P$  and divide by  $Y$ :

$$S/Y = b_1 - a_1(Y/P)^{-1} \quad (13.2)$$

The Keynesian absolute income hypothesis therefore predicts that savings per head ( $S/P$ ) is a linear (but non-proportional) function of income per head ( $Y/P$ ), and that the savings ratio ( $S/Y$ ) is a hyperbolic function of the level of income per head; that is, the savings ratio will rise with the level of PCY but at a decreasing rate. As  $Y/P \rightarrow \infty$ ,  $S/Y \rightarrow$  to the asymptote  $b_1$ . This is shown in Figure 13.1.

The data on the savings ratio in Table 13.1 above suggest this type of relation, as already discussed. The savings ratio is lower in poor countries than in richer countries, but the ratio does not continue rising linearly (for ever) as PCY rises. It increases at a diminishing rate and then levels off.

**Figure 13.1** The Keynesian absolute income hypothesis





Indeed, there is even some indication that it starts falling at high levels of income, as we shall see when we come to examine the empirical evidence.

The reason why the savings ratio should rise as PCY increases and then level off is not clear-cut. It is as if saving is a luxury good in the early stages of development but then loses its appeal. Part of the reason may be purely 'statistical', arising from the way saving is normally defined in developing countries as the difference between investment and foreign capital inflows. As investment expenditure becomes more faithfully and accurately recorded as development proceeds (as per capita income rises), the savings ratio is also shown to increase. But there are also a number of economic factors that probably play a contributory role in explaining the relation. One is the growth of the money economy. As money replaces barter for transactions, the public will wish to hold a higher proportion of their income in the form of money, which they can only do by reducing consumption as a proportion of income. This hypothesis is supported by what we know about the income elasticity of demand for money in developing countries, which exceeds unity.

A second possible explanation is that population growth decreases with increases in the level of per capita income, so that population growth absorbs household saving to a lesser and lesser extent. Another plausible hypothesis is that in the early stages of development, the distribution of income, both personal and functional, grows more unequal but at a decreasing rate. If higher income groups have higher propensities to save than lower income groups, and profit earners have a higher propensity to save than wage earners, the savings ratio will be positively related to the degree of inequality in income distribution (personal income distribution) and to the share of profits in total income (functional income distribution). Some evidence of the widening distribution of income in the early stages of development was given in Chapter 3.

A second major determinant of the capacity of a country to save is the growth of income, as suggested by the **life-cycle hypothesis of saving**. The basis of the hypothesis, as originally formulated by Modigliani and Brumberg (1954), is that individuals and households attempt to spread out consumption evenly over their lifetime so that decisions to save are assumed to be a function of total lifetime earnings and the stage reached in the earnings cycle. A typical pattern of behaviour would be dissaving in youth, positive saving in middle age and dissaving in retirement. Consider now the effect of income growth within this framework. If income is rising over time, this means that the life earnings and consumption of each successive age group will be higher than the preceding one. If each successive age group is aiming for a higher level of consumption in retirement, the volume of saving of active households will exceed the dissaving of the currently retired households with a lower level of lifetime consumption. The saving ratio will then tend to rise with the rate of growth of income because the higher the growth rate, the greater the gap between the target future consumption level of the current generation of working households and the dissaving of retired people from a less prosperous generation. Thus, countries with higher growth rates might be expected to have at least higher personal savings ratios than countries with lower growth rates.

But income growth comprises two components: the growth of income per head (PCY) and the growth of population. Income growth due to population growth will affect the savings ratio according to how population growth affects the ratio of active to non-active households. Thus, a third major determinant of the savings ratio is the **dependency ratio**. If population growth rises suddenly, this will lead to a higher ratio of young dependents who consume but do not produce, and this will tend to reduce saving. Equally, however, if population growth slows for a long period, this will lead to a higher ratio of retired people, who also consume but do not produce. Thus, both high and low population growth may be associated with a high dependency ratio and

a low savings ratio. To test the life-cycle hypothesis of saving, it is best to relate the savings ratio to the growth of per capita income and include the age structure of the population, or dependency ratio, as a separate variable (see Hussein and Thirlwall, 1999).

Finally, we have already mentioned the distribution of income as a determinant of the capacity to save. If the propensity to save of the rich is higher than that of the poor, the aggregate savings ratio will be positively related to the degree of inequality in personal income distribution (between individuals) and functional distribution (between wages and profits), on the assumption that the propensity to save out of profits is higher than out of wages. It will be remembered from Chapter 5 that in Lewis's model of development with unlimited supplies of labour, it is not the absolute level of per capita income that is the prime determinant of the savings ratio but the size of the capitalist surplus and the distribution of income between entrepreneurial profits and other income. According to Lewis (1955): 'if we ask why the less developed countries save so little the answer is not because they are so poor but because their capitalist sector is so small'.

### Empirical studies

Let us consider four major studies of the determinants of saving across countries, which include all or some of the variables discussed above, and also other variables measuring the willingness to save that we will discuss below. These are Edwards (1996), Masson et al. (1998), Hussein and Thirlwall (1999) and Loayza et al. (2000). Edwards takes panel data for 36 countries over the period 1970–92, distinguishing between private and government savings. Masson et al. use panel data for 21 developed countries (1971–93) and 40 less developed countries (1982–93) to explain the ratio of private saving to GDP. Hussein and Thirlwall take 62 countries over the period 1967–95, taking the domestic savings ratio as the dependent variable. Finally, Loayza et al. use a dataset of 160 countries from 1964 to 1994, taking four different measures of private saving (all highly correlated). All the studies find the level and growth of per capita income highly significant as determinants of intercountry differences in the savings ratio. Masson et al. (1998) and Hussein and Thirlwall (1999) use a nonlinear specification for the level of PCY, as discussed above, and find it more significant than the linear specification, thus supporting the shape of the curve in Figure 13.1 above. Indeed, in the Masson et al. study, a quadratic term for PCY is used so that the savings ratio is first assumed to rise and then fall. For both developed and developing countries, the quadratic term turns out to be significantly negative, with the savings ratio peaking at 60% of the US level of PCY. The Loayza et al. (2000) study does separate analyses of developing countries and OECD countries and finds the impact of PCY on the savings ratio larger in developing countries than in developed countries, which is also evidence of nonlinearity. For the sample as a whole, Loayza et al. find that a 10% difference in PCY is associated with a 0.47 percentage point difference in the savings ratio. Loayza et al. (2000) conclude that 'policies that spur development are an indirect but most effective way to raise saving' and 'successful growth policies may be able to set in motion a virtuous cycle of saving, capital accumulation and growth'. The question is how to get this cumulative process started of rising income, more saving and faster growth, leading to more saving. Monetary and fiscal policy, and the sophistication of the financial system, are likely to play an important part in this process. This leads us on to the topic of the willingness to save and the role of the financial system in promoting saving and allocating resources in the most efficient manner. All the studies mentioned above include financial variables in their equations.

## The willingness to save

Saving represents an intertemporal choice between consumption today and consumption tomorrow. It might be expected, therefore, that the price of present consumption, namely the real rate of interest, will affect saving positively. The higher the rate of interest, the greater the amount of saving. This assumed positive relation also reflects the classical idea of the rate of interest as the reward for waiting, and lies behind the financial liberalization programmes in developing countries, which seek to raise the real interest rate in order to encourage saving, investment and growth. Since the 1970s, there has been extensive testing of the **financial liberalization hypothesis**, and the role of the **interest rate**, in promoting saving, with mixed and largely inconclusive results. Perhaps this is not surprising since the financial liberalization argument largely refers to *financial* saving, but financial saving is only one component of total saving. If interest rates rise, financial saving may rise but at the expense of other assets, leaving total saving unchanged (see Warman and Thirlwall, 1994). It is also standard theory that any price change has both *income* and *substitution* effects. The substitution effect promotes saving, but the income effect reduces saving (because the same level of income can now be generated by less saving) and the two effects may cancel each other out.

Probably a more important determinant of the willingness to save is the **existence of financial institutions** and the **range and availability of financial assets to suit savers**. There is no *single* measure that can capture those institutional determinants of the willingness to save. The number, proximity and diversity of financial institutions serving the different needs of savers could be important. Equally, the volume and range of financial assets might matter as a measure of financial deepening. Such measures include money and quasi-money as a percentage of GDP, money and quasi-money growth, and quasi-liquid liabilities as a percentage of GDP. Domestic credit provided by the banking system as a percentage of GDP is also a measure of financial deepening, but its effect on saving is ambiguous. On the one hand, if bank credit finances investment and growth, this will have a positive effect on saving. On the other hand, an increase in bank credit will relax a liquidity constraint on consumption, resulting in a decline in saving.

Finally, the rate of inflation can be expected to affect the willingness to save, but the effect is ambiguous. On the one hand, inflation acts as a tax on money balance holdings. If individuals wish to restore the real value of their money balance holdings (the so-called **real balance effect**), saving will rise with the rate of inflation. On the other hand, it is natural to expect individuals to avoid the tax if it becomes burdensome in relation to the convenience of holding money. Even if private saving does increase, however, total saving may not increase if the government fully consumes the proceeds of the inflation tax. Inflation will also redistribute income from wages to profits within the private sector if the wage–price coefficient is less than unity. This will increase saving if the propensity to save out of profits is higher than out of wages (as discussed above), but this process can last only as long as there is money illusion and workers do not bid for wage increases to match price increases. The most likely relation between inflation and the savings ratio is an inverted U-shape (quadratic function) showing saving rising with mild inflation and then falling as inflation becomes excessive. This type of nonlinear relation is also suggested by the evidence available on the relation between inflation and growth (see later).

The evidence from the four studies cited above (and others) is that financial variables matter for the performance of saving, but financial deepening and credit availability are much more significant than interest rates. Edwards (1996) and Masson et al. (1998) find that the level of financial development is an important determinant of private saving. Hussein and Thirlwall (1999) experiment with different measures of financial deepening and find a strong positive relation between the domestic savings ratio of countries and the ratio of quasi-liquid liabilities of the banking

**Table 13.2** Interest sensitivity of saving

Country groupings	Initial real interest rate		
	3%	4%	5%
Low-income			
Average for group	0.312	0.306	0.300
Average for 10 poorest	0.177	0.174	0.171
Lower middle-income	0.532	0.522	0.512
Upper middle-income	0.560	0.549	0.539
High-income	0.584	0.573	0.562

*Note:* The data refer to the change (in percentage points) in the saving rate owing to a 1 percentage point increase in the real interest rate. For example, in high-income countries with a real interest rate of 3%, a 1 percentage point rise in the real interest rate would raise the saving rate by nearly two-thirds of a percentage point (0.584 of a percentage point). At higher baseline levels of the real interest rate, the saving response diminishes slightly.

Source: Ogaki et al., 1996.

system to GDP. Loayza et al. (2000) take the ratio of M2 money to GNP as a measure of financial deepening but find it only weakly significant. More interesting, they find that higher interest rates and larger private domestic credit flows exert a *negative* effect on the private savings ratio. Loayza et al. (2000) conclude that: 'these results provide a bleaker view of the savings effects of financial liberalization than previous studies suggested'. The process and effects of financial liberalization are discussed later in this chapter.

The overall conclusion would be that while financial variables may not be as important as income variables in determining savings behaviour, economic development itself is dependent on the sophistication of the financial system, and there is evidence that saving may be more responsive to interest rates when the level of income rises above subsistence. Research on this topic by Ogaki et al. (1996) is reported in Table 13.2.

It appears that saving is very unresponsive to interest rates in the very poorest low-income countries where there is little margin of income over subsistence needs, but its responsiveness increases as consumption rises above subsistence needs and people can exercise choice about increasing their present or future consumption.

This leads us to the extensive topic of financial systems, financial policy and economic development.

## Financial systems and economic development

One of the characteristic features of developing countries is that quite large sections of the economy are either non-monetized or transactions take place outside the formal financial sector. In other words, the economies of developing countries have a large sector where money is not used as the primary means of exchange, as well as having a large **informal financial sector** or **unorganized money market**. This has a number of consequences that are not conducive to development:

- If transactions take the form of barter, this is costly in time and wasteful of resources. Sellers must spend time and effort finding buyers who have things they want. Money as a means of exchange avoids the problem of the double coincidence of wants. In this sense, money is a resource and its introduction and use in an economy can be highly productive.

- Without a convenient and acceptable means of payment, the division of labour or specialization is impeded, which hinders the process of capital accumulation and reduces productivity. Remember that, for Adam Smith (see Chapter 4), it is the division of labour that is the source of increasing returns by allowing complex processes to be broken up into simpler operations that permit the use of machinery and mass production. Specialization is not worthwhile if the market is limited by the difficulty of exchanging goods.
- Saving takes the form of the acquisition of real assets as opposed to monetary assets, for example land, cattle, gold, jewellery and so on, which absorb resources and may not be used productively.
- Without the existence of financial institutions issuing monetary assets, investment will tend to take place in the sector in which the saving takes place, and this may not be the most productive sector.
- Much of the lending in the informal sector is for consumption purposes and interest rates are very high, both of which can adversely affect total investment. The informal financial sector has an important role to play in the development process, but its integration with the formal financial sector is desirable for a number of reasons.

## The informal financial sector

The **informal financial sector** refers to all institutions and transactions that take place outside a country's authorized banking system. The sector plays a significant role in the financing of economic development, although exactly how significant no one really knows. Within the informal sector, there are a wide variety of institutions and multifarious arrangements between depositors, lenders and borrowers, some dating back for centuries, rooted in custom and tradition. Others are evolving constantly in response to changing economic and social conditions. The sector is characterized by a high degree of spontaneity and flexibility, with demand creating its own supply. The major participants are moneylenders, merchants, loan brokers, savings groups, and friends and relatives.

**Moneylenders** have a long tradition in the rural areas of developing countries. They may be landlords, merchants, shopkeepers and pawnbrokers. Loans are typically for short periods at high rates of interest, reflecting the scarcity of funds and the high demand for short-term loans to finance consumption and investment, for example the holding of stocks (inventories). Merchants often provide loans to clients based on the future sale or purchase of commodities (see Appendix to Chapter 5). Loan brokers act as intermediaries between agents who have surplus funds and those who require credit. The loans tend to be larger and the duration longer than for other sectors in the informal market.

**Savings groups** take different forms and have different names in various countries, and are also important sources of finance and credit in rural areas. In some cases, the savings group consists of individuals who deposit money on a regular basis with a group leader or treasurer, sometimes for special purposes such as tax payments, investment or paying for festivities. If the savings are invested, the returns may be shared by the members. Rules and regulations are shaped by local conditions and traditions. In other cases, members of the savings group take turns to borrow the collected sums of money. One particular type of savings group with a long history in Africa is the 'rotating savings and credit association', which operates like a miniature credit union based on the 'mutuality' principle, whereby members of the association make a fixed contribution to the savings fund on a periodic basis and are entitled to withdraw money on a rotational basis. Individuals can decide on the cycle of payments and withdrawals that suit their needs. The advantage is that

large expenditures can be undertaken by members sooner than if they had to rely on their own personal savings.

