


Evidence-based Employment Scenarios

Employment and Income Distribution Experiences of Minerals Exporters and of Countries Achieving Growth Acceleration

Executive Summary

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innovative employment strategies

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Successfully diminishing a country's minerals dependency is one challenge and achieving a growth take-off is a different one, even though in some countries both challenges may be present (as in South Africa) and in some cases both may be conquered at the same time. Leaving minerals-dependency behind involves a reallocation of existing and a channelling of new resources to change the sectoral composition of output. It is, in the most direct sense, a matter of resource allocation. Growth acceleration involves growth dynamics, and is thus based on raising the level of resource utilisation, raising saving and investment, and facilitating technological change. Like conquering minerals-dependency, it involves the risk that success on the output front will not be matched by success on the employment and income distribution fronts. Nothing can be taken for granted.

Implications of minerals-dependency

A plausible case has been made that the effect of minerals-dependency on growth is more often negative than positive, and it is quite clear that the range of performance in such economies is greater than among others. The evidence suggests that at best an endowment of natural resources can put the country on a fast track to development but at worst it can do the opposite − condemn the country to a vicious cycle of negative feedbacks. Clearly policy matters a great deal in determining the outcome. High mineral (or any other natural resource) rents also widen the range of possible employment and income distributional outcomes, partly just because they widen the range of possible growth outcomes, but also because the rents can be channelled either in ways which worsen income distribution or in ways which improve it. Economies with strong mineral rents might be expected to be more inegalitarian than others because of some combination of effects from the capital-intensity of the export sector and the resulting lower-than-normal overall demand for labour, or the possible concentration of the rents in a few hands (the owners, the financial sector or other successful rent-seekers).

In a major analysis of oil-exporting countries, Gelb found that the typical country initially allocated a large part of the oil windfall to savings abroad (trade and non-factor services surplus). Windfall-based investment (in most cases mainly public sector investment) grew faster than consumption but then tapered off as consumption kept rising and eventually exceeded investment. By 1978, just five years after the first price hike, a deficit had arisen in the balance of payments as countries began to borrow against future oil revenues. Domestic oil prices were held at or near former levels until the early 1980s. The windfall decade saw a big increase in the size of the state and the diversification of its role. By 1979-83, all of the countries had experienced net appreciation, which was of huge dimensions in Nigeria and Iran. This study implicates the tendency for consumption to rise at the expense of investment, leading to borrowing abroad, and an appreciated exchange rate as two key factors contributing to weak economic performance across this set of countries.

No comprehensive analysis has been undertaken of minerals-dependency and employment and income distribution, but a marked relationship with inequality does exist, albeit not a simple one. Among countries with per capita incomes below US$5,000 (1991 international or purchasing power parity dollars), the average gap in the Gini coefficient between minerals-dependent countries and others is small or modest, but in the income range of $5,000-$7,500 it is enormous, nearly 20 Gini

points. Possibly when minerals dependency lasts long enough to contribute to significant increases in per capita income it also produces high levels of inequality, or at least does nothing to lower them. These figures imply that middle-income minerals-dependent countries need to worry a great deal about inequality, which normally implies that they also face a challenge to create adequate employment.

Clues as to the employment, income distribution and growth implications of minerals-dependence can be gleaned from case studies. *Indonesia* made generally effective use of its oil revenues to foster growth, productive employment and reasonable equality. Both agriculture and export-oriented manufacturing, instead of shrinking under the influence of booming oil revenues, grew. In the case of agriculture this was facilitated by the country's being on the edge of a potential Green Revolution as the 1970s began. Success along that path was furthered by various forms of government support − investment in infrastructure, subsidisation of the fertiliser price to encourage its use, stabilisation of the rice price and others. The overwhelmingly small-farm structure of Indonesian agriculture meant that the introduction of new technology would not be a threat to employment in those farm families. On the manufacturing front, government continued to provide protection for various domestic market-oriented industries. Later, as oil revenues fell and growth slowed, Indonesia succeeded in launching a light manufactures export sector. To do this required a well-executed real exchange rate devaluation in the latter-1980s.

