

adds to unemployment. But in his view this is a somewhat extraneous issue. The real issue as he sees it is whether immigration encourages harmful speculation and necessitates substantial additional capital expenditure in directions unlikely to improve—and, in fact, likely to weaken—the country's economic position. He finds that it has had this effect in Australia. The Committee for the Economic Development of Australia (CEDA) has claimed that, if migrants are selected on the basis of their skills and capital, immigration can contribute to economic growth, at least in the longer run. But, on the basis of a comparison with Sweden, Birrell concludes instead that the absence of population increase enables a country more easily to upgrade its capital stock and improve the quality of its work force. It also offers a greater incentive to making truly efficient use of the work force than would population increase. In short, the absence of population increase can help very considerably in that restructuring of the economy both he and Mitchell consider so essential. Birrell goes somewhat beyond Mitchell in contending that limiting immigration to low levels is actually essential to long-term economic success. Neither deals with the contention in some quarters that, while admittedly likely to delay the transition to restructuring, immigration might for a while render this transition less stressful by increasing the number of consumers for declining industries dependent on the domestic market, and by offering easier access to new work-force skills through introducing workers who are more likely, for a time, to be occupationally and geographically mobile.

Neither Mitchell nor Birrell rejects the view that economic growth is desirable. What each wants is an Australian economy restructured in a way that would make it competitive in the world market. Some may wonder, however, whether continued economic growth is altogether desirable, even if it does not make undue demands on non-renewable resources. They may also wonder whether, in increasing their dependence on an extensive foreign market rather than on a more limited domestic one (with or without large-scale population increase), Australians may not risk becoming even more dependent than they already are on forces over which they can exert little or no control.

Chapter 6

The economic implications of high population growth

William F. Mitchell

The Australian economy is poised, albeit precariously, between a future of prosperity and a future of mediocrity and declining welfare. We can no longer subsidise an inefficient, low-technology manufacturing sector with buoyant commodity export receipts. Not only has the manufacturing baby failed to mature beyond a reliance on tariffs, but more recently our traditional export income has been slashed by declining terms of trade. It is expected that the changed trade relations and demand patterns are such that a return to prosperity through commodity exports is doubtful. The policy agenda is now focused, urgently, on industry policy—rationalising old, decaying industries and promoting new competitive endeavours. The exchange rate float has provided a dynamic that a coherently articulated industry policy can exploit.

The thrust of this paper is that government policy must be integrated and oriented to maximising the benefits of restructuring by minimising the costs of adjustment. In particular, labour force policy should support the adjustment process rather than inhibit it. The basic question is whether an increasing population is a necessary condition for restructuring. We used to be told that scale economies were best achieved by expanding the domestic market. It is now recognised that an essential part of structural adjustment, given the need to develop new export industries, involves penetration of world markets. This method of enhancing low-cost domestic industries avoids the need to expand the local population.

The international payments problems we now face reflect more basic microeconomic factors relating to our economic structure and developments in world trade over the last decade. In retrospect, the structural deficiencies are partly the inheritance of undesirable industry and labour-force policies. The push for rapid post-war development through mass-produced manufacturing with an extensive reliance on low-skilled, imported labour was initially successful because demand for our commodity exports was consistently strong and domestic protection high.

What has emerged from this umbrella of security is an inertia-prone economy with a fragmented, inefficient manufacturing sector, relying on imported capital goods and facing a declining demand for its traditional exports. Industry policies and labour-force strategies that

were ostensibly appropriate in the 1960s have contributed to these rigidities and have no place in the future. The long-term outlook is not optimistic. While the Organisation for Economic Cooperation and Development (OECD) area is expected to grow steadily at about 2.6 per cent a year in real terms, the demand for Australia's exportable raw materials is likely to remain fairly depressed. After the input price shocks of the 1970s, the large manufacturing nations, our traditional export markets, have invested in production techniques that economise on raw material inputs.

A new order in world agriculture has also developed. The agricultural policies pursued by the European Economic Community (EEC) and the USA reflect a desire by the countries concerned to subsidise their inefficient agricultural sectors at the expense of jobs and output in other areas of their economies. Australia, despite achieving efficiency in rural production, cannot compete in the long run against the heavily subsidised output of its competitors.