**Rural financial intermediaries (RFIs)**, including **microcredit institutions**, have grown in importance in recent years, operating mainly in the rural sector to provide small, unsecured, short-term loans to individuals (mainly women), households and small entrepreneurs. These intermediaries are discussed in greater detail below.

Finally, **friends and relatives** are major providers of credit. The credit is flexible and interest-free, and repayment is open-ended.

Despite the growth of the formal financial sector in the majority of developing countries, the informal financial sector continues to flourish because it fulfils needs that are not met elsewhere:

1. Many rural areas have no ready access to financial institutions, either because they are non-existent or because they are not in the immediate vicinity. The formal financial sector is predominantly urban based.
2. Where banks do exist, there are a number of institutional barriers to their use, in the form of rules of procedure for obtaining financial assistance. The conditions for obtaining loans can be stringent and hard to satisfy for a number of people. It is difficult, for instance, for the poor and illiterate to provide collateral for loans, which is usually required by the formal sector. In practice, the formal financial sector tends to be out of reach of peasant farmers, small-scale entrepreneurs and ordinary households, so the informal financial sector fills the gap in the market.
3. The informal sector sometimes acts as a complement to the formal sector. Individuals may borrow from the formal sector but find such credits inadequate and therefore resort to the informal sector to augment their borrowing. In recent years, the World Bank's structural adjustment programmes, implemented in several countries, have reduced the flow of credit from the formal sector and demand has switched to the informal sector.

A well-developed financial system serving the whole community has five main requisites, each of which can contribute to the process of **financial deepening**, as well as raising the level of saving and investment, the productivity of capital and the growth of output:

- Full monetization of the economy and the replacement of barter as a means of exchange.
- Integration of the informal and formal money markets.
- Development of a commercial banking system with central bank supervision.
- The creation of development banks and microcredit facilities for small-scale borrowing.
- Development of financial markets and financial intermediaries, issuing and dealing in financial assets.

## Monetization and money market integration

Monetization of an economy provides the potential to generate a real investible surplus in several ways. As fiat (paper) money replaces barter in transactions, the demand for money relative to income rises, which releases real resources of equivalent value. The increase in real saving is equal to the increase in the real stock of money held. The issuer of money can appropriate the released resources and increase the level of investment accordingly. In a growing economy, monetary expansion is also required to allow an increased volume of transactions to take place. Monetary expansion for this purpose can also be appropriated by governments for development purposes.

The increased use of money not only releases resources, but it also saves and generates resources. It saves resources by replacing barter objects, or commodity money, which may be



costly to produce, with money that is virtually costless to produce. It also saves time – which is a resource if the marginal product of labour time is positive – by avoiding the double coincidence of wants necessitated by barter. Money generates resources by facilitating exchange and thereby permitting the greater division of labour (and specialization).

Historically, the growth of the money economy has also been a powerful stimulus to the development of banking and credit mechanisms, which can themselves act as a stimulus to saving and investment. When the range of financial assets is narrow, saving tends to take the form of the acquisition of physical assets. While, in principle, this need not mean that the level of saving is reduced, in practice, it depends on how sellers of physical assets dispose of the sale proceeds. If a portion of the proceeds is consumed, the saving of one person is offset by the dissaving of another, and less resources are released for investment than if financial assets had been acquired, issued by financial institutions with an investment function.

For a number of reasons, there is also the need to promote links between the informal and formal financial sectors. The high interest rates charged in the informal sector add to costs and add to household debt, and these could be reduced if the informal sector was exposed to greater competition from the formal sector. This could be done by transforming informal institutions into more formal ones, or using the informal sector as a conduit for formal funds, taking advantage of the low transaction costs, local knowledge and greater flexibility in the informal sector. There could also be support mechanisms to guarantee loans from the informal sector.

It is also important that the capital market should be integrated, in the sense that the interest rate structure is unified. The consequence of a fragmented capital market, in which interest rates vary from one sector to another because of a lack of information and factor immobility, is that some sectors of the economy may be able to borrow funds far below the rate of interest prevailing in other sectors where the productivity of capital is higher. The allocation of capital is distorted and inefficient and the capital–output ratio is higher than it would otherwise be: the solution is to encourage funds into the organized money market, and extend the provision of financial institutions into sectors of the economy that lack them.

Paradoxically (on a classical view of the world), development of the organized money market can *lower* average interest rates in the economy at large and *raise* the level of saving because the unorganized money market tends to charge higher interest rates and lends mainly for consumption purposes, whereas in the organized money market, interest rates are lower and lending is more for investment purposes.

## Developing a banking system

Developing a national banking system, comprising a central bank, a commercial banking system and special development banks, is one of the first priorities of development strategy. The functions of a **central bank** include the following:

- Issuing currency and lending to government, whereby real resources are transferred to the government in the manner described earlier (with a strong central bank, it is much easier to give priority to government and public sector needs).
- Developing a fractional reserve banking system through which it can provide liquidity and control credit (a central bank can require member banks to hold reserves in government bonds, and the growth of the bond market itself can aid development without excessive monetary expansion).
- Developing other financial institutions, especially institutions that provide long-term loan finance for development, and a market for government securities.

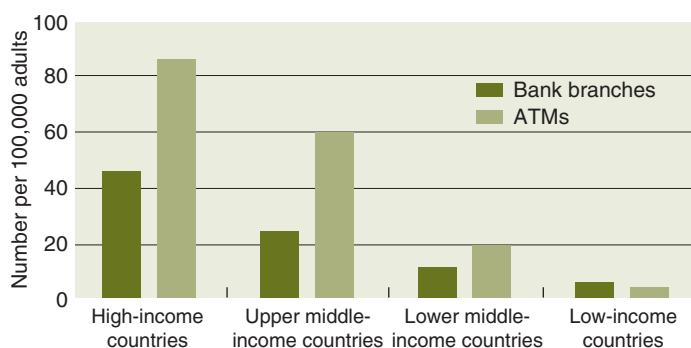
- Maintaining a high level of demand, through the appropriate use of monetary policy, to achieve capacity growth.
- Applying selective credit controls when necessary, in the interests of developing particular sectors of the economy.

The **commercial banking system** has two important functions: to create credit, and to encourage thrift and allocate saving in the most socially productive manner. The ability of an economic system to create credit is important for two main reasons. First, it can compensate for the failure of the economic system to generate enough investment to match planned saving. Second, it provides the means by which growth is financed. This is the real significance of the invention of paper money and credit – permitting the economic system to expand in response to the continual opportunities for growth provided by technical progress, which a barter system or a purely metallic currency do not allow.

Banks can encourage thrift and allocate savings more productively than would otherwise be the case, by offering a return on savings and enabling savings to be used outside the sector in which they originate. Banks can help to break down sectoral bottlenecks and unify interest rates. But commercial banking is still rudimentary in many developing economies. The challenge for developing countries is to promote **financial inclusion**. Approximately 2 billion people in the world lack access to bank facilities, including 500 million in Asia. The ratio of bank deposits to national income averages approximately 30% and the proportion of demand deposits to the total money supply averages 40–50%. In developed countries, in contrast, the ratio of bank deposits to national income usually exceeds 50% and the money supply consists largely of the deposits of commercial banks. The number of banks relative to population size is also small. In developing countries as a whole, the average number of banks per million of the population is about 20 compared with 200 in developed countries. Banks need to be numerous and dispersed if they are to act as catalysts for small savings. Figure 13.2 shows the financial access gap between high-income and low-income countries.

While high-income countries have 85 ATM machines per 100,000 adults and 45 branch banks, low-income countries have only 3 ATM machines and 6 branch banks. The case for **branch banking** is that it can tap small savings. If savings institutions are near at hand, people will save more than if the nearest savings institution is some distance away. Case example 13.1 describes mobile banking in Vietnam, which is an example of microcredit, discussed in the next section.

**Figure 13.2** Financial access gap between high- and low-income countries, 2009





## Case example 13.1

## Vietnam's bank on wheels

Ma Seo Sang, a Hmong widow living on less than 25 cents a day in the mountainous region of Vietnam, needed help. She had sold a pig to pay for her husband's funeral, paid a fine incurred by her son by selling one of her buffalo, and redeemed a debt with the other. She had borrowed all she could from relatives. Moneylenders, if they would even lend to her, would charge exorbitant interest (up to 10% per month). She needed money to survive.

Sang's plight raises many issues related to extreme poverty, of which lack of access to credit is one. Part of the solution is microfinance – the provision of basic financial services to the poor. Microfinance can offer a path out of poverty. But how long is the path, and can it be shortened? Vietnam's experiment with the mobile banking programme under the World Bank's Rural Finance Project provides a partial answer to those questions. It suggests that creative ways can be found not only for lenders to reach out to the poor but also for the poor to 'reach in' to lenders.

In 1998 the Vietnam Bank for Agriculture and Rural Development (Agribank) initiated a mobile banking programme modelled after similar programmes in Bangladesh and Malaysia. It procured 159 vehicles equipped to travel on dirt roads and hilly pathways, enabling loan officers to reach remote areas to process loan applications, disburse money, collect payments, and mobilize savings deposits. The visits followed a fixed calendar and were announced in advance.

Once the programme was launched, it became clear that more than just difficult access prevented the poorest from taking advantage of its services. Their isolation caused them to have feelings of helplessness and fear. In the upland ethnic group, the higher up a mountain people lived and the longer their isolation, the more they seemed to believe that they could not get credit. Suspicion was another issue. What if the lender offered a loan and then, if a payment were late, took a farmer's buffalo, as had happened to Sang?

Above all, the poorest people lacked confidence and self-esteem. For example, the illiterate poor would wonder how they could fill in applications and receipts. Others felt they could do nothing to earn extra income to repay a loan. Many were afraid to venture into activities other than cultivation and animal husbandry, even though opportunities existed.

For mobile banking to work for borrowers, the following services had to be made available: offering appropriate loan products, linking lending and saving, and combining credit and human asset building.

For lenders, it was necessary that the mobile banking experiment be financially self-sustaining. It thus required the following ingredients: group-based lending, linking formal and informal credit, and reasonable interest rates.

Barely five years in operation, the mobile banking programme has proved to be relatively cost-effective, providing financial services to 315,000 poor households. Preliminary data show that, on average, each mobile bank disbursed 1,921 loans, collected 1,387 payments, and transported cash on 75 occasions to 16 local points monthly. The excellent repayment rate suggests that the poor are good credit risks. The programme also mobilized 1,983 small savings accounts every month, showing that the poor can be good savers.

As for Ma Seo Sang, she received a loan of about \$300 and used the money to buy some chickens and pigs to raise. The income she made from selling her animals helped her earn a living.

Source: Hung, 2004.

In India, 65% of Indians do not have access to financial services, only 13% have debit cards, and only 5% of Indian villages have branch banking. There is only one branch bank for every 160,000 people. Thus, India has launched a financial inclusion programme, where forty billion rupees is to be spent on the attempt to increase financial inclusion, initially focusing on villages with more than 2,000 people.

### Rural financial intermediaries and microcredit<sup>1</sup>

Rural financial intermediaries (RFIs) and microcredit institutions play a crucial role in helping the poor and fostering the growth of small business where potential entrepreneurs are precluded from borrowing from the banking system because they are too poor and lack collateral. Within the structure of RFIs, there is a diversity of organizations and financial services. In the rural sector where most RFIs operate, and where most lending takes place, there are different niches and markets to be served. There are several case studies of successful RFIs. One such study is for Indonesia (Chaves and Gonzalez-Vega, 1996). In the 1980s and 1990s, the Indonesian government established a network of semi-independent, locally operated RFIs that have been highly successful, largely through the recruitment of local agents to gather information on borrowers, monitor their actions and enforce loan contracts. This has kept down loan defaults to less than 2% of lending. In the early 1990s, there were 13,000 such intermediaries reaching out to over 4 million people, dispensing loans of between \$50 and \$600. Most of the RFIs made accounting profits because fixed costs are kept low, and the effective interest rate is high, ranging from 30% to 84% per annum. Interestingly, the loans are not group-based; they are to individuals, and the pressure to repay comes from the local agents who are given appropriate incentives not to shirk, collude with the borrower, or be bribed.

This contrasts with the microcredit movement where most lending is through **joint liability lending**, which makes all members of the group jointly liable for any loan given to its members. If the group does not repay, there is no further access to loans. Thus, joint liability group lending stimulates screening, monitoring and enforcement of contracts among borrowers, reducing costs to the lenders. Because of the close proximity of borrowers within a group, information asymmetries between lenders and borrowers are reduced. Evidence shows (see Hermes and Lensik, 2007) that groups with stronger group ties have better repayment records, as do groups with written rules and a strong group leader, and which are more open geographically with no other access to credit.

There are now over 3,000 microfinance institutions across the world (some now also in developed countries), and it is estimated that at least 100 million poor people have benefited. The lobby group **Microcredit Summit Campaign** wants to see a vast expansion of such institutions, particularly to achieve the 2030 Sustainable Development Goals.

It was **Grameen** (meaning village) **Bank** in Bangladesh that pioneered the concept of microcredit in developing countries. It was formally established in 1983 (seven years after the initial idea) by Muhammad Yunus, economics professor at Chittagong University in Bangladesh, who instead of teaching the economics of poverty from an ivory tower decided to do something practical about it, based on the philosophy that everyone has the right to credit, but the poor are excluded from the conventional banking system. But the best way for people to help themselves out of poverty is to be able to borrow to set up small businesses. Thus, Grameen Bank was founded as a microcredit organization to lend sums as little as \$10 to the rural poor, especially women, without collateral. A poor woman may obtain a microloan to buy an oven in order to sell hot food.

She repays the loan with interest, others can borrow, she can borrow more to buy another oven and ultimately become a prosperous trader. Another poor woman uses her microloan to buy chickens, starts selling eggs, repays the loan, borrows more and becomes a chicken farmer. These are simple, real-life stories of what is possible.

Lending and repayment take place within a group context (usually five people) where members of the group agree to monitor one another, so that there is peer pressure to use loans wisely and to repay. Each member of the group normally comes from the same village and members have a similar economic and social background. Loans are first given to two members of the group, who are closely observed for two months and must repay the loan in weekly instalments. If the repayments are made, then two others can borrow. Loan use is monitored by the staff of Grameen Bank and groups meet collectively to discuss the choice of new projects. All credit transactions are discussed openly, so there is complete transparency concerning what is going on. There can be no 'cover ups' and no corruption. The record of repayment to Grameen Bank is close to 98% of loans; far better than the record of repayment to the commercial banking system where bad debts are rife.