Growth acceleration initially manifested itself in the labour market primarily through an increase in employment/decrease in underemployment. This widening of employment opportunities helped to prevent an increase in inequality. Over the 30 years of rapid growth from the late 1960s, the demand for unskilled labour was driven first by agriculture, especially rice − dominant until 1972 and important until 1987 − then by manufacturing − significant by 1972 and playing a dominant role from 1987 on - and construction, which had a smaller but still significant role, as labour-intensive public works were a major source of employment demand in several periods. A boom in housing construction contributed as well. Services accounted for a little over a third of the new jobs over 1971-85 but for over 60% by 1985-97. By the early 1990s nearly all wage rates were rising as the labour market tightened up.

Indonesia established its enviable record of growth with relative equity through a combination of good luck and good management. The main piece of luck was the availability of new agricultural technologies from the 1960s that could raise productivity and create jobs simultaneously. Good management showed up in the maintenance of macroeconomic stability, the investment of much of the oil profits in infrastructure expenditures and other supports for the Green Revolution, and the adoption of a reform package in 1986, most notably a major devaluation which allowed the country to launch its manufactured exports career. Another step that contributed significantly to overall growth and to raising the incomes of the bottom half was the extension of the financial system to reach them. The savings of lower income people were probably small until the country was well into the sustained boom. But eventually small rural savings grew dramatically.

The *Chilean* path out of excessive minerals dependency may be characterised as the 'high road' in that it did not rely on low wages and labour-intensive manufacturing exports. Because of its much higher per capita income and wages than Indonesia's when that country made the shift to light manufacturing exports, this option was not open to Chile. As a result the 'new exports' were a mixed bag, involving in the first instance such primary products as salmon, wood and products, grapes and wine, etc. and only later a significant role for manufactures. The transition was bumpier than Indonesia's. In both cases it occurred either mainly (as in Chile) or wholly (Indonesia)

under authoritarian rule and in both cases an impressive group of technocrats (albeit of different views on some things) had the ear of the president.

Extreme dependence on copper exports was ended by the expansion of non-copper exports and an associated economic acceleration, which broke a lengthy pattern of only modest growth, during which the country had channelled copper rents towards human capital formation and manufacturing, among other uses. Corruption and theft were not large by the standards of the oil countries. Chile's recipe to break the stranglehold of mineral exports involved a combination of planning and market support policies that led to a dramatic expansion of non-copper exports. By 2000 copper's share of exports was under a third. Many new export products have emerged over the years, bringing the number up from 200 in 1970 to 3,900 in 1996. The destination of exports has also diversified considerably. For much of this period the most dynamic category was traditional non-copper (fresh fruit and natural-resource based manufacturing such as fish meal, wood pulp, etc.) but this group has recently been surpassed by non-traditional items (other manufactures and new resource-based items). Manufactured exports grew at 15% per year from a small base of 2% of exports in 1970 to 14% in 1998.

The tremendous number of new export items that had emerged by the mid-1990s suggests the role of a devalued currency that raised the profitability of a wide range of tradables. Effective management of the exchange rate was not easy since when Chile became a favoured destination for capital inflows – both FDI and short-term speculative funds – a new threat of overvaluation and exchange rate instability appeared. Chilean officials responded by introducing capital controls to discourage an excessive inflow of speculative capital. Another positive development was a dramatic rise in the domestic savings rate. Business savings were the driver of this success. The social security reform of 1981, which shifted the system from the previous (and bankrupt) 'pay as you go' (PASG) mode to an individual capitalisation scheme of compulsory saving, contributed thereby to macroeconomic stability and to a deepening of the financial markets. Human capital was considerably more abundant and the combination of natural resources and technological improvements (as in forestry, fishing and fruits) yielded a number of important new export products. Though human capital availability was a plus, scarcities arose as growth accelerated, and this was likely a factor contributing to the increased inequality of labour earnings over the period.