Depreciation and domestic contraction will resolve the payments difficulties. But the long-term strategy must focus on industry policy aimed at diminishing the position of the protected sectors and industries susceptible to overseas influence, and encouraging the selective expansion of competitive export-oriented manufacturing. Restructuring involves rationalising resource use in uncompetitive areas, and channelling capital and labour into industries capable of high productivity growth. Rationalisation admittedly implies some short-term job loss and dislocation. Policies to make labour market adjustment easier are therefore crucial to the success of the strategy. A potential obstacle to the deliberate running-down of inefficient industries is the entrenched attitude of labour to job loss, skill obsolescence, and mobility. Relocation assistance and retraining schemes can minimise the adjustment costs and resistance from those bearing (or likely to bear) the burden of structural change. Obviously, any policies that might exacerbate or be seen to be incompatible with minimum cost adjustment, like induced labour-force growth through immigration, should be avoided. The success of a restructuring strategy depends in part on the ability of the government to pursue a consistent and integrated policy. It would be counter-productive to foster a policy emphasising selective, high-technology-oriented growth (with low labour requirements implied) while implementing labour force growth policies.

The next section discusses some general economic issues concerning high population growth. The third section introduces some economic arithmetic relating to the projected output growth needed to maintain a stable aggregate unemployment rate at given projections of growth in labour productivity and labour force (under different immigration assumptions). Sections on the vexing issue of immigration and unemployment, the implications of restructuring for labour-force policy, and the link between restructuring and economies of scale follow. The

conclusion is that it is not wise to pursue a programme of accelerated labour-force growth if industry policy is aimed at developing selective growth in manufacturing exports. It is both unnecessary and potentially counterproductive.

Some general economic issues

Before pursuing specific labour market issues, it will be useful briefly to discuss some general economic aspects of high population growth. A recent report by the Committee for Economic Development (CEDA, 1985) titled *The Economic Consequences of Immigration on Australia* is the most current and comprehensive analysis of this topic available. Unfortunately the report leaves many issues unresolved. It conventionally relates national output growth to the level of immigration, although causality is not established. Population growth can increase the quantity and quality of available resources (labour, capital, technology) and also boost expenditure. However, as is recognised in the report, a nation's standard of living is usually expressed in terms of per capita growth rather than growth per se. Australia's record in this respect, particularly during the 1970s, is not encouraging. CEDA fails to identify any significant positive relationship between per capita growth and net migration.

Per capita output grows faster the more rapid the expansion of capital stock and the faster the rate of technical progress. If steady-state per capita output is to remain constant with a growing population, savings must be enough to endow each new person with the average per capita capital. The failure to substantiate a relationship between net migration and per capita growth in Australia has implications for potential labour productivity. If immigration boosts the labour force by a larger proportion than it increases population, and if there is no clear relation between per capita output growth and net migration, it follows that the impact of net migration on labour productivity cannot be deduced. If migration did significantly stimulate savings or the rate of technical progress, then a stronger association between per capita growth and migrant inflow should be evident. CEDA fails to resolve these important issues.

CEDA does examine the savings (consumption) behaviour of new entrants. Its findings negate the popular notion that migrants are high savers. The expenditure injection is found to be uneven and weighted to the early years after arrival. Employment is obviously stimulated by the heavy demands placed on the housing industry. But on the negative side, the funds attracted to housing have not represented the most efficient, productive use of scarce capital because of bank regulations subsidising home finance. This distortion, which has diverted capital from capacity expansion, is one possible reason why per capita growth has not responded positively to migration.

The fiscal consequences of increased immigration are uncertain. Does immigration inhibit the ability of public authorities to improve the quality and intensity of amenities and services for the existing population by creating demand for more basic amenities and services (like roads and schools)? This issue is summarised under the heading of 'capital-widening' versus 'capital-deepening'. There are conflicting conclusions in the literature, and CEDA does not illuminate us further. Discriminating between the extra demands caused by extra people and more intense demands by locals is virtually impossible.