### Muhammad Yunus



Born 1940, Chittagong, Bangladesh. Professor of Economics at Chittagong University; founder of Grameen Bank in 1983 lending small sums mainly to groups of poor women, with the philosophy that everyone has the right to credit, not just the rich with collateral. The microcredit movement has now spread throughout the developing world and lifted millions of families out of poverty. Yunus and Grameen Bank were awarded the Nobel Peace Prize in 2006.

The conventional explanation for the low default rate at Grameen Bank is the peer pressure from the group, but research shows (Pankaj, 1996) that the explanation is much deeper than this; it lies within the culture and ethos that the bank has developed among its employees, and the relationship between the bank's employees and the client borrowers. Pankaj could find no evidence of members of a group not being able to borrow if one member defaulted. The main explanation for the very high repayment rate seems to be that the bank is tightly structured, with checks on clients and borrowings at every stage. Each borrowing group has five members, and six groups make a centre, which meets weekly at a fixed time. Each centre is supervised by an employee from a Grameen branch bank who may look after 10–15 centres. Each branch bank is answerable to an area manager. The line of command is clear and there is supervision at every stage. It is this organizational structure of the bank that lies at the heart of its success. Other banks serving the poor in rural communities could learn lessons from the Grameen structure.

Grameen Bank also involves itself in social development programmes in the villages to improve the quality of life, such as encouraging members to build houses and sanitation facilities, planting trees and kitchen gardens. There is also a comprehensive training programme in maternal health, nutrition and childcare. In Bangladesh alone, there are over 1,000 branches of the bank serving 36,000 villages, which have lent more than \$6 billion to 8 million people. In 2006, Muhammad Yunus and Grameen Bank were awarded the Nobel Peace Prize.

The Grameen idea has now spread to over 100 countries. Not all microcredit banks operate in the same way, but all are designed to lend to poor people denied access to credit from the commercial banking system because they have no collateral. Other well-known microcredit institutions across the world are BancoSol in Bolivia (the first microcredit bank to be set up in Latin America in 1992), Banco Compartamos in Mexico (lending mainly to women), Accion Internacional, based in the USA with affiliates in 13 Latin American countries (including Mibanco in Peru), Kenya's Rural Enterprise Programme and Bank Rakyat in Indonesia.

At the beginning of the microcredit movement, almost all the banks relied on public subsidies to operate because of the high overhead costs of administering very small loans, despite high interest rates on loans of 20–30%. In the past ten years alone, microcredit institutions (many run by NGOs) have received public subsidies of \$10 billion.

The challenge for the future is to see whether microfinance can be extended more on a commercial basis without long-term subsidies, but without compromising the basic purpose of microcredit, which is to lend to the very poorest who are cut off from the normal banking system. Many profit-making microfinance institutions have sprung up in recent years, but have been criticized for high interest rates and exploitation of poor people. In Andhra Pradesh (India), more than fifty people, mainly women, committed suicide in 2010, leading state officials to intervene in the activities of commercial microlenders. Morocco, Bosnia, Nicaragua and Pakistan have all been hit by microloan payment crises in recent years.

At present, the evidence is that there seems to be a trade-off between the commercialization of microfinance and reaching out to the poor. Cull et al. (2007) attempt to examine this issue rigorously by taking a sample of 124 microcredit institutions in 49 countries to see whether there is any significant relation between the profitability of banks and their outreach to the poor. Three types of bank are distinguished: those that lend to groups (48), those that lend to individuals (56), and village lenders (20). What the evidence shows is that individual-based lenders seem to have higher profitability than group-based institutions, but the fraction of poor (and female) borrowers in the loan portfolio is lower in the latter case. Cull et al. (2007) conclude:

we find examples of institutions that have managed to achieve profitability together with notable outreach to the poor – achieving the ultimate promise of micro-finance. *But they are so far the exceptions.* (emphasis added)

Cull et al. (2009) have also used data from the Microfinance Information Exchange covering 364 institutions with £25 billion of assets and 10 million borrowers in the period 2002–04, distinguishing between the activities of commercial microbanks and NGOs. They find that:

- Commercial microbanks account for more assets, but NGOs reach out to more people.
- More microbanks are profitable (73%) than NGOs (54%).
- Most microbanks lend to individuals, while most NGOs lend to groups.
- NGOs give much smaller loans than microbanks.
- NGOs charge higher interest rates (25% a year for the median bank) than microbanks (13%) because operating costs are higher (26 cents per \$ lent for NGOs compared with 12 cents per \$ for microbanks).
- Default rates don't differ between the two types of microcredit institution.

Cull et al. (2009) remark, however, that evidence on the social returns to microlending, and by how much people have been lifted out of poverty, is scant. This is the research challenge for the future. Case example 13.2 highlights a case study of a randomized control trial on the impact of microfinance in India.

**Case example 13.2****A randomized control trial of microfinance in Hyderabad, India**

In 2005, half of 104 slums in Hyderabad, India were randomly selected for the opening of a branch of Spandana, a microfinance institution, while the remainder were not, although other microfinance institutions were free to enter those slums. Fifteen to eighteen months after Spandana began lending to treated areas, households were 8.8 percentage points more likely to have a microcredit loan. They were no more likely to start any new business, although they were more likely to start several at once, and they invested more in their existing businesses. There was no effect on average monthly expenditure per capita. Expenditure on durable goods increased in treated areas, while expenditure on 'temptation goods' declined. Three to four years after the initial expansion, the probability of borrowing from a microfinance institution in treatment and comparison slums was the same, but, on average, households in treatment slums had been borrowing for longer and in larger amounts. There was no change in any of the development outcomes that are often believed to be affected by microfinance including health, education and women's empowerment. The results of this study are largely consistent with those of other evaluations of similar programmes in different contexts.

Source: Banerjee et al., 2013.

Another major international development organization that lends to the ultra-poor is BRAC (see Case example 13.3), which tries to tackle poverty from the bottom up in a way advocated by the World Bank (2001) in *World Development Report 2000/2001: Attacking Poverty*.

**Case example 13.3****BRAC**

BRAC was established in Bangladesh by Fazle Hasan Abed (now Sir) in 1972 designed to help the 'ultra-poor' (mainly women) who could not qualify even for microloans. The philosophy of the organization is to provide people with an asset base, such as a cow, goat or a few chickens, which they are taught to manage themselves. While doing so, they are given a small stipend for food. The programme is quite costly (at least \$1,000 per household), but randomized control trials show that it works, and women do not fall back into poverty when the help terminates. It is estimated that the rate of return to women after going through the graduation programme is between 16 and 25%.

BRAC is the largest nongovernmental development organization in the world, now operating in eleven other countries outside Bangladesh. It employs over 100,000 people, it is 70–80% self-funded, and has helped more than 126 million ultra-poor people. In the early years, BRAC concentrated on community development through village development programmes including agriculture, fisheries, cooperatives, rural crafts, literacy, health and family planning. Since then, it has branched out into other fields including, in 1986, its rural development programme that incorporates institution building, including functional education and training, credit provision, and income and employment generation. Over the past 30 years, BRAC has given \$1.5 billion in microloans – more even than Grameen Bank. BRAC also focuses on the problem of youth unemployment. To help fund its development programmes, BRAC has a number of commercial enterprises, including a retail handicraft chain called Aarong, a dairy and food project, and BRAC Salt.

Source: <http://brac.net>.

## Development banks

**Development banks** play a particularly important role in the development process because it is not the explicit function of the private commercial banking system to have development priorities in mind when making loans, unless directed by the government. The function of commercial banks is to make a profit for their shareholders. This means that commercial banks are generally risk-averse and have short time horizons. It also means that they are only interested in their own cash flows and have no particular interest in the *social* profitability of the projects they lend for, or in lending to poor people. Development banks can afford to have longer time horizons, take more risks, pursue development objectives, and focus on the social profitability of lending, as well as encouraging saving.

The activities of Tonga Development Bank (where one of the authors was a consultant in 1995) provide an interesting case study. The bank was established in 1977 'to promote the expansion of Tonga for the economic advancement of the people of Tonga'. Its lending policy gives priority to projects that have the potential to increase exports or reduce imports, involve local entrepreneurship, use local inputs, contribute to increased employment opportunities, particularly for women, and increase income for the poorer sections of the community in rural areas and the outer islands. Regarding exports, if economic growth is constrained by a shortage of foreign exchange, any project financed by the bank that earns net foreign exchange will give a higher social return than private return because the growth of output will be higher than would otherwise have been the case. In Tonga, the commercial banking system would not lend to producers wishing to grow the vegetable squash, because the venture was regarded as too risky. However, Tonga Development Bank lent nearly \$10 million to squash producers, and squash now accounts for 80% of the country's export earnings. The bank reaches out to nearly 50% of households in Tonga, and it funds 70% of all loans to the private sector. It fills an important gap in the market for small loans because commercial banks will not lend for projects of less than \$5,000. There can be little doubt that Tonga Development Bank plays a pivotal role in the development of the economy of Tonga and is able to do things that the private sector would not contemplate. The positive externalities conferred fully justify interest rate subsidies.

All development banks have a role to play in stimulating the capital market. They can do this by selling their own stocks and bonds to raise finance, by helping enterprises to float or place their own securities, and by selling from their own portfolio of investments.

## Financial intermediaries

The importance of having a wide variety of financial intermediaries is that they can offer a diversity of financial assets with different yields, maturities and divisibilities to suit savers and investors with different requirements and different time horizons. This can increase the level of saving and investment, and also improve the efficiency of resource allocation.

As far as the level of saving and investment is concerned, financial intermediaries offer four major advantages:

1. In general, savers wish to lend for only a short period of time (to remain liquid), while investors wish to borrow for a longer period of time. Direct lending from savers to investors, without financial intermediation, would involve savers committing themselves for longer periods than they would really like because investment does not generally generate returns immediately. Financial intermediaries, however, are able to pool risks and can borrow short and lend long, thus suiting both savers and investors.



2. The use of financial intermediaries reduces transaction costs. Direct lending, whereby savers have to find suitable borrowers or investors have to find suitable lenders, is time-consuming and costly. Reduced transaction costs encourage saving and investment.
3. Financial intermediaries can specialize in particular areas of business, which reduces information costs by accumulating knowledge of various markets. This lessens the credit risks associated with lending, and also encourages greater saving and investment.
4. Investment projects are invariably larger than the savings of any one individual or group of individuals. The existence of financial intermediaries overcomes the problem of indivisibilities.

As far as the *efficiency* of resource allocation is concerned, the great advantage of financial intermediaries is that the creation of financial assets and liabilities allows savers to hold part of their wealth in financial form. This means that investment is no longer confined to the sector where the saving takes place, thereby facilitating the allocation of resources to the most productive sectors of the economy.

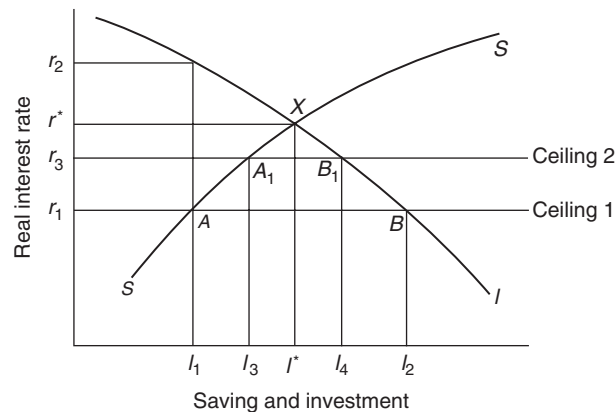
## Financial liberalization

The formal financial sector, consisting of a central bank, a commercial banking system and various other financial intermediaries, typically suffers from various forms of **financial repression**, which may thwart the development process. For example, the government may have a near-monopoly of the banking system and restrict the growth of financial institutions. Private sector banks may have to keep high reserve requirements and lend compulsorily to the government to finance its deficits. The central bank may impose credit rationing on the commercial banks, or insist that the banks lend to certain priority sectors. Nominal interest rates may be kept artificially low, so that with inflation the *real* rate of interest is negative, discouraging the acquisition of interest-bearing financial assets. These are all examples of financial repression.

The argument for financial liberalization is that the various forms of financial repression impede the development of financial markets. The consequences, it is argued, are a reduction of the flow of funds to the formal financial sector and distortion of the allocation of resources, leading to lower levels of saving, investment and output growth than would otherwise be the case.

The importance of the growth of the money economy and financial deepening for economic development along the lines indicated above has been stressed in the development literature for a long time (see, for example, Schumpeter, 1911, Gurley and Shaw, 1960 and Tun Wai, 1972), but it was McKinnon (1973) and Shaw (1973) who independently in 1973 first highlighted the dangers of financial repression in a rigorous way, and argued the case for maximum financial liberalization. Their views became highly influential in the thinking of the IMF and the World Bank in the design of programmes for the financial restructuring of countries as part of structural adjustment programmes. Their arguments, however, emphasize different points:

- **McKinnon's argument** is that money holdings and capital accumulation are complementary in the development process. Because of the lumpiness of investment expenditure and the reliance on self-financing, agents need to accumulate money balances before investment takes place. Positive (and high) real interest rates are necessary to encourage agents to accumulate money balances, and investment will take place as long as the real rate of return on investment exceeds the real rate of interest.
- **Shaw's argument**, on the other hand, stresses the importance of financial liberalization for financial deepening, and the beneficial effect of high interest rates on encouragement to save

**Figure 13.3** The McKinnon–Shaw argument

and discouragement to invest in low-yielding projects. The increased liabilities of the banking system, resulting from higher real interest rates, enable the banking system to lend more resources for productive investment in a more efficient way. Figure 13.3 can illustrate the McKinnon–Shaw argument.

Figure 13.3 is a standard classical savings and investment diagram showing saving as a positive function of the real interest rate (reflecting the idea of time preference and the interest rate as the reward for abstaining from present consumption), and investment as a negative function of the real interest rate (reflecting the diminishing marginal efficiency of investment). With no interest rate controls, the equilibrium rate of interest would be  $r^*$  and the level of saving and investment would be  $l^*$ .

Now suppose that the government imposes a ceiling on the *nominal deposit rate* for savers, giving a *real* rate of interest of  $r_1$ . This would mean that saving is  $l_1$ , and on classical assumptions that prior saving is necessary for investment, this also constrains investment to  $l_1$ . If there was no ceiling on the *loan* rate of interest, the banks could charge interest rate  $r_2$  to investors and the gap between  $r_1$  and  $r_2$  would give substantial profits to banks, which they could use for various forms of non-price competition. At  $r_2$  there is no unsatisfied demand for investment funds.

Suppose, however, that the interest rate ceiling applies to loans as well as deposits. This means that saving is still  $l_1$ , but investment demand is now  $l_2$  and there is an excess demand for investment funds equal to AB. Credit will have to be rationed. There will be a tendency for banks to favour less risky projects with lower rates of return. This will lower the overall productivity of investment.