Over the period 1987-2003 when growth averaged 5.9% per year, agriculture's share of employment dropped from 16.2% to 13.1% and manufacturing's from 17.9% to 13.3%, even though its output was rising at 6.0%. Manufacturing employment grew at 1% per year, contributing just 5% of all new jobs, as the sector's labour productivity leapt by 5% per year, partly due to shifts in composition, with large positive contributors to net job change being food, beverages and tobacco (3.94%), wood, wood products and paper (2.72%) and metal products (2.35%). Large losses occurred in textiles and clothing (-2.85%). Employment-wise the big gainers were commerce et al (15.5% to 19.9%) with 28% of new jobs, finance, etc. (4.6% to 6.9%) and construction (6.6% to 8.6%). Interestingly, the services share was just constant at about 28% (27.8% to 28.1%). The breakdown of net employment gain shows nearly 60% in commerce et al and services, with another 11% in finance, 10.5% in transport et al, 12% in construction, only 5% in manufacturing and 7.6% in agriculture et al. Two very impressive employment performers over 1992-2003 were business services (13.9% of all new jobs) and education (12.3%), while personal services, with a falling share of employment, accounted for just 5.6% of new jobs.

Venezuela's experience from the 1920s reflects both the positive and the negative effects of a large endowment of oil. During the fast growth period up to the 1970s labour demand and wages appear to have risen more or less commensurate with the growth of output per capita. By the 1960s inequality of labor earnings was high, but somewhat below the average for Latin American countries. During this half-century the structure of employment changed rapidly. In 1920 the share of agriculture et al was nearly 70%; by 1950 it had fallen to 44% and by 1977 to 17%. This enormous decline can be seen as a combination of the normal fall in agriculture's share as development proceeds, accelerated by the unusually fast economic growth and by the crowding out effect of petroleum exports on other tradables. The corresponding increases occurred mainly in construction, from probably under 2% to 5.4% by 1950 and 8.8% in 1977; manufacturing, from 9%-10% to a peak of 16%-17% by 1977; and commerce et al from probably about 5% of employment in 1920 to 8.8% in 1950 and over 17% in 1977, on its way on up to 26.7% by 2002. The public sector showed increases from about 2%-3.5% in 1920 to probably 10%-11% in 1950 and around 18% in 1990. Transport et al grew from 3.5% in 1941 to 6.7% in 1977. Services, other than public sector, recorded a major increase from about 8% in 1920 to 14.6% in 1950 and on to 35% in 2002.

Ironically, it was the oil price hikes of the 1970s that brought this generally satisfactory oil-based development to a halt. Over 1972-78 the non-oil economy boomed at 8.4%, but much of the windfall was used to raise employment, wages and output in the public sector. Per capita consumption went up by 50% over 1973-82. After some saving abroad in the first years, the country had by 1976 become a net borrower and began channelling present and future oil revenues to develop a large public enterprise sector, mainly in basic industries. Previously those revenues had gone to general infrastructure and the social sector, the first of which at least could be cut back without great difficulty when revenues shrunk. Now it was locked into low productivity expenditures. A vicious circle of powerful groups constraining decisions into unproductive channels and periodic shocks has helped to keep Venezuela off a healthy growth path since the 1970s. The plethora of policy errors was accompanied by some elements of bad luck, chief of which was the open character of the Venezuelan capital market and the grievous malfunctioning of the international capital market in the 1970s. After being lured into international borrowing at what were very low real interest rates, Venezuela, like so many other countries, was caught off guard by the sudden reversal of the international capital market in the early 1980s.

With Venezuela's failing growth performance came a dramatic wage crash. Between 1950 and the peak in 1978 the implicit wage series from the national accounts indicates an approximate doubling; by 1989 this series was back below its 1950 level. In this case the recent dominance of services in job creation (about 80% over 1977-2002) is at least in part the result of the proliferation of low-paying jobs in the informal sector, whose share of total employment rose from 30% in the late 1970s to 50% by the mid-1990s. It is possible, though not confirmed for want of reliable data, that inequality increased significantly since the early 1980s.

Nigeria's economic performance has been erratic and on average weak since its short quick recovery from the civil war of the late 1960s. Over 1970-2001 average growth was just under 2.9%, resulting in a slight fall in GDP per capita. The country is seen as a prime example of how oil and minerals can exert a negative impact on institutional quality and through that on economic performance. Inequality appears to have increased significantly since the oil bonanza began, which, together with no increase in per capita income, means that poverty has risen markedly.