CEDA also analyses the intertemporal effects of immigration on government expenditures and transfers. The report concludes that in the short term government costs rise as a consequence of increased immigration, but that in the longer term the per capita effect in health and welfare is favourable. Education expenditure per capita increases over time. All the results presented are based on the initial assumption that immigration lowers the average age of the population. Unfortunately, the effects on aggregate per capita expenditure in the long run are not discussed. This is disturbing, because aggregate effects bear on the amount of scarce resources diverted from productive uses to meet the needs of an increased population. The relevance of per capita analysis per se is related to this. The absolute level of the federal budget deficit has recently been the subject of intense scrutiny. It is argued that an increase in the deficit (especially the structural component), say, due to increased provision of infrastructure for immigrants, places demands on the money market that can lead to an increase in interest rates and reduce private investment. It would have been useful if CEDA had examined these links.

The balance of payments impact of immigration is important, particularly because our current payments position represents the basic constraint on our future growth. CEDA say that immigration increases would worsen the trade balance. Export gains would predominate in the mining sector, although this presumes that output can be sold at favourable prices—not an obvious expectation, given recent movements in the terms of trade. CEDA downplays the trade effects, arguing that depreciation would correct any imbalances. A reliance on depreciation is not without cost. Domestic inflation rises, wage pressures mount, and the \$A burden of external debt increases. In addition, if migrants raise the propensity to import (which reduces the expenditure multiplier), the beneficial relative-price effects of depreciation are reduced. In the current setting, Australia should be minimising its trade imbalance. CEDA also argues that there would be capital inflow due to increased capital requirements (increasing return on scarce capital) and business optimism. If this inflow occurred, our indebtedness or invisibles deficit would increase, which again is contrary to the goals of future policy aimed at correcting our external imbalance.

Some economic arithmetic

Economists use simple rules of thumb to focus on more complex issues. Okun's Law, a celebrated example, relates expected changes in the aggregate unemployment rate to growth in the gross domestic product (GDP). A series of related accounting identities underpins Okun's Law and helps us understand the labour market output implications of a high population policy. Consider the following short-run model of output determination:

$$y = gh(1 - u)L \quad (1)$$

where y is real GDP, g is labour productivity, h is the average number of hours worked, u is the aggregate unemployment rate, and L is the labour force. $L(1 - u)$ is total employment (people), and when multiplied by h gives total labour input in hours. Equation (1) says that output is equal to total labour input ($h(1 - u)L$) times labour productivity (g).

Equation (1) can be re-expressed in percentage growth rates to provide a simple benchmark to estimate, for given labour force and productivity growth, the increase in output required to achieve a desired unemployment rate.¹ Accordingly, with dots indicating derivatives and hours worked assumed constant, we get:

$$\dot{y} = \dot{g} + (1 - u) + \dot{L} \quad (2)$$

For the unemployment rate to remain constant, the rate of real output growth must equal the rate of growth in the labour force plus the increase in productivity (see State of Play 4, 1986, p. 73). This neat benchmark is disturbed by the fact that the economy does not trend smoothly. Both labour force and productivity growth display considerable cyclical deviations from their underlying trends, which modifies the predictions of equation (2).²

Table 6.1 shows the relationship between estimated civilian labour force projections (up to 2001) and alternative net migration assumptions (see CEDA, 1985, p. 268). Using 1986 labour force data statistics, I calculated annual labour force growth rates for each net

Table 6.1 Civilian labour force projections 2000-1

| Net migration gain assumption (per annum) | Total labour force |
|---|--------------------|
| zero | 8 379 466 |
| 50 000 | 8 945 061 |
| 100 000 | 9 523 809 |
| 150 000 | 10 217 753 |
| 200 000 | 10 823 104 |

Sources: CEDA, 1985, table 4.33, p. 268. Projections based on estimated participation rates and population projections, and calculated by the Bachuroo model.