If the interest rate ceiling is raised so that real interest rates rise to  $r_3$ , this encourages saving from  $l_1$  to  $l_3$ . This leads to more investment, credit rationing is reduced and the productivity of investment rises. From this argument, it would seem to follow that saving and investment will be optimal and credit rationing will disappear when the market is fully liberalized and the real rate of interest is left to find its market clearing level at  $r^*$ .

### Critics of financial liberalization and empirical evidence

Many of the arguments for financial liberalization sound convincing on the surface, but a number of qualifications need to be made. The experience of financial liberalization across the globe has been very mixed, and we shall consider some of the empirical evidence relating to the effect



of liberalization on saving, investment and growth, as we examine some of the major criticisms of the financial liberalization argument (see Gibson and Tsakolotos (1994) for a comprehensive survey of the issues involved).

First, the argument refers to *financial* saving, but financial saving is only one type of saving. Financial saving may increase as interest rates are liberalized, but there may simply be a substitution between financial assets and other assets, leaving total saving unchanged. It is also well known that any price change (in this case, the interest rate) has income as well as substitution effects. The substitution effect promotes saving by making current consumption more 'expensive', but the income effect deters saving because at higher interest rates the same income can be obtained with less saving, and the two effects may cancel each other out. This being so, it is perhaps surprising, as Dornbusch and Reynoso (1989) once remarked: 'to find so strong a belief in the ability of higher interest rates to mobilise saving'.

In fact, many of the empirical studies and surveys of the results of financial liberalization in various countries are extremely cautious in their conclusions. Research by Gupta (1987) on 22 Asian and Latin American countries over the period 1967–76 suggests that there is little support for the 'repressionist' hypothesis that the positive substitution effect of real interest rates on savings dominates the negative income effect. The most important determinant of saving is real income. Giovannini (1983) concludes from his research on eight Asian countries that his results 'cast serious doubts on the view that the interest elasticity of savings is significantly positive and easy to detect in developing countries'. Similarly, a study by Cho and Khatkhate (1990), two World Bank economists, of the financial liberalization experience of five Asian countries concluded that:

financial reform, whether comprehensive and sweeping or measured and gradual, does not seem to have made any significant difference to the saving and investment activities in the liberalised countries. It was believed until recently that removal of the repressive policies would boost saving. The survey in this paper of the consequences of reform does not reveal any systematic trend or pattern in regard to saving ... it lends support to the conclusion that decisions to save are determined by several factors and the relationship between saving and real interest rates is at best ambiguous.

Bandiera et al. (2000) examined the liberalization experience of eight countries (Chile, Ghana, Indonesia, South Korea, Malaysia, Mexico, Turkey and Zimbabwe) over 25 years and concluded:

our results cannot offer support for the hypothesis that financial liberalization will increase saving. On the contrary, the indications are that liberalization overall – and in particular those elements that relax liquidity constraints – may be associated with a fall in saving.

Maxwell Fry (1995), a leading authority on finance and development and an ardent advocate of financial liberalization, has conceded that:

what is agreed ... is that if an effect [on saving] exists at all, it is relatively small [and that] positive interest effects are easier to find in Asia than in other parts of the world, but even in Asia the effects appear to have diminished over the past two decades.

If financial liberalization does not increase aggregate saving, its positive impact on development must come through a more efficient allocation of resources, which raises the productivity of investment. In other words, as stressed by Shaw (1973), financial liberalization should concentrate

on the quality of investment rather than the quantity. There is not much evidence on this point, but the World Bank (1989) claimed, in its *World Development Report 1989: Financial Systems and Development*, that in countries with positive real interest rates, the average productivity of investment (as measured by the incremental output–capital ratio) is four times higher than in countries with strongly negative real interest rates. Bandiera et al. (2000) also conclude their study by saying that even if financial liberalization does not increase private saving, it does not follow that the process contracts the volume of funds applied to productive investment. For one thing, financial liberalization can increase the flow of capital from abroad, and, second, the reform process can have the effect of eliminating less productive uses of loanable funds. This is an area where more research needs to be done.

A second major criticism of the financial liberalization argument is that the model seems to treat banks simply as savings depositories, with the presumption that the supply of loans from the banking system depends on deposits held by the banks, and if deposits increase, loans will automatically increase. In short, the supply of credit is treated as exogenously determined. However, if banks have the power to create credit (which they do), backed by a central bank acting as lender of last resort, the supply of loans will depend on the demand for loans, not on the supply of deposits. The supply of loans becomes endogenous. Within this framework, what is important is not so much incentives for saving, but incentives for investment, which may require lower interest rates. This is part of the **Keynesian** and **post-Keynesian** critique of the financial liberalization school. The work of Paul Davidson (1986), the foremost post-Keynesian, is representative of this line of argument. Davidson argues that all that is needed to initiate additional real investment is finance provided by an increase in total bank loans and there is no need for prior savings, ‘as long as the banks can create new finance via acceptable bank accounting practices’.

How the supply of credit responds to the interest rate, and how investment is affected by the supply of credit and the rate of interest, becomes very much an empirical matter that can only be settled by an appeal to the facts. Warman and Thirlwall (1994) found that for Mexico, over the period 1960–90, financial saving responded positively to the rate of interest, and this led to an increase in the supply of credit from the banking system to the private sector. However, while the increased supply of credit affects investment positively, there is a strong negative effect of interest rates on the level of investment, holding the supply of credit constant, and the *net* effect of higher real interest rates on investment is adverse. This is also the central conclusion of Demetriades and Devereux (1992) from research on 63 developing countries over the period 1961–90. They find that the negative effect of a high cost of capital on investment outweighs the effect of a greater supply of investible funds. Greene and Villanueva (1991), in a sample of 23 developing countries over the period 1975–87, likewise show a negative effect of real interest rates on investment.

This leads to a third worry about the financial liberalization model, which is that it ignores the adverse effect that high real interest rates can have on costs and the level of demand in an economy, which may lead to stagflation (a combination of cost inflation and rising unemployment). This is another aspect of the post-Keynesian critique of the financial liberalization model (see Dutt, 1990–91). High interest rates not only discourage investment, but may also lead to currency overvaluation by attracting capital from overseas, which leads to a fall in exports, and also increases the cost of servicing government debt, which leads to cuts in government expenditure. This has occurred in Africa (see African Development Bank, 1994). Currency overvaluation and cuts in government expenditure are both deflationary. In Latin America in the 1970s, financial liberalization went wrong because there was an explosion of government debt, economic instability and excessively high real interest rates, which led to bankruptcies, bank failures and prolonged

recession. In the immortal words of Diaz-Alejandro (1985): 'Goodbye financial repression, hello financial crash.' Financial liberalization programmes were abandoned (temporarily).

A fourth critique of the financial liberalization school concerns the relationship between the formal and the informal financial sectors. Higher real interest rates are likely to attract funds away from the informal money market, or **curb market**, where there is no regulation over the use of funds. If banks are subject to reserve requirements and are forced to lend compulsorily to governments, the diversion of funds away from the informal sector may lead to the total supply of loans to the private sector being reduced. This is part of the argument of the **nestructuralist school** (see Buffie, 1984). The hypothesis is difficult to test directly without information on the supply and composition of credit from the curb market. To the extent that curb loans are mainly for consumption purposes and the government uses the reserve requirements of the banks for productive investment, the problem may not be serious. If, however, the curb loans are for investment and the government uses the banks to finance current account budget deficits, the reallocation of funds between the sectors will adversely affect the total level of saving and investment.

A final point to make is that it does not follow that credit rationing will necessarily be eliminated and resources allocated more 'efficiently' if interest rates are not controlled and are allowed to reach their market clearing level. As Stiglitz and Weiss (1981) showed in a classic paper, banks suffer from the problem of **adverse selection** because of **asymmetric information** on the part of borrowers and lenders. Borrowers know more than lenders about the risks involved in a loan transaction. A rational profit-maximizing bank may therefore be expected to practise credit rationing to reduce risk, and not simply lend to those projects that seem to offer the highest return but with more risk attached.

Where do these various criticisms leave the financial liberalization argument? Clearly, the existence of financial repression has to be taken seriously, but it does not follow that the more liberalization there is the better, when we know that financial markets have many imperfections, and that competition between banks and other financial institutions can lead to **financial distress** if there are not institutional structures in place with adequate standards of accounting and auditing to prevent bad loans. Governments will always need to intervene for prudential reasons, and also for strategic reasons either as a major borrower or to direct credit. Particular care needs to be exercised in the liberalization of interest rates because of their impact on costs, investment demand, the exchange rate and the cost of financing government deficits. This raises the intriguing question: What is the 'optimum' real rate of interest for a country? This is virtually impossible to answer (see Clarke, 1996), but even in classical terms, it is not clear that the optimum real interest rate ( $r^*$  in Figure 13.3 above) is necessarily positive. The savings and investment curves could cut below the horizontal axis if liquidity preference is very high and investment demand is very weak.

Ultimately, financial liberalization has to be judged by its impact on economic growth and development, and here the evidence is very mixed. In a major cross-section study of 80 countries over the period 1960–89, King and Levine (1993) conclude that: 'higher levels of financial development are significantly and robustly correlated with faster current and future rates of economic growth, physical capital accumulation and economic efficiency improvements'. Using cross-section analysis, however, it is difficult to test for causality. It could be that financial development is itself the product of growth and economic development. In fact, Demetriades and Hussein (1996), taking time-series data for 16 countries, find considerable evidence of bidirectional causality between levels of financial deepening and economic development, and conclude that different countries exhibit different causality patterns, reflecting differences in financial sector policies and institutional structures. Barajas et al. (2011) analyse the relationship between financial deepening, measured by private sector credit as a percentage of GDP, across over 140 developed and

developing countries over the period 1975–2005 and find that the relation differs across regions depending on the concentration of bank loans, the degree of competition in the banking system, and the level of state involvement. In North Africa and in oil-producing countries, the link between financial depth and growth is weak. Arestis and Demetriades (1997) find that, in South Korea, the real interest rate and growth performance have been negatively related, and despite financial liberalization, South Korea has deliberately pursued a policy of keeping real interest rates low in order to encourage investment. This is also the message from the World Bank's (1993) report *The East Asian Miracle: Economic Growth and Public Policies*: 'a policy of moderate financial repression at positive real interest rates may have boosted aggregate investment and growth in the HPAEs [high-performing Asian economies] by transferring income from depositors, primarily households, to borrowers, primarily firms'.

De Gregorio and Guidotti (1995) suggest that the relationship between real interest rates and growth is likely to be an inverted U-shape because negative real interest rates are not conducive to financial development and growth, and very high real interest rates are also likely to reduce growth by adversely affecting investment and leading to a concentration on risky projects. Somewhere in between, growth is likely to be maximized. Fry (1997) tests this hypothesis across 85 countries for the period 1971–95 and finds broad support for the idea, with the growth rate maximized with the real interest rate at zero.

What is clear from all the evidence across countries and continents is that if financial reforms are to succeed, they must be implemented in an appropriate macroeconomic, financial and institutional framework, with proper sequencing between internal and external liberalization. Sequencing is important because if countries liberalize their external sector before or at the same time as internal liberalization, it could have severe repercussions for the exchange rate. If there is no confidence in the country, the relaxation of capital controls could lead to capital flight and downward pressure on the exchange rate. On the other hand, higher real interest rates could attract massive capital inflows, leading to excessive currency appreciation. Either way, exchange rate instability is not conducive to macroeconomic stability.

Liberalization has been more successful in Asia than in Latin America and Africa because it has taken place in an environment of greater macroeconomic stability, with a sounder institutional framework of regulation and supervision of the banking system. Macroeconomic stability means manageable fiscal and balance of payments deficits and low inflation to encourage the holding of financial assets and to allow funds to be devoted to the private sector. Confidence in the banking system is also important and requires the restructuring of bank balance sheets, the removal of bad debts, and a strengthening of the management and risk evaluation capabilities of bank managers in order to avoid bankruptcies. Governments need to strengthen banking regulation and supervision at the same time that liberalization takes place. For successful liberalization, Fry (1997) outlines the following five prerequisites:

1. Adequate prudential regulation and supervision of commercial banks, implying some minimal levels of accounting and legal infrastructure.
2. A reasonable degree of price stability.
3. Fiscal discipline.
4. Profit-maximizing, competitive behaviour by the commercial banks.
5. A tax system that does not impose discriminatory explicit or implicit taxes on financial intermediation.

The results of a meta-analysis of financial liberalization and growth are given in Case example 13.4.

**Case example 13.4****A meta-analysis of financial liberalization and economic growth**

Since the early 1970s, the relationship between financial liberalization and economic growth has been hotly debated, in policy and academic circles. On the one hand, this is because, during the past two decades, many countries have liberalized their domestic financial markets. On the other hand, views with respect to the impact of these liberalization policies differ. Whereas some have claimed that liberalization of financial markets contributes to the efficiency with which these markets can transform saving into investment, which ultimately fosters economic growth, others have pointed out that these liberalizations have contributed to various financial and economic crises in the past. Several papers have investigated the nature of the relationship between financial liberalization and economic growth. The evidence from these studies remains inconclusive.

This study aimed to provide a systematic analysis of the empirical literature by conducting a meta-analysis of the relationship between financial liberalization and economic growth based on 60 empirical studies. Two main conclusions emerge. First, the statistical results indicate that although, on average, there is a positive effect of financial liberalization on growth, the significance of this is only weak. Second, for most of the variables that may help explain the heterogeneity of results about the relationship between financial liberalization and economic growth, significant results were not found, except:

1. Data from the 1970s generate more negative coefficients, which suggests that financial liberalization policies carried out during the 1970s seem to have a stronger negative effect on growth.
2. Studies that take into account a measure of the level of development of the financial system show a weaker relationship between financial liberalization and economic growth.

Notwithstanding these qualifying remarks, the meta-analysis is highly valuable, as it provides the most comprehensive overview of the literature on the relationship between financial liberalization and economic growth available to date. Moreover, it is the first systematic analysis of this literature. The future challenge will be to improve on the meta-analytical techniques to extend the analysis of the financial liberalization growth nexus.

Source: Bumann et al., 2012.

## Fiscal policy and taxation<sup>2</sup>

There is another arm of the prior savings approach to the financing of development from domestic resources that needs to be considered, and that is the use of fiscal policy and taxation. Fiscal policy has two major roles in the financing of development. The first is to maintain the economy at full employment so that the savings capacity of the economy is not impaired. The second is to design a tax policy to raise the marginal propensity to save of the economy as far above the average as possible without discouraging work effort and consistent with an equitable distribution of the tax burden.

Using fiscal policy to maintain full employment will involve deficit finance if unemployed or underused real resources exist in the Keynesian sense due to a deficiency of aggregate demand. While deficit finance may be inflationary in the short run until supply has had time to adjust, there is an important analytical distinction between the means by which resources are made available for investment through deficit finance at less than full employment and the means by which savings are generated by inflation. In the former case, savings are generated by an increase in real output; in the latter case, by a reduction in real consumption through a combination of factors, including a 'real balance effect on outside money' (this refers to the attempt by holders of money assets to restore the real value of their money balances, eroded by inflation, by reducing their consumption. For a fuller discussion, see below); income redistribution from low to high savers, and money illusion.