In Nigeria's case the oil industry appears to have discouraged production both in agriculture, whose share of output and employment has fallen precipitously, and also in manufacturing. The oil period ushered in a very rapid process of urbanisation and labour reallocation, parallel to Venezuela's between 1924 and 1940 or so. By 1986 only 48% of the classified labour force was still in agriculture (down from over 70% at mid-century), with manufacturing's share sitting at a paltry 4.4%, commerce et al up to 25.0% and services to 15.3%. At this time only about 19.4% of the employed were in paid positions, with the majority of these in services (60% of them), presumably principally in the public sector. In manufacturing only 18.2% of the employed were paid and in commerce et al (dominated by women) the share was just 2.9%. In terms of employment structure, Nigeria thus urbanised in a much more 'informal' way than had Venezuela—few paid jobs appear to have been available outside of government. And employment was strongly skewed towards commerce, as reflected in the ratio of about six jobs in the commerce et al sector for every one in manufacturing, far above the normal range of about 0.7 to 1.5 or so.

In contrast to Indonesia, Nigeria's' development strategy was strongly urban-biased. The decision-makers believed that achieving productivity gains in smallholder agriculture would be hard, so little effort was directed this way and agricultural technology remained static. Politics probably favoured spending on education, in part because of a popular feeling that it could be a mechanism of social mobility. Policy-makers believed that urban poverty could be attacked by service delivery. Within agriculture the spending pattern favoured large, better-placed farmers.

Given Nigeria's base of other resources, it is plausible that post 1970 growth might have been reasonably good without the oil. But average non-mining growth averaged just 2.5% over 1972-84 (fast in the first years, then negative), despite the biggest investment splurge in the country's history. A high share of that investment went for physical and social infrastructure but it did not stimulate other economic activities. Investment quality was negatively affected by a variety of institutional and administrative flaws. Of the oil countries studied by Gelb and associates, Nigeria (together with Iran) suffered the highest degree of exchange rate appreciation by the early 1980s. The overvaluation was to a great extent related to the political need/desire to create rents for government officials and their cronies.

Taken together, the experiences of these four countries suggest that promising new or strengthened competencies may be expected to emerge in each of the primary, secondary and tertiary sectors. Central to the early success in Indonesia was investment in raising agricultural productivity, especially in rice, the staple crop which could have become a significant import in the absence of that improvement. Not achieving much productivity increase in agriculture contributed to failure in Nigeria. But agriculture's potential role in growth and overcoming of mineral-dependence arises mainly in countries that are still largely agricultural. Mining itself seldom generates more than 2% to 3% of employment in countries of any population size.

The big debates about potential and desirable sectoral roles in minerals-dependent countries thus involve services and manufacturing and subgroups of these broad categories. If one believes it essential for longer run growth that manufacturing play a large role, then one will probably be worried if service-type activities appear to be growing at the expense of manufacturing. Such a concern with fast growth of service employment should be distinguished from a different worry, the idea that fast service employment growth signals an overall problem in the labour market, a problem which forces too many people into easy-entry, low-productivity sectors, most of which are in services. Thus in post-1980 Venezuela, much of the service employment growth has been a reflection of weak labour demand. The evidence from these four countries and

in general implies that in some degree an increase in the share of non-tradables and of services is inevitable and in some degree (not usually the same degree, however) it is desirable. In recent decades the share of new jobs generated by the service sector ranges from 60% to 90% (*see Table 1*). It was nearly 80% during Chile's fast-growth period when it might reasonably be assumed that markets were working effectively so this allocation was an efficient one. Two categories of services with special interest are tradables (tourism, computer services, etc.) and services sold to businesses and hence logically having the potential to raise productivity in those businesses.

Patterns of growth acceleration

When a country, whether minerals-based or not, has been undergoing a period of stagnation or slow growth, how may it make the leap to fast sustained growth? The record from episodes of growth acceleration in developing countries over the last four decades or so reveals a number of common or even universal features of those successes.