Table 6.2 Required real output growth (per annum) under alternative net migration assumptions to maintain a constant unemployment rate

| Net migration gain assumption (per annum) | Estimated annual labour force growth (1986-2001) | Trend productivity growth (per annum) | Required real output growth (per annum) |
|---|--|---------------------------------------|---|
| zero | 0.72 | 2.7 | 3.42 |
| 50 000 | 1.21 | 2.7 | 3.91 |
| 100 000 | 1.73 | 2.7 | 4.43 |
| 150 000 | 2.34 | 2.7 | 5.04 |
| 200 000 | 2.87 | 2.7 | 5.57 |

migration gain assumption. Labour productivity growth was estimated from a least squares equation from 1966-70 to 1986 at approximately 2.7 per cent per annum. That figure appears realistic and is unlikely to increase dramatically over time. Table 6.2 shows the rate of growth in output (real GNP) required to maintain a stable unemployment rate for given estimates of labour force and productivity growth. The estimated growth rates (to maintain an already high unemployment rate) do not support immigration. Considering that improving the balance of payments requires a restrained level of domestic activity, we could reasonably conclude that the prospects for supporting an increasing labour force are not good.

Immigration and unemployment

Immigration policy should not be cyclical. Business cycles will always cut across a long-term population programme. Labour market pressures in both good and bad times will place strains on these strategies. Yet this does not mean population policies should be varied over the cycle. The performance of the population programme should be appraised independently of cyclical variations. A high unemployment rate does not per se signal that a particular net inflow of immigrants, for example, is inappropriate. Critics who call for immigration cutbacks when the economy enters a low period of activity, solely because the level of job vacancies is low relative to the labour force, reveal a lack of understanding of cycle and trend relationships.

Economists thus have a large responsibility for correctly evaluating the causes of a persistently high unemployment rate. Australia's current high unemployment rate has responded only slowly to the strong employment growth over the last three years. Cyclical adjustments, like changes in participation, reduce the responsiveness of the unemployment rate to job growth, and contribute to the persistence of high unemployment rates in the upturn. There is, however, some evidence (in business surveys and duration figures) that there are

structural problems in the labour market. If so, it can reasonably be argued that ongoing migration aimed at increasing the labour force is inappropriate. In this case, the trend expectation of unemployment would be pessimistic, because structural imbalances require micro labour policies that take time to take effect.

Immigration and aggregate unemployment

Several studies have examined the vexed issue of the effect of immigration policies on unemployment (CEDA, 1985; Pope and Withers, 1985; Withers, 1986). Immigration can affect the level and rate of unemployment through its influence on all the variables in equation (2). A myopic, somewhat entrenched view is that migration takes jobs from local workers. Migrants increase the labour force proportionately more than they increase population—they are concentrated in the 15-65-year-old group and their participation rates tend to be higher (CEDA, 1985, vol. 1, p. 93). Because measured unemployment may temporarily increase, however, the short-run impact of labour force growth is likely to be greater than the impact on output and productivity. This is not necessarily a cause for alarm, because longer-term demand effects may offset the short-run changes. Trend and cycle effects must thus be differentiated.

Economists averse to the 'threat to jobs' thesis point to the demand side-effects. Output and job growth are increased by the stimulus to aggregate demand for government capital works expenditure and business investment provided by migrants themselves and by other bodies. Harrison (1984) concluded that '... the difference between the proportionate increase in the labour supply and the proportionate increase in labour demand is probably neither sufficiently large nor sufficiently consistent over time to cause us to reject our initial assumption that the two proportions are equal'. Assuming constant labour productivity (an ambitious simplification), Harrison believes the unemployment rate is unchanged by migration. Interestingly, there is a higher unemployment incidence among new arrivals, which suggests that new jobs created as a result of increased demand are taken in disproportionate numbers by locals.

An important clarification must be made. It is unclear whether the debate about the consequences of immigration for unemployment is focusing on the unemployment rate or the level of unemployment. An increased level of immigration may increase aggregate expenditure by an amount sufficient to generate jobs in proportion to the labour-force growth (assuming productivity growth zero). In this sense, the unemployment rate decreases but the level is unchanged. We could conceive of a situation in which the demand effects create enough jobs to make the unemployment rate fall but the level increase. If statistical analysis focused on the rate, a conclusion that increased

migration does not cause (or correlate with) an increased unemployment rate would be reasonable. Equally well, a study that concluded migration was associated with an increasing level of unemployment would also be reasonable. Recent work has related net migration to the unemployment rate, and yet has referred in textual discussion to the view that 'immigration exacerbates unemployment' and that 'increased migration has not contributed to unemployment' (Pope and Withers, 1985, pp. 2, 23).