Fiscal policy to raise the marginal propensity to save above the average is concerned with the implementation of taxes to reduce consumption in the private sector. Saving brought about by taxation is **involuntary saving**. How much taxation a country raises as a proportion of national income depends on two major factors: the **taxable capacity** of the country, and the **tax effort** made by the country in relation to its taxable capacity. The taxable capacity of a country depends on factors such as the overall level of per capita income of the country, the distribution of income, the level of literacy and urbanization, the size of the industrial sector, the importance of trade, whether the country has mineral resources, and the amount of foreign investment. In turn, the tax effort depends on the extent to which a country exploits these various tax bases and on the rates of tax applied to the bases.

The overall **buoyancy** of a tax system is measured by the proportional change in total tax revenue ( $\Delta T/T$ ) with respect to the proportional change in national income ( $\Delta Y/Y$ ), and is composed of two parts: the elasticity of tax revenue ( $\Delta T/T$ ) with respect to the tax base ( $\Delta B/B$ ), and the elasticity of the base ( $\Delta B/B$ ) with respect to income ( $\Delta Y/Y$ ), that is:

$$(\Delta T/T)/(\Delta Y/Y) = (\Delta T/T)/(\Delta B/B) \times (\Delta B/B)/(\Delta Y/Y) \quad (13.3)$$

If the tax system is progressive (with higher tax rates applied to higher levels of income or expenditure), then the elasticity of tax revenue with respect to the base will be greater than unity, and buoyancy will be greater than unity, provided the elasticity of the base with respect to income is at least unity. If buoyancy is greater than unity, then tax revenue as a proportion of national income will rise as national income rises. The buoyancy of the tax system can be increased by increasing the rates of tax or extending the base.

Any measured change in tax revenue with respect to income is likely to consist of an automatic increase in tax revenue as income increases if the rate structure is progressive, and the effect of discretionary changes in tax rates and extension of the tax base. The **elasticity** of a tax system is measured as buoyancy minus the effect of discretionary tax changes. There are techniques for estimating the elasticity of the tax system but we will not describe them here – suffice it to say that the greater the elasticity, the more that tax revenue and saving can increase without the need for discretionary changes. This is a desirable feature of tax systems in circumstances where it may be difficult to implement discretionary changes.

**Tax effort** depends on the elasticity of the system and overall buoyancy, and needs to be measured in relation to capacity. One way of doing this, pioneered by the IMF (see Tait et al., 1979), is to take a cross-section of countries and relate their ratios of tax revenue to national income to the various measures of tax capacity mentioned earlier, namely per capita income,



the importance of trade and industry and so on. Estimating such an international tax function gives an equation of the form:

$$T/GDP = a + b_1(PCY) + b_2(X/GDP) + b_3(I/GDP) + \text{other variables} \quad (13.4)$$

where  $T/GDP$  is a country's ratio of tax revenue to national income,  $PCY$  is per capita income,  $X/GDP$  is the ratio of trade to GDP,  $I/GDP$  is the ratio of industrial output to GDP, and the coefficients  $b_1$ ,  $b_2$ ,  $b_3$  and so on measure the *average* effect of each of the variables on the tax ratio across countries. For example, if  $b_2$  was estimated as 0.5, this would mean that a country with a trade ratio that is 1% above the average for all countries will have a tax ratio that is 0.5 percentage points above the average for all countries, other things remaining the same.

By this method, a country's tax effort can be measured by substituting its values for  $PCY$ ,  $X/GDP$ ,  $I/GDP$  and so on in equation (13.4), predicting what the tax ratio *should be* and then comparing the predicted value with the actual value of the tax ratio. If the actual value is greater than predicted, the country can be said to be making a good effort; if it is less, then the tax effort can be regarded as weak. A study of this nature has been made by Piancastelli (2001) for 75 developed and developing countries over the period 1985–95, and the results are shown in Table 13.3. Any country with a tax effort index greater than 1 has a tax ratio greater than predicted. It can be seen from Table 13.3 that there are several developing countries making a good tax effort, including some of the largest and poorest such as India, Pakistan and Ghana. Equally, however, there are other developing countries making a very poor effort, including many countries in Latin America, notably Mexico, Argentina, Venezuela, Colombia, Bolivia and Peru.

The facts on tax revenue in developing countries are that tax revenue as a percentage of national income is typically low, averaging less than 20% compared with nearly 30% in high-income countries, and taxes on income are a minor source of tax revenue compared with indirect taxes. The proportion of the population that pays income tax in developing countries is correspondingly low, averaging about 20%, compared with the vast majority of the working population in developed countries, who constitute over 40% of the total population.

On the surface, there would appear to be a great deal of scope for using tax policy to raise the level of community saving relative to income. Two important points must be borne in mind, however. The first is that the rudimentary nature of the tax system in developing countries is partly a reflection of the stage of development itself. Thus, the scope for increasing tax revenue as a proportion of income may, in practice, be severely circumscribed. There are the difficulties of defining and measuring the tax base and of assessing and collecting taxes in circumstances where the population is dispersed and primarily engaged in producing for subsistence, and where illiteracy is also rife. There is also the fact that, as far as income tax is concerned, the income of the majority of the population is so low anyway that it falls outside the scope of the tax system. Whereas 70% of national income is subject to income tax in developed countries, only about 30% is subject to income tax in developing countries.

Even if there is scope for raising considerably more revenue by means of taxation, whether the *total* level of saving will rise depends on how tax payments are financed – whether out of consumption or saving – and how income (output) is affected. It is often the case that taxes that make tax revenue highly elastic with respect to income are taxes that are met mainly out of saving or have the most discouraging effect on incentives. For example, very progressive income tax will discourage work effort if the substitution effect of the tax outweighs the income effect; and to the extent that high marginal rates of tax fall primarily on the upper income groups with a low propensity to consume, saving may fall by nearly as much as tax revenue rises.

**Table 13.3** Tax effort indices estimated over 1985–95

Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))	Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))	Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))
Fiji	20.595	9.023	2.283	Botswana	26.766	22.224	1.204	Peru	10.728	12.223	0.878
Kenya	19.991	10.497	1.908	PN Guinea	18.825	15.774	1.193	Jordan	17.733	20.938	0.847
Belgium	42.357	23.774	1.782	UK	32.752	27.542	1.189	Panama	17.881	22.197	0.806
South Africa	25.182	15.297	1.646	Luxembourg	39.923	33.653	1.186	Philippines	13.696	17.218	0.795
Netherlands	44.273	27.228	1.626	Portugal	28.667	24.307	1.179	Madagascar	9.174	11.641	0.788
Ethiopia	11.665	7.502	1.555	Sweden	34.721	29.484	1.178	Japan	15.856	20.236	0.784
Ghana	11.76	7.776	1.512	Costa Rica	20.903	17.913	1.167	Dominican Rep.	12.677	16.432	0.772
France	37.808	25.785	1.466	Cameroon	12.784	11.011	1.161	Colombia	11.895	15.431	0.771
India	10.645	7.279	1.462	Spain	28.326	24.437	1.159	El Salvador	12.265	15.979	0.768
Lesotho	23.37	16.058	1.455	Belize	21.649	18.685	1.159	Mexico	13.752	18.431	0.746
Italy	37.482	26.176	1.432	Finland	28.219	24.777	1.139	USA	18.02	24.251	0.743
Zimbabwe	21.449	15.062	1.424	Austria	32.21	28.559	1.128	Turkey	12.452	16.899	0.737



**Table 13.3** Tax effort indices estimated over 1985–95 – *continued*

Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))	Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))	Countries	Actual tax ratio (a)	Predicted tax ratio (b)	Tax effort index ((c)=(a)/(b))
Uruguay	25.515	18.089	1.411	Syria	16.334	14.576	1.121	Congo (Dem. Rep.)	6.885	9.379	0.734
Morocco	22.534	16.027	1.406	Iceland	24.347	22.018	1.106	Switzerland	19.878	28.015	0.71
Namibia	27.595	19.957	1.383	Indonesia	15.737	14.533	1.083	Nepal	7.16	10.387	0.689
Egypt	20.704	15.121	1.369	Greece	23.093	21.862	1.056	Venezuela	16.119	23.675	0.681
Romania	21.053	15.797	1.333	Brazil	17.103	16.273	1.051	Argentina	11.401	17.434	0.654
Tunisia	24.165	18.171	1.33	Malaysia	20.016	20.417	0.98	Canada	18.008	27.743	0.649
New Zealand	32.996	24.815	1.33	Chile	18.801	19.451	0.967	Bolivia	9.451	14.62	0.646
Ireland	34.487	26.496	1.302	Thailand	15.62	16.45	0.95	Sierra Leone	6.789	10.772	0.63
Norway	32.86	25.263	1.301	Mauritius	19.667	20.72	0.949	South Korea	15.619	25.678	0.608
Pakistan	12.999	10.058	1.292	Malta	25.688	27.647	0.929	Paraguay	9.139	15.754	0.58
Denmark	33.84	26.369	1.283	Germany	23.485	26.413	0.889	Guatemala	8.024	14.269	0.562
Sri Lanka	17.886	14.422	1.24	Australia	22.017	24.904	0.884	Iran	7.423	13.702	0.542
Zambia	18.286	15.133	1.208	Ecuador	14.836	16.819	0.882	Singapore	15.672	38.905	0.403

Source: Piancastelli, 2001.

To avoid such large reductions in private saving, an **expenditure tax** on upper income groups, which exempts saving from taxation, is an alternative to a progressive income tax, but the disincentive effect on work effort is not necessarily avoided. This is so because if the expenditure tax encourages saving, the tax rate must be higher to yield the same revenue as the income tax. If people work to consume and the price of consumption is raised, work effort will be curtailed if the substitution effect of the change outweighs the income effect. The more successful the expenditure tax is in stimulating saving out of a given income, the higher must be the rate of tax to keep the yields from the two taxes equal, and the greater the disincentive to work is likely to be. If the expenditure tax is in addition to the income tax, however, there is no reason to expect any substitution effect in favour of private saving, so that whether aggregate community saving increases depends on how much work effort is discouraged and the relative propensities to consume and save of those who pay the tax compared with those of the government. In general, the most effective tax policy to raise the level of saving relative to income is to impose taxes on those with a high marginal propensity to consume, namely the poor, but there are obvious considerations of equity to bear in mind in pursuing such a policy, as well as the practical consideration of political feasibility.

The prominence of agriculture in developing countries makes agricultural taxation a potentially significant source of tax revenue and a means of transferring resources into investment. There are a great variety of tax instruments for taxing agriculture, including taxes on land area, land value, net income, marketing taxes, export taxes, land transfer taxes and so on. If revenue is the aim, then marketing and export taxes are probably the most efficient and the easiest to collect. As far as exports are concerned, two main systems may be adopted; the state-controlled marketing board may pay the producer a price that is lower than the international price received, or the government may require that all foreign exchange receipts be surrendered, with compensation given in local currency at an exchange rate that overvalues the local currency.

Export taxes may, however, have disincentive effects. The substitution effect of export taxes will be to discourage production, or to switch production to the home market if the home market is not saturated. Either way, the yield from tax will fall if the tax base (the level of exports) falls more than in proportion to the rise in the export tax. Trade taxes have also been shown to be very unstable because of the volatility of primary product exports (and imports), which can lead to severe budgetary problems for countries that rely on them (see Bleaney et al., 1995).

In theory, land taxes are probably the most desirable way to transfer resources from agriculture, but, in practice, land taxes are not important as a source of tax revenue. It is also worth mentioning that no developing country has yet successfully applied a conventional income tax to agricultural income. The nearest that countries have come to this is to tax the value of land, the imputed income from land or the potential physical yield from land.

The balance between direct taxes on income and indirect taxation on expenditures and trade in the economy at large is heavily weighted in the direction of the latter, particularly in the form of import duties and sales taxes. The emphasis on indirect taxes reflects the difficulties already mentioned of levying direct taxes, and the disincentive effects that direct taxes can have. This is not to say that indirect taxes are totally devoid of disincentive effects, but they are probably less, especially if taxes such as sales taxes and import duties can be levied on necessities without too much social hardship. Indirect taxes on luxuries will raise revenue, the more so the more price inelastic the demand, but the taxes may largely be paid out of saving, to the extent that luxuries are consumed by upper income groups with a low propensity to consume. The equity grounds for such taxation, however, are still strong.

Taxes on business are relatively easy to collect and administer, but again business taxation may merely replace one form of saving with another. The marginal propensity to save out of profits is

typically high. The main justification for company taxation must be to retain control of resources that might otherwise leave the country if the business is foreign-owned, or to substitute public for private investment on the grounds that public investment is more socially productive than its private counterpart.

### Tax reform in developing countries<sup>3</sup>

Efficient utilization of the tax potential of developing countries raises problems that vary with the circumstances of each country, but there are certain fundamental changes in most of these countries that, if adopted, would make it possible to increase public revenue and reduce some of the inequities that now exist. In particular, if a tax system is to be accepted by a poor community, it must be seen to be administered honestly and efficiently, which means that every attempt must be made to minimize the scope for avoidance (legal) and evasion (illegal).

According to the classical canons of taxation, a tax system is to be judged by the standards of equity, efficiency and administrative convenience. In most developing countries, the tax system is neither equitable nor efficient and is administratively cumbersome. Avoidance and evasion are rife.

Equity requires a comprehensive definition of income and non-discrimination between income sources. A major deficiency of tax systems all over the world, and particularly in developing countries, is that there is no single comprehensive tax on all income. Typically, there is a 'cedular' system, with separate taxes on different sources of income. Wage and salary earners ('earned' incomes) tend to be discriminated against vis-à-vis the owners of property and capital and the self-employed (professional people and small traders). An equitable system should also be such that it discourages luxury consumption and makes it difficult to avoid and evade taxation.

Taxable capacity is not measured by income alone, but also by wealth. Equity therefore also requires the taxation of wealth. The ownership of wealth endows the owner with an inherent taxable capacity, irrespective of the money income the asset yields. Consider the case of a beggar with nothing and a rich man who holds all his wealth in the form of jewellery and gold, which yields no money income. Judged by income, their taxable capacity is the same: nil. No one could claim, however, that their ability to pay was the same, and that, for tax purposes, they should be treated equally.

Income tax is not only inequitable between those with property and those without, but also *between* property holders. For example, two property holders may derive the same income from property but the value of their property may differ greatly. One has a greater taxable capacity than the other. Only a combination of income and property taxes can achieve equity according to ability to pay. This is the case for a **wealth tax**.

Equity also requires that gifts between individuals be taxed, on death and *inter vivos*.

Efficiency requires that the entire tax system be self-reinforcing and self-checking so that the attempt to escape one tax increases the liability to other taxes. The system should also be based, as far as possible, on a comprehensive annual tax return.