Investment, capital productivity (the marginal output/capital ratio) and savings

Least surprising, a universal feature is **a rising investment rate (the ratio of investment to GDP) eventually reaching a high level**. In nearly all the countries studied this rate got to 25% or more, typically several years into the fast-growth period. The **marginal gross output/investment ratio also typically rises markedly** between slow- and fast-growth periods. Related to the efficiency of (payoff to) investment and its implications for employment is the provenance of the investment (public sector, public enterprise, private, size of firm, etc.) and what kind of investment goods are involved (machinery, construction, infrastructure, human capital). Productivity and employment generation of public investment appears to have varied more than that of private investment, running the gamut from the extremely productive and employment generating investment in support of the Green Revolution in Indonesia to very low productivity and job destroying investment in capital-intensive public enterprises in Nigeria and Venezuela. In experiences of acceleration, public and private investment appear generally to complement and mutually enforce each other, leading to a high average payoff to new investment taken as a whole. The job-creating impact of investment varies according to the technologies embodied in it, which in turn tend to be related to the type of firm or individual doing the investing. Large firms, whether public or private, tend to use more modern capital-intensive technologies that therefore create fewer job opportunities per unit of capital than the technologies adopted by smaller firms. This is one of the reasons why South Korea's record stands out from almost all of the other ones here. Indonesia in effect invested a lot of its 1970s oil revenues in smallholder agriculture and later undertook policies which fostered light manufacturing exports. Both of these steps were big job creators, so it is no surprise that inequality in that country is one of the lowest of those considered. Chile's policies before and at the time of the take-off would be more accurately described as 'pro-large' (in fact when not in deliberate design) and this may have played a role in the fact that increasing inequality and sluggish employment creation characterised the decade before take-off so the take-off occurred in a context where job creation on a big scale was less likely.

High investment requires **high savings**. The ratio of gross national savings to GDP rises between slow- and fast -growth periods, though usually less than the investment rate. The income distributional impact of rising savings is most positive when small savers participate, something achieved most notably in Indonesia through the BRI. Improving saving and credit access for lower income families encouraged the growth

of smaller labour-intensive firms, whose profits then fed into the growing pool of savings. This virtuous circle contributed to employment, equity and growth. No other country appears to have been as successful on this count, though the pension schemes in Chile and Singapore, together with the rising incomes, did encourage savings farther down the income hierarchy than before.

Trade and the exchange rate

Both growth acceleration and success in minerals-dependent countries usually involve the tradable sector in one way or another. To begin with, a common component of the acceleration process (though less universal than a jump in investment) was a significant increase in exports. Their share of GDP rose by 7% of GDP or more in six of nine cases of acceleration to sustained growth. Exports are the usual instrument of take-off in smaller economies, but can play that role even in some large ones (like China) that started out being very inward-oriented. **Export expansion is usually facilitated by a combination of a competitive exchange rate (the most common element of the policy package) and other supporting instruments**. A competitive exchange rate has facilitated the absorption of surplus labour and/or pulled excess capacity into use in cases like China, Chile, Singapore and Ireland. Where the growth acceleration starts from a macroeconomic trough it is to be expected that the extra increase in aggregate demand generated by the devaluation will raise the level of resource utilisation, including labour. Having a very competitive exchange rate, which may require devaluation, is especially likely to be important in minerals-dependent countries aspiring to lower that dependency and/or needing other motors than their current mineral export(s) to achieve growth acceleration. Devaluations were central to the successes achieved by Indonesia and Chile in this regard. The employment and income distributional implications of exchange rate policy depend on the country's economic structure. The strongest case for a large devaluation is where that will bring into permanent competitiveness a set of labour-intensive tradable goods, as it did in Indonesia. The benefits, while important, were somewhat less in Chile, since few of the new tradables were labour-intensive. Devaluation is also more beneficial if the country is suffering considerable resource underutilisation through weak aggregate demand. This appears to have been a factor in most of the acceleration episodes studied.

In a number of cases (Chile, Korea, Singapore, Ireland, and others) **export support policies** – from research and development investment to identify and launch new export items to subsidised credit, import duty drawbacks, etc. – have contributed to rapid export growth. From the employment point of view, it is especially important that such policies be pursued where the tradables in question can generate significant numbers of jobs.