Even if the demand effects offset the supply effects, the relevant question, in the context of growing awareness that our economy in 2001 will have undergone significant restructuring, is: what sort of jobs would migration stimulate? To be classified as employed, a person need work only one or more hours a week. Increased job opportunities may arise in the form of growing fractional (part-time) secondary employment. Clearly, measured unemployment might not increase while the unmeasurable underemployment was growing. Whether this is desirable is debatable. In addition, if migrants are largely unskilled, low-productivity workers, apart from the inconsistency with the high-technology and high-productivity goals of restructuring, we would expect the level of structural unemployment to persist and to be concentrated among the new entrants. The implications for welfare expenditure and per capita income are obvious.

A different perspective on this debate, one not generally explored by researchers in this field, can be articulated. In retrospect, there may have been an implied job loss arising from our emphasis to date on low-skilled migration, which was masked by other compensating factors like high protection levels. One columnist suggests that 'the problems we now face have been compounded by the interaction of past immigration and industry policies, which has encouraged low skilled employment in industries such as clothing, textiles and footwear and motor vehicles behind high protective walls' (Davidson, *The Age*, 2 June 1986). Any actual job loss may therefore have long forward lags, and accordingly reveal itself slowly, as the costs of decisions (and the changes caused by the decisions themselves) become manifest. In other words, it is only now that the consequences of our fragmented, low-skill (migrant)-based industrial growth have become potent indicators of the costs of misguided past policies. Studies like the CEDA Report (1985) and Withers (1985) do not pick up these effects. The hypothesis that migration (of the type seen in Australia) inevitably raises the long-run level or rate of unemployment has thus not been empirically tested.³

The issue of whether our past migration has caused higher or lower unemployment (rates or levels) is actually largely irrelevant for future policy directions. Past industry and population strategies are not consistent with the goals of selective restructuring, and an emphasis on achieving traditional levels of immigration could harm the adjustment processes required. It is reasonable to suggest that labour force

growth (given the pool of current unemployed) must be a passive actor in the overall scheme. Absolute GDP growth rates are unlikely to be high enough to be constrained by an aggregate labour force deficiency. Specific compositional bottlenecks should, in the first instance, be addressed through micro labour market policy aimed at absorbing the current unemployed labour force. It is to this issue that I now turn.

Immigration and the non-accelerating inflationary rate of unemployment (NAIRU)

Several studies have focused on the effects of migration on the level of structural unemployment. The concept of structural unemployment is usually related to labour market efficiency—the ability to match characteristics of jobs offered to characteristics of available workers. A structural problem is said to exist if these characteristics differ geographically or in terms of skill. During the 1960s much effort was spent trying to operationalise the conventional classification of unemployment that distinguishes between demand-deficient (cyclical) and structural unemployment.

The concepts used by recent economists investigating possible 'structural' effects of immigration have been fairly basic. A popular framework of analysis is the unemployment-vacancy (U-V) relationship. Shifts in the U-V schedule (a curve estimated by regressing unemployment on vacancies) indicate changes in labour market efficiency, whereas movements along the curve represent cyclical variations in aggregate expenditure. Migration has been implicated by researchers in the shifting U-V relation, which has been notoriously unstable in the last 20 years. A quandary remains as to the effect of immigration on the direction of the shift, if indeed there has been any parametric effect at all.

Hughes (1975), building on conventional wisdom, argues on a priori grounds that migration improves the efficiency of the labour market matching process (U into V), which means that the level of structural (frictional) unemployment at full employment output levels will be lower. He argues that 'large scale migration has a considerable effect on the speed with which vacancies are matched by people without work' (Hughes, 1975, p. 63). Many factors might support this view. The increased geographical mobility of immigrants and their greater willingness to take less socially acceptable jobs than native Australians are among the likely reasons (Warren, 1982, p. 451). The current policy emphasis on family reunion rather than selective skill migration reduces the expected mobility and reduces the relevance of the acceptability of jobs, however.