The above considerations suggest at least four major reforms of the tax system in developing countries, which would also release resources for investment and act as an incentive to effort:

1. All income (including capital gains) be aggregated and taxed in the same way, at a progressive rate but not exceeding a maximum marginal rate of, say, 50%. Marginal rates above this level may not only discourage incentive but may also be counterproductive by encouraging evasion and avoidance.

2. The institution of a progressive personal expenditure tax levied on rich individuals who reach the maximum marginal rate of income tax.
3. The institution of a wealth tax.
4. The institution of a gifts tax.

## Inflation, saving and growth

If voluntary and involuntary saving are inadequate, inflationary policies that 'force' saving by 'taxing' money and redistributing income between classes within the private sector are an alternative possibility. The price of financial conservatism may well be economic stagnation. The potential benefits of inflationary finance, which embrace both the Keynesian and the quantity theory approach to development finance, have been discussed by economists (including Malthus, Bentham, Thornton, Robertson and, more recently, Kaldor) at least since David Hume in the eighteenth century; and several economic historians (including Keynes) claim to have discerned a relationship in history between periods of inflation and rapid economic development. Hamilton (1952) claims that inflation was a powerful stimulant to growth in a wide number of historical contexts through the favourable effect of excess demand on profits, saving and investment, for example in England and France in the sixteenth and seventeenth centuries and in England in the latter half of the eighteenth century. Rostow (1960) also claims that inflation was important for several industrial take-offs.

Keynes, in his *Treatise on Money* (1930), similarly remarked on the apparent extraordinary correspondence in history between periods of inflation and deflation and national rise and decline, respectively. Keynes was certainly more predisposed to inflation than deflation. He described inflation as unjust and deflation as inexpedient, but of the two, inflation is to be preferred because 'it is worse in an impoverished world to provoke unemployment than to disappoint the rentier' (Keynes, 1931). While recognizing that inflation to increase capital accumulation may have regressive distributional consequences, Keynes (1930) further argued that the long-run gains to wage earners can outweigh the short-term losses:

the working class may benefit far more in the long run from the forced abstinence which a profit inflation imposes on them than they lose in the first instance in the shape of diminished consumption so long as wealth and its fruits are not consumed by the nominal owner but are accumulated.

## The Keynesian approach to the financing of development

The Keynesian approach to the financing of development by inflationary means stresses, first, that investment can generate its own saving by raising the level of income when the economy is operating below capacity, and by redistributing income from wage earners with a low propensity to save to profit earners with a higher propensity to save when the economy is working at full capacity. Second, inflation itself can encourage investment by raising the nominal rate of return on investment and reducing the real rate of interest. Only the first of these two aspects of the Keynesian approach will be considered here.

Unemployed resources provide the classic argument for Keynesian policies of inflationary finance. If resources are unemployed or underused, real output and real savings can be increased by governments running budget deficits financed either by printing money or by issuing government bonds to the banking system and the public.

In a situation of genuine 'Keynesian' unemployment, any tendency towards inflation, whatever method of deficit finance is used, should burn itself out as the supply of goods rises to meet the additional purchasing power created. Some economists have questioned, however, whether the observed unemployment of labour in developing countries is strictly of the Keynesian variety, and whether the supply of output would respond very much to increased demand. It is probably true that most unemployment in developing countries results not from a shortage of demand, but from a lack of cooperating factors of production for labour to work with (mainly capital); and the direct multiplier effects of government expenditure may be low, but some deficit-financed projects (e.g. infrastructure projects) may have considerable secondary repercussions on output if they eliminate production and marketing bottlenecks at the same time.

In the agricultural sector of developing countries, and in the production of consumer goods in the industrial sector, there are many opportunities for investment that can yield outputs several times more than the money value of capital invested in a very short space of time. In agriculture, the use of fertilizers and the provision of transport facilities are good examples. Credit expansion for these activities can soon generate sufficient output to absorb the demand-creating effects of the new money in circulation.

Thus, while it may be true that much of the unemployment in developing countries is not of the Keynesian variety, it does not follow that monetary expansion cannot generate secondary employment and output effects. The capacity-generating effects need to be considered in conjunction with the emphasis on demand in Keynesian static multiplier theory.

Let us now turn to the Keynesian full employment case. At full employment, inflation is the inevitable result of the Keynesian approach to development. In contrast to classical and neoclassical theory, Keynesian theory specifies independent saving and investment functions and allows price changes in response to excess demand in the goods market to raise saving by redistributing income. Inflation is the means by which resources are redistributed between consumption and investment. In Keynesian models, investment is not constrained by saving, but by the inflation rate willing to be tolerated by wage earners who have had their real wages cut.

If plans to invest exceed plans to save, it is reasonable to suppose that investors and consumers will both have their plans thwarted. Investment is less than firms desire, but greater than consumers plan to save. Let us assume, therefore, that the actual growth of capital is a linear combination of planned saving and planned investment:

$$\frac{dK}{K} = \alpha \frac{I}{K} + (1 - \alpha) \frac{S}{K}, \quad \alpha < 1 \quad (13.5)$$

where  $K$  is the quantity of capital,  $I$  is planned investment and  $S$  is planned saving. Now assume that the rate of inflation is proportional to the degree of excess demand, as measured by the difference between plans to invest and save:

$$\frac{dP}{P} = \lambda \left( \frac{I}{K} - \frac{S}{K} \right), \quad \lambda > 0 \quad (13.6)$$

where  $P$  is the price level. Substituting the expression for  $I/K$  into equation (13.5) gives:

$$\frac{dK}{K} = \frac{\alpha(dP/P)}{\lambda} + \frac{S}{K} \quad (13.7)$$

$S/K$  is planned saving, and  $\alpha(dP/P)/\lambda$  is forced saving, per unit of capital. Forced saving results from the inability of consumers to fulfil their planned consumption in conditions of excess demand. The underlying mechanism that thwarts the plans of consumers is inflation, which redistributes income from wage earners to profits. Other things remaining the same, if prices rise faster than wages, real consumption will fall and real saving increase as long as the propensity to save out of profits is higher than the propensity to save out of wages.

In Keynesian models, therefore, the effect of inflation on saving depends on two factors: the extent to which income is redistributed between wages and profits, and the extent of the difference in the propensity to save out of wages and profits. The relation between wages, prices and profits, and the consequent effect of income redistribution on saving, is best illustrated using simple algebra. Let  $Z$  be labour's share of national income so that:

$$Z = \frac{W}{PY} = \frac{wL}{PY} = \frac{w}{Pr} \quad (13.8)$$

where  $W$  is the wage bill,  $w$  is the wage rate,  $P$  is price per unit of output,  $Y$  is income and  $r = Y/L$  is the productivity of labour. Hence, the rate of change of labour's share may be written as:

$$\frac{dZ}{Z} = \left( \frac{dw}{w} - \frac{dP}{P} \right) - \frac{dr}{r} \quad (13.9)$$

From this equation, it can be seen that given a positive rate of growth of productivity, a sufficient condition for a redistribution of income from wages to profits is that prices rise faster than wages. Note, however, that in a growing economy (with positive productivity growth), it is not a *necessary* condition. Labour's share will fall and the share of profits rise as long as  $(dw/w - dP/P) \leq dr/r$ ; that is, as long as the real wage rises less than the growth of labour productivity. In a growing economy, therefore, there is no necessary clash between the real wage and profits. The real wage can rise and the share of profits in income can also rise as long as some of the gains in labour productivity are appropriated by the capitalists.

It is also obvious that on the classical savings assumption that all wages are consumed and all profits are saved, the savings ratio will rise by exactly the same amount as the wage share falls.

The basic Keynesian notion that investment determines saving forms the backbone of **neo-Keynesian growth theory**, as originally expounded by Robinson (1962) and Kaldor (1955–56). Variations in the savings ratio resulting from inflation and income redistribution are one of the many possible adjustment mechanisms for raising the warranted growth rate towards the natural rate (see Chapter 4). As Robinson (1962) used to argue, in response to the neoclassical adjustment mechanisms of variations in interest rates and the capital–output ratio, there is nothing in the laws of nature to guarantee growth at the natural rate, but if entrepreneurs wish to invest sufficient to grow at the natural rate, then saving will adapt, subject to an **inflation barrier**. (In a static economy, the 'inflation barrier' means a real wage so low that wage earners react to price increases to prevent the real wage from falling further. In a growing economy, it is the point at which labour resists any further reduction in its share of national income; that is, where labour appropriates all increases in labour productivity itself in the form of increased real wages.) When there is a steady rate of growth, the share of savings adapts to it. In effect, the actual growth rate pulls up the warranted growth rate by forcing saving. Saving adapts to investment through the dependence of saving on the share of profits in income, which rises with the level of investment relative to income in the way that has been described. Profits depend, in turn, on what happens

to real wages when the system is out of equilibrium. The basic equation of Robinson's model is the distribution equation:

$$PY = wL + \pi PK \quad (13.10)$$

where  $\pi$  is the gross profit rate  $R/K$ , and  $P$ ,  $Y$ ,  $w$ ,  $L$  and  $K$  are as before. Dividing by  $P$  and rearranging to obtain an expression for the profit rate, gives:

$$\pi = \frac{(Y/L) - (w/P)}{(K/L)} = \frac{R/L}{K/L} = \frac{R}{K} \quad (13.11)$$

Given the capital-labour ratio ( $K/L$ ), the rate of profit depends on the relationship between output per head and the real wage. If all wages are consumed and all profits are saved, the rate of profit gives the rate of capital accumulation and the rate of growth. This follows since  $S = I = \pi K$ , and  $\Delta K = \pi K$ ; therefore  $\Delta K/K = \pi$ . And if the capital-output ratio is fixed,  $\Delta K/K = \Delta Y/Y$ ; hence  $\pi = \Delta K/K = \Delta Y/Y$ .

Variations in the rate of profit and corresponding variations in the real wage provide the mechanism that equilibrates plans to save and invest and the actual and warranted growth rates. If the actual growth rate equals the natural rate, the warranted and natural growth rates will also be equalized. If the real wage remains unchanged as investment takes place, however, saving cannot adapt and a greater volume of real investment cannot be funded. This is the inflation barrier in a static model. It appears, in fact, that in a static context, the growth rate can only be raised at the expense of the real wage, which comes close to the pessimistic development theories of Ricardo and Marx, as discussed in Chapter 4. In a growing economy, however, such pessimism would be unfounded because it can be seen from equation (13.11) that the rate of profit and capital accumulation can rise even if the real wage is rising, as long as the growth in labour productivity exceeds the increase in the real wage.

Kaldor's model also makes saving adjust to the desired level of investment through a rise in the share of profits in national income. The model consists of three basic equations:

$$Y = W + R \quad (13.12)$$

$$I = S \quad (13.13)$$

$$S = s_w W + s_r R \quad (13.14)$$

where  $R$  is profits,  $W$  is wages,  $s_w$  is the propensity to save out of wages and  $s_r$  is the propensity to save out of profits. Using the three equations we can write:

$$\begin{aligned} I &= s_w(Y - R) + s_r R \\ &= (s_r - s_w)R + s_w Y \end{aligned} \quad (13.15)$$

Making investment the independent variable in the system, and dividing by  $Y$  gives:

$$\frac{R}{Y} = \left( \frac{1}{s_r - s_w} \right) \frac{I}{Y} - \frac{s_w}{(s_r - s_w)} \quad (13.16)$$

The ratio of profits to income and the investment ratio are positively related as long as the propensity to save out of profits exceeds the propensity to save out of wages. The investment



ratio must clearly be the independent variable in the system. Capitalists can decide how much they are going to consume and invest but they cannot decide how much profit they are going to make. If  $s_r = 1$  and  $s_w = 0$ , then  $I/Y = R/Y$ , and, multiplying both sides of equation (13.16) by  $Y/K$ , we have Robinson's result that the rate of profit, the rate of capital accumulation and the rate of growth are all equal. A higher level of investment can raise the rate of capital accumulation by raising the profit rate and the share of saving in total income, subject, of course, to the inflation barrier. The mechanism that gives this result is rising prices relative to wages.

The Kaldor model can be used for estimating how much inflation is necessary to raise the savings ratio by a given amount (see Thirlwall, 1974 for the model). The inflation rate required depends on three main factors:

1. Labour's initial share of national income.
2. The difference in the propensity to save out of wages ( $s_w$ ) and profits ( $s_r$ ).
3. How fast wages chase prices (the wage-price coefficient).

If wages chase prices equiproportionately, and there is no difference in the propensity to save out of wages and profits, there can be no redistribution effects on saving by generating inflation. If there is a big difference in the savings propensities, and the wage-price coefficient is quite low, mild inflation of approximately 3% can increase the savings ratio by one percentage point. If there is only a small difference in the savings propensities, and the wage-price coefficient is very high (close to unity), over 100% inflation would be required to raise the savings ratio by one percentage point. Even Keynesians might regard such a rate as a high price to pay for extra growth (see Thirlwall, 1974 for a full range of estimates).

## Reconciling the prior saving and forced saving approaches to development

There can be little doubt that the traditional development literature and the governments of most developing countries have veered towards the classical view of development when making policy prescriptions and formulating plans. But there is scope for a more eclectic approach. It is not necessary to be a classicist to recognize the importance of voluntary saving in capital-scarce economies, and it should not be necessary to be a Keynesian to admit that investors may lay claim on real resources in excess of the community's plans to save. Keynesians welcome prior saving. What they dispute is that prior saving is necessary for investment; that investment is constrained by prior saving. As Robinson (1960, vol. II) said when discussing the relation between savings and investment at full employment:

We cannot return to the pre-Keynesian view that savings governs investment. The essential point of Keynes' teaching remains. It is decisions about how much investment is to be made that govern the rate at which wealth will accumulate, not decisions about savings.

A start at reconciliation would be for the prior savings school to admit the possibility of forced saving and to reduce their aversion to demand inflation. Equally, the Keynesians could admit that saving depends on factors other than the functional distribution of income, and that for any desired savings or investment ratio, inflation will fall as voluntary saving rises.



## The quantity theory approach to the financing of development

The quantity theory approach to the financing of development stresses the effect of inflation as a tax on real money balances. Suppose a government wishes to divert more of a country's resources to investment; one of the ways it can do so is to invest on society's behalf, financing the investment by expanding the money supply. In conditions where capital is already fully employed, monetary expansion will be inflationary.

Inflation is the means by which resources are effectively transferred to government. Inflation imposes a **tax on money holdings** and consists of a reduction in the real purchasing power of money and the real resources that the holders of money must forego to restore the real value of their money holdings. The base of the tax is the level of real cash balances ( $M/P$ ), and the tax rate is the rate at which the real value of money is deteriorating, which is equal to the rate of inflation ( $dP/P$ ). The real yield from the tax is the product of the tax base and the tax rate; that is,  $(M/P)(dP/P)$ , which will be maximized (as in standard tax theory) when the elasticity of the base with respect to the rate of tax is equal to  $-1$ . If the rate of inflation is equal to the rate of monetary expansion, the real tax yield ( $R$ ) will equal the real value of the new money issued; that is,  $(M/P)(dM/M) = dM/P$ . If  $dP/P > dM/M$ , some of the potential tax yield will be lost owing to a reduction in the tax base.