Macroeconomic management

Macroeconomics matters for a country to accelerate its growth, but the relationship between the two is far from simple. That macroeconomic stability is not a sufficient condition for growth acceleration is probably not surprising since one might easily believe that acceleration would mainly occur under conditions of a high and/or rising level of aggregate demand. Investment may be fostered by good access to credit and/or low interest rates, but such demand can cause inflation. Overvaluation can be helpful in restraining inflation but very damaging to growth. One might think of the pursuit of growth acceleration as a venture that is, from the point of view of macroeconomic stability, a risky one. The trick is to understand any trade-offs between growth acceleration and macroeconomic stability – how to achieve the former with minimum risk of damage to the latter. It is essential to get beyond overly simplistic buzz phrases like 'getting the basics right'. The task is to understand what is

more basic that what else and what are the real trade-offs among desirable goals. Among the acceleration episodes studied, **moderate inflation was a fairly frequent accompaniment** to accelerating and fast growth. In most economies, the shift from low to high gear appears to need a strong level of aggregate demand, which both raises the efficiency of resource utilisation and over a period of time induces a major increase in investment. Although very low rates of inflation are clearly not a necessary condition for growth acceleration, and may in some cases be a deterrent to such acceleration, **reasonable fiscal balance and macroeconomic conditions** are often a precursor, hence perhaps a true prerequisite of take-off. If an undesirably high level of inflation appears unavoidable if growth is to accelerate, how much should one worry that this will have negative employment and/or income distributional effects? To the extent that the inflation is simply a reflection of an economy heated up by high demand, this condition should by nature be employment increasing. Inflation that leads to a modest price-wage lag may even be desirable by raising profits and encouraging investment and expansion that will, with a modest lag, be employment creating. Early in several acceleration episodes, it was business savings (out of recent profits) that mainly fuelled the ascent. When inflation has a more cost-push character, these optimistic conclusions may not hold. But it is revealing that in none of the acceleration episodes studied did inequality appear to increase. Any negative effects of a price-wage lag when it appears (as in Singapore and Brazil) were apparently offset by the rapid increase in the quantum of employment.

Labour and education/training policy

The fact that growth acceleration requires rising savings and investment signals caution on wage policy. It is important that profits be adequate both to make investment desirable to firms and also to facilitate their undertaking savings to be used to that end. Thus it is probably not a coincidence that **take-offs tend not to begin in the midst of rapid wage increases**. Such increases usually come anywhere from a couple of years to five or more after the growth acceleration. This lag notwithstanding, growth **accelerations seldom lead to increasing inequality**, in spite of some presumption that they might. Many minerals-dependent countries have fallen into the trap of paying high salaries in the public sector (including public enterprise), as well as in the export-oriented mineral sector itself. The typical volatility of the export price means that, sooner or later, the cost of those high wages in terms of growth is likely to become high through their eating up potentially investable funds. The level of wages/salaries should thus be determined prudently, with a view to the possibility that future resource rents will be less than present ones.

Neither with respect to training nor education is it easy to learn from the empirical record how much education and training have contributed to acceleration or to overcoming minerals dependence. It is reasonable to guess that Chile's relatively good record on education has been a factor in its export diversification and overall growth. In countries trying to grow out of minerals-dependence like Chile, Venezuela, Malaysia and Nigeria, human capital formation is likely to be important but straightforward policy conclusions are hard to draw.

The role of technological change?

Developing countries tend not to live on the world technological frontier. Thus, whenever acceleration occurs there are likely to be more modern and sophisticated technologies available to the country than those currently embodied in the capital equipment that is wearing out. If a country is lucky, the first stage of acceleration may simply involve raising capacity utilisation, which creates jobs without destroying any. The introduction of new technology may then be gradual as growth proceeds, in which case there may be no net job destruction. Under the opposite conditions, there

may be considerable job destruction and the take-off could worsen income distribution. Indonesia's experience approximated the first situation, with Chile's closer to the latter one. Still, the fact that increased inequality was not a normal accompaniment of take-offs gives grounds to believe that successful episodes do not involve such major and rapid adoption of capital-intensive technologies as to have net labour-displacing effects or to worsen income distribution. Where technological choices involve much labour displacement, the countries have tended not to grow (Venezuela after the 1970s and Nigeria).