Härper (1980) estimated U-V curves for Australia (1952–1978). He tentatively concludes on the basis of coefficient signs (rather than

their statistical significance) that reduced migration increases the level of structural mismatch within the Australian labour market. Warren (1982), using a method developed by Holt and David (1966) that is now an accepted framework for examining labour market flows, set out to test Hughes's contention explicitly. He found that 'the proposition... that the decrease in immigration decreased job-search efficiency, thereby increasing equilibrium unemployment, was not supported' (Warren, 1982, p. 456). While Warren's analytical framework is more rigorous than Harper's, his empirical work is restricted because he employs simple dummy variables to capture the effects of migration. Without knowing the structural equations underlying the Hughes proposition, it is unclear whether Warren's work is a fair test of the hypothesis.

A recent study by Withers (1986) tries to resolve the conflicting results of the earlier research. He concludes that neither the findings of Harper (implicitly Hughes) nor those of Warren are robust into an updated sample period. He says the NAIRU is unaffected by migration over the sample period. Thus the notion that migration improves labour market efficiency is not supported. Supplementary evidence, such as the fact that there is no significant difference in mobility between migrants and the Australian-born, bolsters the belief that there seems not to have been an overall improvement in job-matching (Withers, 1986, p. 6). These studies leave unresolved the question of the effects (if any) of migration on structural unemployment. Each piece of research is limited by particular problems, often inadequate data. Some more basic points can be made about all the approaches, however. The U-V model and the Holt search model use a fairly simplistic view of structural unemployment.⁴

Various labour market adjustments are to be seen as the business cycle enters a downturn. In the normal course of events, these are symmetric as the economy improves. Firms with excess capacity and flagging sales tighten hiring standards and reduce training and job opportunities. As the economy expands, the hiring process is 'opened' and training with jobs is offered. Mobility is enhanced as workers upgrade their skills or return to jobs commensurate with their skills (Okun, 1973). This upward mobility frees positions for the least skilled, and gives them a chance to gain durable (relevant) job skills through on-the-job training schemes. So workers displaced in the recession (whose skills may be obsolete) gain retraining, and entry positions are available for young, inexperienced people leaving formal training.

Persistent recession complicates this simple adjustment process by introducing asymmetries. If the trough endures, the general skills of the displaced workers atrophy with the job-specific skills rendered obsolete as jobs were shed. Retraining can more quickly replace job-specific skills if the general skills (like work discipline, concentration, punctuality) are intact. We may thus expect that the ability to

reabsorb displaced workers into the employed labour force varies inversely with the duration of unemployment. School-leavers who spend a long period unemployed are also in danger of becoming 'difficult to employ'. If a recession overlaps school years, the most recent school-leavers will be preferred to the pool of unemployed from earlier years. It is in this context that microeconomic labour policies are usually discussed. Some policies focus on reducing wage-cost disincentives for employers, others on subsidising job-training positions. If these policies fail to place members of the disadvantaged groups (the long-term unemployed) in jobs, the economy's growth potential is reduced and the chronic pool of the unemployed is an inflationary constraint.

It is a popular belief that the mismatch between unfilled vacancies and the supply of labour can be reduced by importing the skills in demand. Reinforcing this idea is the fact that migrants are unlikely to have the disincentives associated with prolonged unemployment and its related welfare dependence. After a persistent recession, the local workers initially displaced develop (endogenously) characteristics unsuited to stable employment. As demand is stimulated, the inflationary pressures could therefore be avoided by selective imported labour-force growth. This is the basis of the increased labour market efficiency argument.

This is not entirely satisfactory, however. If efficiency increases when the level of unemployment (participation rate corrected) at potential output decreases, then importing labour does not improve labour market efficiency. In fact, the economy sidesteps the constraints but does not reduce the long-term pool of unemployed, although the aggregate unemployment rate may fall for reasons mentioned earlier. The influence of migration on the NAIRU is therefore not independent of the timing of migration flows with respect to the business cycle (and the persistence of the cycle). With hysteresis (see the end of note 4) operating, structural imbalance increases as the cycle turns down. The proportion of labour with obsolete or no skills increases as the trough deepens. If we measured structural imbalance at comparable stages in the cycle, these proportionate changes would not be observed.