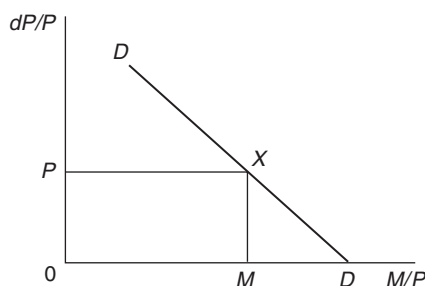
The inflation tax can be illustrated diagrammatically, as in Figure 13.4.  $DD$  is the demand for real money balances in relation to the rate of inflation. When prices are stable, the demand for real balances is  $D$ . At inflation rate  $P$ , however, which is expected to continue, the demand for real balances falls to  $M$ . The area  $OPXM$  thus represents the amount of real income that holders of real money balances must substitute for money balances to keep real balances intact at level  $M$ . Since money balances must be accumulated and real income forgone at the same rate as the rate of inflation, the rate of tax is equal to the rate of inflation.

Inflation as a tax on money redistributes resources from the private sector to the government as the issuer of money – resources that are just as real as those obtained by more conventional means of taxation. Keynes was fully aware of this other aspect of inflation, as well as the tendency for demand inflation to transfer income from wages to profits. In his *Tract on Monetary Reform* (1923), Keynes describes inflation as 'a form of taxation that the public finds hard to evade and even the weakest government can enforce when it can enforce nothing else'.

The real yield from the inflation tax available for investment as a proportion of income ( $R_I/Y$ ) will be the product of the money–income ratio,  $(M/P)/Y$ , the rate of inflation,  $dP/P = dM/M$ , and the proportion of the increase in the real money supply captured for investment ( $R_I)/(dM/P)$ , that is:

$$\frac{R_I}{Y} = \left( \frac{M}{PY} \right) \left( \frac{dM}{M} \right) \left( \frac{R_I}{dM/P} \right) \quad (13.17)$$

**Figure 13.4** Inflation tax



Suppose that the money–income ratio is 0.4 and 50% of new money issued is used for investment purposes, then a 10% expansion of the money supply leading to a 10% rate of inflation would yield 2% of the national income for the development programme. If all the new money is used for investment purposes, the real yield from the tax is simply the ratio of the real value of the new money issued to income (our earlier result), which in this example would be 2.5%. These calculations assume, however, that the desired ratio of money holdings to income remains unchanged regardless of the rate of inflation. In practice, the ratio is likely to be a decreasing function of the rate of inflation because the opportunity cost of holding real money balances rises. Only if the base of the tax falls more than in proportion to the inflation rate, however, will the yield from the inflation tax actually decline.

From the limited evidence available, it appears that the elasticity of the money–income ratio with respect to the rate of inflation is quite low even in high inflation countries. This suggests that inflation can operate effectively as a tax on money even in countries that have been experiencing high rates of inflation for many years. It should also be remembered that while inflation may reduce the desired ratio of money holdings to income, the ratio will have a continual tendency to rise with the gradual monetization and development of the economy. On balance, the ratio may be very little affected by monetary expansion.

The fact that the demand to hold money relative to income rises as development proceeds, and output is growing, also means that some government investment can be financed without any increase in the price level. This is easily seen taking the fundamental equation of exchange:

$$MV = PY$$

or:

$$M = K_d PY \quad (13.18)$$

where  $M$  is the nominal money supply,  $V$  is the income velocity of circulation of money,  $K_d (= 1/V)$  is the demand to hold money per unit of money income,  $P$  is the average price of final goods and services, and  $Y$  is real income.

Taking rates of growth of the variables, denoted by lower-case letters, gives:

$$m = k_d + p + y \quad (13.19)$$

It can be seen that if the demand for money per unit of income is increasing ( $k_d > 0$ ),  $m$  can be positive without the price level rising. Similarly, if the economy is growing ( $y > 0$ ),  $m$  can also be positive without the price level rising. The government's proceeds from monetary expansion will equal  $m - p$ . In several developing countries, the rate of growth of the demand for money per unit of income seems to be in the order of 5% per annum. This, combined with a growth rate of output of 3% per annum, would mean that the non-inflationary growth of the money supply would be in the order of 8% per annum.

Finally, it should also be added that government investment projects financed by monetary expansion can reduce an economy's capital–output ratio (if the projects have high output–labour ratios and low capital–labour ratios), enabling a higher rate of capital accumulation for any given investment ratio, and therefore a higher rate of employment growth. Inflation is not necessarily inequalitarian if the government investment projects financed by monetary expansion help the poor in rural and urban areas by generating employment opportunities and raising productivity.

## The dangers of inflation

Some of the benefits of inflation have been considered, especially the ability of inflation to release resources for development by redistributing income between classes within the private sector and from the private sector to government. Inflation is not without its dangers, however, and these must be emphasized.

First, a distinction needs to be made between the different types of inflation that may be experienced by a developing country: **demand inflation**, **cost inflation** and **structural inflation**. The argument for inflationary finance is an argument for demand inflation. Cost inflation, by reducing profits, will not be conducive to development. Structural inflation may be the inevitable price of development, but there is nothing in the process of structural inflation itself that will necessarily accelerate the development process.

There are also certain dangers and costs involved in deliberately pursuing an inflationary policy to stimulate development. The most serious threats to growth from inflation come from the effect on the balance of payments if foreign exchange is a scarce resource, and from the possibility that voluntary saving, productive investment and the use of money as a medium of exchange may be discouraged if inflation becomes excessive. If one country inflates at a faster rate than others, its balance of payments may suffer severely, leading to protection and exchange controls, and hence inefficiency in resource allocation. As far as investment is concerned, if inflation becomes excessive, investment in physical plant and equipment may become unattractive relative to speculative investment in inventories, overseas assets, property and artefacts that absorb a society's real resources. If the real rate of interest becomes negative (that is, the rate of inflation exceeds the nominal rate of interest), it may even become attractive to claim real resources and not to use them.

Inflation clearly reduces the purchasing power of money. If inflation becomes excessive, not only may voluntary saving be discouraged but the use of money as a medium of exchange may be discouraged, involving society in real resource costs and welfare losses. Since inflation reduces the purchasing power of money, holders may be expected to avoid losses by cutting down their holdings of money for transactions purposes. The cost of inflation arises from the fact that cash balances yield utility and contribute to production, and inflation causes energy, time and resources to be devoted to minimizing the use of cash balances that are costless to produce; for example the frequency of trips to the bank may increase, which absorbs labour time, and credit mechanisms may be resorted to, which absorb society's resources.

There are also the distributional consequences of inflation to consider. These are difficult to assess, but the following can be said with some confidence:

- Debtors benefit at the expense of creditors.
- Profit earners gain at the expense of wage earners in times of demand inflation and lose at the expense of wage earners in times of wage inflation.
- Real asset holders probably gain relative to money asset holders.
- The strong (in a bargaining sense) probably gain relative to the weak; and the young gain relative to the old, who tend to live on fixed contractual incomes.

In developing countries, however, the possible inegalitarian distributional consequences of demand inflation should not be allowed to constitute an argument against the use of mildly inflationary policies if one of the aims is to create additional employment. The major beneficiaries of inflationary finance should be the unemployed and the underemployed, which represents a move towards a more egalitarian structure of household incomes.

Having considered some of the potential dangers of inflation, it can be seen that there is plenty of room for disagreement over whether inflation is a help or a hindrance to development. We have seen that it can help to raise the level of real saving and encourage investment; on the other hand, it may stimulate the 'wrong' type of investment, and inflation may get out of control and retard development through its adverse effects on productive investment and the balance of payments. A lot clearly depends on the type of inflation under discussion and its rate.

## Inflation targeting

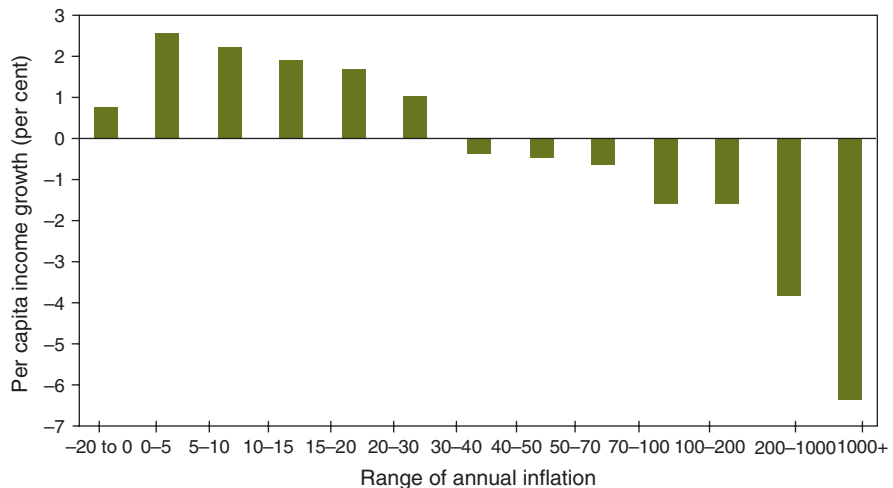
Because of the perceived dangers of inflation – inflation is harmful to growth and development – many developing countries have recently copied developed countries, such as the UK and the countries of the EU under the direction of the European Central Bank, and adopted inflation targeting to control the rate of inflation. Countries such as Brazil, Chile, Colombia, Mexico, Peru, South Korea, the Philippines and Thailand all started the process in the late 1990s and early 2000s. Targeting a specific inflation rate, such as 5%, or a range between 4% and 6%, is a way of dampening inflationary expectations in an economy and lending credibility to a government's monetary and fiscal policies for controlling the economy. The question is: Does it work, without sacrificing growth and employment? To evaluate this properly, the countries adopting inflation targeting need to be compared with a control group. When this is done, the evidence for developed countries is that targeting has no significant effect on either inflation or its variability (see Lin and Ye, 2007). On the other hand, given that the credibility of central banks in developing countries is significantly less than in developed countries, it might be expected that the credibility gain from explicitly announcing an inflation target would be much more substantial in developing countries. Goncalves and Salles (2008) find this to be so in a sample of 36 emerging economies, but they do not compare their results with a control group. Lin and Ye (2009) rectify this deficiency by comparing 13 developing countries that adopted inflation targeting up to 2004, using 39 other countries as a control group. Their central conclusion is that inflation targeting has reduced the inflation rate by about 3 percentage points on average, but the experience varies between countries according to the length of time the policy has been adopted, fiscal discipline, exchange rate variability, and governments' commitment to meet the preconditions for the policy of adopting a target inflation rate. Whether any costs have been incurred, however, in terms of slower growth or higher unemployment, is not explored. But what does the empirical evidence show of the relation between inflation and growth across countries? We examine this in the next section.

## Inflation and growth: the empirical evidence

The discussion so far suggests that the relation between inflation and growth is likely to be non-linear, with growth positively related to inflation up to a certain rate of inflation and then negatively related as the disadvantages of inflation outweigh the advantages. This is in line with recent empirical evidence from large datasets across developing and developed countries.

A study by Bruno (1995) at the World Bank, taking pooled annual observations for 127 countries over the years 1960–92, produced the pattern depicted in Figure 13.5. Inflation and growth are positively related up to 5% inflation, and then 'diminishing returns' to inflation set in. Inflation and growth are strongly negative once inflation rises above 30%, but for inflation rates below 20%, Bruno (1995) concludes that 'there is no obvious empirical evidence for significant long-run growth costs'.

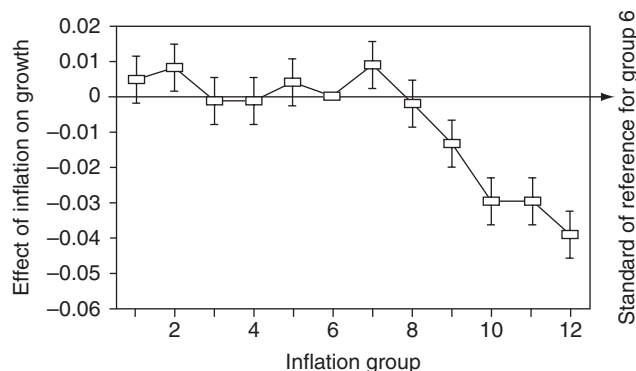
**Figure 13.5** Inflation and per capita income growth, 1960–92 (pooled annual observations, 127 countries)



A study by Sarel (1996) at the IMF has produced a similar result. He takes 87 countries over the period 1970–90 and divides the observations into 12 inflation groupings using the inflation rate of group 6 as the standard of reference. He then estimates the effect that differential inflation has on the growth rate in the other groups. The results are shown in Figure 13.6. It can be seen that inflation has a generally positive effect on growth up to group 7, with inflation averaging 8%. Thereafter, inflation and growth are negatively related. When inflation is very high (in group 12), the difference in the effect of inflation on growth compared with group 6 is close to 4 percentage points (holding all other factors constant). (These results support the early work of Thirlwall (1974), which also showed a nonlinear relation between inflation and the savings ratio, and inflation and the investment ratio. For a survey of models of inflation and growth, and some of the early empirical evidence, see Johnson (1984). See Temple (2000) for an overview.)

Ghosh and Phillips (1998), also at the IMF, show the growth of GDP to be highest in the range of inflation 3–5% for developed countries, and in the range 5–10% for developing countries (no doubt reflecting greater structural inflation).

**Figure 13.6** Effects of different inflation rates on growth



Evidence of nonlinearity between inflation and growth is also found by Stanners (1993) in a study of 9 countries over the period 1948–86 and 44 countries over the period 1980–88. First he divides the 44 countries into four groups according to the rate of inflation and shows that the highest growth occurred in the second group of countries, with an average rate of inflation of 8.2%. He then takes a scatter of 342 points for nine countries over 38 years and shows a positive correlation between inflation and growth up to 8%.

The most recent comprehensive study is by Pollin and Zhu (2006), who take 80 countries over the period 1961–2000, distinguishing between OECD (rich) countries, middle-income countries and poor countries. They find no significant relation between inflation and growth in the OECD and middle-income countries, but in the poor countries, there is a positive relation up to 15–23% inflation. Pollin and Zhu (2006) conclude:

There is no evidence ... supportive of a policy of maintaining inflation within a low band of about 3–5 per cent, to the degree that government policy-makers are interested in promoting growth and employment, rather than low inflation as an end in itself. ... There is still a wide range of inflation rates that are very likely to be associated positively with economic growth. ... This is most especially the case when inflation is resulting from, as Bruno (1995) puts it, 'investment demand pressure in an expanding economy'.