Few growth accelerations have relied much on a country's technology policy. In contrast, overcoming minerals-dependency may require a strong technology drive: the objective is medium and long run in nature and involves raising productivity in a variety of new and existing activities. This objective naturally entails an attempt to identify activities that are candidates for such productivity improvements as to allow them to grow fast. Chile is the prime example of a country whose growth acceleration coincided with its leaving minerals dependency behind, with success on both counts owing a good deal to its pre-take-off technology policy of R&D in promising sectors, including both fairly natural ones (given Chile's economic history) like fruits and rather surprising ones like freshwater salmon. These technological advances were big enough to play an important role in growth acceleration by adding important new products to the roster of exports.

Industrial strategy and growth synergies

Growth acceleration has typically been associated with an **economic or industrial strategy that the government pursues vigorously through a variety of instruments**. Traditionally, trade barriers have figured prominently among those instruments, but credit allocation, R&D for new exportables, investment in infrastructure and training, export subsidies and many others make up the typical package. In most cases this industrial strategy also involved a large role for markets and the incentives they provide. **Accelerations typically involve positive synergies among growth itself and the key contributing factors to it: savings, investment and export expansion**. Positive inertia built around those synergies explains much of the pattern in which, once growth begins to accelerate substantially, it continues, unless interrupted by strong negative shocks or impeded by weak policies.

The overall logic of employment policy

One reason that makes employment policy necessary in the first place is that sectors of output growth are not necessarily sectors of employment growth. This is true, par excellence, in the case of mineral exports. In Nigeria, oil has accounted for nearly all of exports (96% in 1991) and up to 40% of GDP but less than half of 1% of employment (1986). While the fact that mining is not a job-creator is well known and easily attributable to its normally high capital intensity, one might expect that export booms in other products would be more likely to play a major or dominant role in job creation. But in a group of experiences ranging from the rising competitiveness of Indonesia's biggest tradable – rice – through Chile's, China's and Mexico's fast growth of manufactured exports in recent decades, the accompanying employment expansion has been much less. Thus Chile's manufacturing output grew at 6% over 1987-2003 but employment stagnated and the manufacturing share of total employment fell significantly. China's manufacturing employment is estimated to have slowed substantially since the mid-1990s, perhaps even stagnating These superficially anomalous outcomes are in part the result of a natural aspect of the growth process, especially when growth is occurring through expansion of exportables and/or importables. Often the main reason that a sector grows faster than the rest of the economy is that it is undergoing rapid productivity growth, giving it a leg up in the

ongoing competition for space in the market. Often labour productivity is what rises the most. In any case, the predictable result is that when a sector grows atypically fast, there will also be an atypically large gap between its output growth and its employment growth. This combination of outcomes suggests that, sectorally speaking, output growth does not translate into employment growth of comparable dimensions, hence that if there is an employment challenge one should not expect it to be adequately met by the fast growing sectors. In the common case of accelerating growth episodes or countries growing out of minerals dependency, this general feature of differential growth across sectors tends to follow a pattern in which much of the output growth occurs in the tradables sector but much of the employment growth occurs in the non-tradables sector. This constitutes the most general reason why the employment challenge is not the same as and must not be confused with the growth challenge.

Table 1 - Growth of the service share* of employment under the influence of mineral exports

Country and period	Share of services at beginning of period (percent)	Share of services at end of period (percent)	Share of services in net new jobs created (percent)	Annual growth of employment in services (percent)
Indonesia				
1971-85	28.0	32.0	36.8	3.6
1985-97	32.0	40.1	60.6	4.6
Chile				
1940-70	36.1	41.6	50.4	2.1
1970-1985	41.6	55.7	96.0	4.0
1985-2003	55.7	63.4	77.6	3.2
Venezuela				
1920-77	20	56.1	63.5	5.1
1920-50	20	35.2	46.7	4.8
1950-77	35.2	56.1	69.9	5.4
1977-2002	56.1	69.8	79.5	4.5
Nigeria (males)				
1952/3-1986	15.0-18.2	39.3	55.3-57.7	4.9-5.5

** Equivalent to the 'tertiary sector' – includes all sectors except agriculture, et al, mining, manufacturing and construction.*

Sources: ILO yearbook of Labour Statistics, various issues. For Nigeria, 1952-3, Helleiner (1966, Table 1-8B-2). For Chile, 1940, Mamalakis (1986, 198-9, 204-5). For Venezuela, the sources cited in Berry, 2006).