The steady state proportions are disturbed if skilled migrants are injected into the labour force in a downturn. The potential imbalance between labour demand and supply becomes an actual structural problem. This is because when the economy peaks, workers who would during the upturn have received training to match the skills in demand, remain unskilled and unemployed. Importing skills in this context locks the economy into a higher level of structural unemployment than necessary. Restructuring will create obsolescence of skills as it creates the demand for new skills. A structural problem will occur if displaced workers are not absorbed back into the growing areas. If migrant skills are easily available, firms in expanding areas

have less incentive to lower hiring standards and establish internal training processes. The real GDP growth needed to reduce unemployment would in this case become just so much higher and more difficult to achieve.

Restructuring and labour force policy

Labour force growth could be accommodated if structural changes were rapid. Jobs in labour-intensive service areas would be stimulated by strong and speedy multiplier effects. In practice, the development of new export industries and the attrition of declining sectors will be a protracted process. Restructuring will also involve a focus on selective initiatives. The Economic Planning Advisory Council (1985, p. 27) argues that '... attempts to achieve competitiveness "across the board" in high technology industries are unlikely to be successful'. Capital deepening techniques are required. Not only will labour have to be retrained and relocated, but the capital intensity requirements will reduce the absolute amount of labour demanded, at least at the beginning. It is possible that inertia-prone firms would resist the incentive to restructure if they foresaw a continued supply of low-cost, low-productivity labour. For all these reasons, labour force growth must (passively) follow the establishment of a revised industry structure and the implementation of labour relocation and retraining schemes.

Restructuring goals will shift the labour debate from concerns about the level of migration towards the composition of new entrants. A low-skill, compliant source of labour power to run large, labour-intensive manufacturing and assembly processes is no longer needed. Clearly, in the first instance, a non-inflationary growth path is made easier by the importation of selective skills in immediate demand. Yet retraining and relocation programmes should increasingly allow local workers to satisfy the needs. The goal of decreasing our high level (and rate) of unemployment is integral to restructuring. Unemployment can be reduced in two broad ways. The first is through the expenditure mechanism, where aggregate demand and export expansion engender growth, and the resulting employment gains outstrip labour-force growth and the harmful effects of productivity growth. The second, by relative price-changes (lowering real wages) that stimulate increases in the labour intensity of production (by substitution of expensive skills for cheaper skills), can reduce unemployment.

While the first option is consistent with the direction of industry policy in Australia, the second is a low-productivity, less competitive approach. The first option would involve investment incentives such as equipment tax concessions and accelerated depreciation export credits. If successful, it might at first reduce employment requirements, and could exaggerate the trade balance (through imported

equipment). Expected medium-term multipliers consequent on productivity and real income increases would be favourable, and are likely to create jobs in other capital and labour-using industries. Complementary labour force policies point to a focus on retraining and redeployment. The growth process is driven by industry changes in this scheme, and labour force strategies are passive. The goal is to reduce the pool of unskilled surplus labour and avoid costly bottlenecks.

Immigration, restructuring and scale

Our traditional manufactures—the medium-technology industries like assembly, and the low-technology operations like clothing, footwear, and textiles—are not a likely source of improved competitiveness and growth. Scale economies of the magnitude necessary to offset Asian domination cannot be achieved in car production or textiles, despite exchange-rate movements. Scale can be enhanced by reducing the number of suppliers, but the size of the market would still be a constraint.

There are two options for exploiting cost-minimising scale economies. We can increase the size of the local market by population expansion. Or we can exploit the world market by creating export competitive products. The somewhat autarkic approach embodied in the first alternative has been, and continues to be, used as a rationale for an expanded immigration programme (see CEDA, 1985). To some extent the demands of restructuring and the pursuit of scale economies in the first option are in conflict. Using the same logic, the second option for achieving scale and the selective growth strategy, involving high technology (capital-absorbing) techniques, are compatible. Certainly, the argument for the desirability of scale achievement is not enough to justify immigration schemes aimed at expanding the local population to the size needed to increase the local market.