It is not surprising from this evidence that Temple (2000) concludes his survey of inflation by saying:

since there is not yet robust evidence that moderate inflation has an adverse impact on growth, any case for price stability which relies on a positive growth effect should continue to be regarded with considerable suspicion.

Similarly, Levine and Zervos (1993), in a review of studies of the macrodeterminants of growth, conclude that:

given the uncharacteristically unified view among economists and policy analysts that countries with high inflation rates should adopt policies that lower inflation in order to promote economic prosperity, the inability to find simple cross-country regressions supporting this contention is both surprising and troubling.

Indeed, we can be more categorical and say that there is *no* scientific evidence to suggest that a necessary condition for faster growth is that inflation should be as low as possible. The evidence suggests that mild inflation, up to 5–8%, can be positively beneficial for growth. After that, however, the effects of inflation can be seriously damaging, certainly at rates in excess of 20%.

## The inflationary experience

Having discussed the advantages of inflation and warned of the dangers of excessive inflation, the fact is that the inflationary experience of most developing countries outside Latin America, at least until the recent past, has been relatively mild. It is a myth that developing countries have been typically prone to high rates of inflation. Out of a sample of 48 developing countries over the period 1958–68, 38 recorded average rates of inflation of less than 6% per annum (see Thirlwall, 1974, p. 35 and Appendix 1). Historically, most developing countries have been very financially conservative.

From the mid-1970s, however, there was a marked acceleration of inflation worldwide, sparked by the oil price rises in 1973 and 1979, as well as other commodity price rises, and this continued into the 1980s and 1990s in many countries. Since 2000, however, the rate of inflation has subsided, at least in developed countries. The average rate of inflation country by country over the period 2000–14 is shown in Table 13.4. It can be seen that there is a wide variety of experience between countries, but, on balance, developing countries have been more prone to inflation than developed countries. In developed countries, the average rate of inflation has been about 5%, whereas in low- and middle-income countries, it has been closer to 10%. Some notable high inflation countries in the past decade have been in Africa: Ghana, 22.8%, Guinea, 16.1%, Nigeria, 15.7%, Malawi, 14.9%, and Sudan and Ethiopia, 13.7%. Some Latin American countries have also recorded some high inflation rates: Venezuela, 25.3%, Argentina, 17.3%, Brazil and Uruguay, 8%, and Paraguay, 7.5%. Historically, Latin America has been the most inflation-prone continent, almost from the start of the industrialization process, and it was in Latin America that the ‘structuralist–monetarist’ controversy started over the causes of rapid inflation in poor countries. We conclude this chapter with an overview of the debate, which still has relevance today.

**Table 13.4** Inflation

	GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014
Afghanistan	8.0	Belize	1.8	Channel Islands	3.6
Albania	2.9	Benin	2.9	Chile	5.3
Algeria	8.1	Bermuda	3.6	China	4.6
American Samoa		Bhutan	5.5	Hong Kong SAR, China	0.1
Andorra	2.4	Bolivia	7.2	Macao SAR, China	5.4
Angola		Bosnia and Herzegovina	3.3	Colombia	5.3
Antigua and Barbuda	1.9	Botswana	7.3	Comoros	3.0
Argentina	17.3	Brazil	8.0	Congo, Dem. Rep.	17.9
Armenia	4.6	Brunei Darussalam	4.9	Congo, Rep.	6.2
Aruba	4.6	Bulgaria	5.1	Costa Rica	8.7
Australia	3.7	Burkina Faso	3.0	Cote d'Ivoire	3.2
Austria	1.8	Burundi	11.9	Croatia	3.1
Azerbaijan	9.2	Cape Verde	1.9	Cuba	2.7
Bahamas, The	1.4	Cambodia	4.4	Curacao	
Bahrain	5.7	Cameroon	2.6	Cyprus	2.6
Bangladesh	6.3	Canada	2.3	Czech Republic	1.6
Barbados	1.9	Cayman Islands		Denmark	2.2
Belarus	25.6	Central African Republic	2.7	Djibouti	3.9
Belgium	1.8	Chad	5.7	Dominica	1.5

*continued overleaf*



**Table 13.4** Inflation – *continued*

	GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014
Dominican Republic	10.6	Ireland	0.7	Mexico	5.2
Ecuador	7.4	Isle of Man	3.5	Micronesia, Fed. Sts.	2.7
Egypt, Arab Rep.	9.6	Israel	1.8	Moldova	9.6
El Salvador	3.1	Italy	2.0	Monaco	1.9
Equatorial Guinea	8.9	Jamaica	10.2	Mongolia	15.3
Eritrea	15.5	Japan	-0.9	Montenegro	5.5
Estonia	5.3	Jordan	6.2	Morocco	2.0
Ethiopia	13.7	Kazakhstan	14.2	Mozambique	6.2
Faeroe Islands		Kenya	9.1	Myanmar	6.4
Fiji	4.5	Kiribati	1.4	Namibia	6.8
Finland	1.7	Korea, Dem. Rep.		Nepal	8.2
France	1.6	Korea, Rep.	2.2	Netherlands	1.7
French Polynesia		Kosovo	2.0	New Caledonia	
Gabon	5.3	Kuwait	7.5	New Zealand	2.7
Gambia, The	5.7	Kyrgyz Republic	9.9	Nicaragua	8.5
Georgia	6.1	Lao PDR	7.1	Niger	3.7
Germany	1.2	Latvia	6.0	Nigeria	15.7
Ghana	22.8	Lebanon	2.8	Northern Mariana Islands	
Greece	2.2	Lesotho	6.9	Norway	4.4
Greenland	-2.1	Liberia	8.7	Oman	8.8
Grenada	2.4	Libya	10.4	Pakistan	11.0
Guam		Liechtenstein	0.7	Palau	2.6
Guatemala	5.4	Lithuania	3.7	Panama	3.7
Guinea	16.1	Luxembourg	3.1	Papua New Guinea	5.1
Guinea-Bissau	2.4	Macedonia, FYR	2.8	Paraguay	7.5
Guyana	11.7	Madagascar	9.7	Peru	3.4
Haiti	11.2	Malawi	14.9	Philippines	4.3
Honduras	6.1	Malaysia	4.0	Poland	2.7
Hungary	4.2	Maldives	5.5	Portugal	2.0
Iceland	5.3	Mali	3.9	Puerto Rico	4.6
India	6.1	Malta	2.9	Qatar	8.4
Indonesia	10.5	Marshall Islands	2.6	Romania	11.2
Iran, Islamic Rep.	17.9	Mauritania	8.1	Russian Federation	13.4
Iraq	11.3	Mauritius	5.0	Rwanda	9.0

**Table 13.4** Inflation – *continued*

	GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014		GDP implicit deflator average annual % growth 2000–2014
Samoa	3.6	St. Kitts and Nevis	2.9	Turkmenistan	16.0
San Marino	2.2	St. Lucia	3.3	Turks and Caicos Islands	
Sao Tome and Principe	14.3	St. Martin (French part)		Tuvalu	2.4
Saudi Arabia	6.1	St. Vincent and the Grenadines	2.2	Uganda	8.9
Senegal	2.5	Sudan	13.7	Ukraine	15.4
Serbia	11.1	Suriname	15.5	United Arab Emirates	7.0
Seychelles	10.4	Swaziland	9.0	United Kingdom	2.5
Sierra Leone	12.2	Sweden	1.7	United States	2.1
Singapore	1.4	Switzerland	0.8	Uruguay	8.0
Sint Maarten (Dutch part)		Syrian Arab Republic	6.4	Uzbekistan	21.2
Slovak Republic	2.1	Tajikistan	17.4	Vanuatu	3.0
Slovenia	2.8	Tanzania	11.3	Venezuela, RB	25.3
Solomon Islands	6.5	Thailand	3.1	Vietnam	10.6
Somalia		Timor-Leste	4.5	Virgin Islands (U.S.)	
South Africa	7.1	Tonga	5.8	West Bank and Gaza	4.5
South Sudan		Trinidad and Tobago	5.4	Yemen, Rep.	12.0
Spain	2.2	Tunisia	3.9	Zambia	12.8
Sri Lanka	10.8	Turkey	11.1	Zimbabwe	8.4

Source: World Bank, *World Development Indicators* 2015, online (<http://wdi.worldbank.org/table/4.16#>).

## The structuralist–monetarist debate in Latin America

The inflation rate in countries such as Argentina, Brazil, Peru, Bolivia, Chile and Uruguay has reached over 100% at times since the Second World War. In the early postwar years, a heated debate developed, which still smoulders today, over the major cause of rapid price increases. The participants in the debate polarized into two schools, frequently referred to as the **structuralists** and the **monetarists**. Although the debate is set in the Latin American context, it is nonetheless of general interest and in many ways is analogous to the Keynesian–monetarist debate that took place in developed countries in the 1970s and 1980s over the causes of inflation. It might also be said that the two debates have been equally inconclusive.

The essence of the structuralist argument is that the basic forces of inflation are structural in nature, that inflation is a supply phenomenon and can only be remedied by monetary and fiscal

means at the expense of the underutilization of resources. The role of monetary expansion in propagating inflation is not denied; what is disputed is that inflation has its *origins* in monetary factors. In the structuralists' view, monetary policy can only attack the symptoms of inflation, not its root causes.

In support of the argument that inflation emanates from the supply side, the structuralists point to the characteristic features of developing countries: the rapid structural changes taking place in the economy and supply inelasticities leading to bottlenecks, and refer back to the pre-industrialization era of Latin America when inflation was much less severe than it has been in the recent past. Prior to 1930, there was relative price stability due to fairly elastic supplies of agricultural output and low population growth. But Latin America then entered the industrialization era with a capitalist class that was reluctant to invest, and with growing population pressure on food supplies, which together contributed to bottlenecks and the beginnings of inflation, subsequently exacerbated by a wage–price spiral and currency depreciation.

There is some dispute about whether this picture is accurate for the whole of Latin America, however. According to some observers, the sequence of events described by the structuralist school is more a description of a particular country, Chile. Indeed, Campos (1961) went as far as to say that any visitor to the Economic Commission for Latin America in Santiago could not help but feel that the thinking of the structuralist school had been affected by the peculiarities of Chilean inflation. But Campos was a confessed monetarist. For even in the Chilean case, he claims that the bottlenecks observed were induced by inflation itself and were not causal elements in the process. This is a more general claim of the monetarist school. They argue that supply bottlenecks are created by policies that discourage investment, for example price controls. Thus, they maintain that the act of repressing inflation, instead of tackling the monetary causes of inflation, creates bottlenecks that subsequently feed the inflation. But, in the first instance, inflation is caused by excess demand due to monetary expansion. In support of the monetarists, it does seem to be the case that in countries where prices have risen the fastest, the money supply has also grown most rapidly, but this does not answer the question of whether monetary expansion initiates inflation or simply 'finances' inflationary tendencies already present on the supply side. Moreover, if there was tighter monetary control, would it be inflation or output that would fall the most? There is no consensus, but a majority of observers seem to pinpoint supply factors as the main contributors to rising prices – particularly agricultural bottlenecks and exchange rate depreciation due to balance of payments difficulties. It is possible to argue, of course, that all balance of payments deficits are a monetary phenomenon, but the more relevant question is: What is the cause of deficits in the first place? Most balance of payments difficulties in Latin America have to do with a high income elasticity of demand for imports and low export growth because of the poor supply characteristics of domestic goods (for a 'structural' interpretation of Bolivian hyperinflation, see Pastor (1991); and see Chapter 16).

## Summary

- Development requires investment, and saving is necessary to *fund* investment (although not necessarily to finance it).
- There are three main analytical approaches to the finance of development from domestic resources: the prior saving approach, the Keynesian approach and the quantity theory approach, which all focus on the ways in which saving and investment can be raised.

- The prior saving approach focuses on raising voluntary and involuntary saving through monetary and fiscal policy. The Keynesian approach emphasizes incentives to invest, which can generate its own saving. The quantity theory approach focuses on 'forcing' saving through inflationary policies.
- Voluntary saving depends on the capacity and willingness to save determined by the level of income, the growth of income, the rate of interest and the availability of financial assets.
- Most developing countries have a dual financial structure with a large informal financial sector serving the poor, rural, subsistence sector, and a formal financial sector serving those with collateral to borrow.
- Rural financial intermediaries and microcredit play an important role in the lending and borrowing activities of poor people.
- The formal financial sector often suffers various forms of financial repression impeding the growth of the financial system.
- Financial liberalization programmes have been implemented in many developing countries, often under pressure, with mixed results.
- Involuntary saving depends on tax policy. Tax effort is weak in many developing countries.
- Investment can generate its own saving through a rise in income if the economy is at less than full employment, or through a redistribution of income by inflation from wage earners with a low propensity to save to profit earners with a higher propensity to save if the economy is at full employment (this is the Keynesian argument).
- Governments can invest on society's behalf and finance the investment by monetary expansion. If this is inflationary, this will 'force' saving (the idea of inflation as a tax on money).
- Inflation poses some dangers, but the empirical evidence shows a positive relation between inflation and growth up to about 5–8% inflation.
- Many Latin American countries have experienced high inflation in the past, but the monetarist–structuralist debate, which originated there, is largely inconclusive.

## Chapter 13

### Discussion questions

1. What is the difference between voluntary saving, involuntary saving and 'forced' saving?
2. What are the main determinants of voluntary saving?
3. How can 'monetization' of the economy help to raise the level and productivity of capital accumulation in developing economies?
4. What are the essential features of the informal financial sector in developing countries?
5. Outline the main requisites of a well-developed financial system.
6. What forms do financial repression take in developing countries?
7. What are the dangers of financial liberalization, and on what factors does the success of liberalization depend?
8. What role do special development banks and microcredit play in financing development?

**Chapter 13****Discussion questions – *continued***

9. Suggest reforms to the tax system in developing countries that would promote equity and more saving for investment.
10. What is meant by 'inflation as a tax on money'?
11. In what ways is demand inflation conducive to growth and development?
12. What conclusions would you draw from the recent empirical evidence on the relation between inflation and growth?

**Notes**

1. For a survey of microcredit, see Morduch (1999), Armendariz and Morduch (2005), and Hermes and Lensink (2007).
2. For a comprehensive discussion of the general issues in this field, see Bird (1991) and Burgess and Stern (1993).
3. For an excellent discussion of general issues, and with specific reference to Pakistan, see Ahmad and Stern (1991).

**Websites on banking and finance****Microcredit**

Grameen Development Bank [www.grameen-info.org](http://www.grameen-info.org)

BancoSol in Bolivia [www.bancosol.com.bo/](http://www.bancosol.com.bo/)

Microcredit Summit Campaign [www.microcreditsummit.org](http://www.microcreditsummit.org)

**Banking**

Central bank list [www.centralbanksguide.com/central+banks+list/](http://www.centralbanksguide.com/central+banks+list/)