Conclusion

Immigration has the potential to increase flow mobility in the labour market, increase aggregate demand and stimulate the achievement of scale economies, and improve productivity growth by introducing new skills and technology. Unresolved issues connected with the consequences of immigration include its effect on per capita growth (rather than growth per se), the effect on long-term unemployment, the net effect on capital requirements, the effect on government expenditure, and the impact on international payments and inflation. Although important, many of these issues are irrelevant to our discussion. By emphasising the imperatives of industry restructuring it can reason-

ably be argued that contrived labour force growth is unnecessary. Scale can be achieved by export penetration, available capital can be unambiguously channelled into productive uses, and retraining can improve the skills of the unemployed. The strategy of selective exports based on high technology does not require the support of a large immigration programme for its success. Indeed, it may well be frustrated by this type of labour force policy.

End notes

- 1 With L being the sum of unemployment (u) and employment (n), the rate of growth in $1/L$ is equal to $(\dot{u} + \dot{n}) / (u + n)$. The percentage employment growth (\dot{n}) is approximately equal to the rate of output growth (\dot{y}) less the growth in labour productivity (\dot{g}). Combining the two relations we get: $\dot{u} = \dot{L} + \dot{y} - \dot{g}$, where \dot{u} is the growth in the unemployment rate.
- 2 The phenomenon of hidden unemployment is well documented. It has been estimated that the labour force participation rate increases by approximately 0.4 per cent every time the unemployment rate falls by one per cent. In other words for every ten jobs created, six people leave the unemployment queue (as measured) and four people enter employment from outside the labour force (State of Play 4, 1986, p. 73). Procyclical productivity patterns are also observed, due ostensibly to adjustment costs of labour. Employment growth is thus less if both output and productivity increase together, and these two cyclical patterns will modify the rules of thumb based on stable assumptions of the variables in the identities.
- 3 The econometric analysis used in the recent work referred to is not without serious limitations. The research relies heavily on causality analysis to solve problems of endogeneity. Traditional simultaneous regression techniques have long been criticised for using an excessive number of zero restrictions (to aid identification), and for arbitrarily separating variables into exogenous and endogenous groups. The question that should be asked is: how confident can we be that causality analysis is an advance? In the same way that traditional regression procedures involve arbitrariness, causality testing requires several implicit assumptions, none based on the exactness of mathematical statistics. Essentially, all time-series must be jointly covariance-stationary, only linear predictors can be considered, and the measure of predictive accuracy is the expected squared forecast errors. The use of causality is confined to variables with these characteristics. If the time-series are not stationary with a moving average representation, then the test is invalid. Further ad hoc elements enter when the distributed lag is chosen. We can thus ask: to what extent is the danger of misspecification any less than the problem of non-exogeneity in traditional estimates?
- 4 Some recent work has shown that the distinction between demand-deficient and structural unemployment underpinning the U-V analysis (with respect to shifts and movements) is not wholly satisfactory. This is due to the observed cyclical labour adjustments that promote a type of structural unemployment (see Mitchell, 1986). In effect, the cycle has an inbuilt mechanism that provides jobs and retraining coincidentally by way of hiring processes. An understanding of this mechanism can produce a theory that immigration can lock the economy into a higher full employment unemployment level. Mitchell (1986) provides empirical support for the NAIRU's (the full employment unemployment rate's) sensitivity to the aggregate level of activity. This supports the so-called hysteresis hypothesis, which suggests that the steady-state level of unemployment is inversely related to the business cycle, rather than being exclusively determined by frictional or structural forces emanating from the labour market.

This chapter is currently a component of the Swedish case study on a stable population environment in Australia. The government to specialise in markets, and to compete against By 1984 gross national product per cent. Sweden's per cent. The high-value work force technology, upgrading productivity much to do to their stable use of the economy to rely on it. This view of migration is inconsistent. mobilisation if the economic servicing of be traced to as a good thing of economic that Australia could never