The future of forestry — A battle between economic theory and common sense

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Whether New Zealand foresters like it or not they are now forced to meet the challenge to their unquestioning faith in the concept that creating renewable assets is good business for investors, whether they are using their own money or the public purse. The Minister of Finance's Economic Statement of December 12, 1985 and the publication of the Consultative Document on Primary Sector Taxation of March 1986 [i] were both clear indications of the present tax gatherer's appreciation of the business of forestry.

In simple terms, if an investor creates a capital asset which grows in value over a long period rather than depreciates, he can expect to pay full tax on most of the original investment plus the increase in value over the growing period, thereby effectively placing a tax on inflation and natural growth. That is, from a taxation point of view, plantation forestry is to be treated as a capital investment at the start and as full taxable income in the final year after 30 years' growth of value. The original intentions of the Treasury theorists were modified to a small extent by the Report of the Consultative Committee on Primary Sector Taxation, June 1986 [ii]. However, even this galaxy of four (including one woman) eminent neutral economists failed to bury the theoretical fallacies which gave rise to the original proposals. Given the proven ability of these people, one must question whether their hands were tied by the terms of reference under which they were forced to report. It surely must be a very simple exercise to conclude that investing capital in a crop (or trading stock) with a relatively short pay back period (e.g. kiwifruit growing) is a much more viable option than tying up the same capital for 25-30 years and therefore different tax regimes should apply?

It is however fruitless to merely criticise either the Treasury theorists or the Committee, which appears to have done an otherwise sterling job in sweetening the pill which the primary sector is being forced to swallow. The problem lies in the complexity of economic theory when applied to long-term investment, the evaluation of risk and returns by those who spend the money and those who collect the tax and, put bluntly, the blind faith of most foresters in the infallibility of their financial decisions. A harsh judgement of the latter could be that most of us won't be around to face up to the consequences of the burden of accumulated expenditure, excessive extraction and transport costs or market supply and demand variations. This perhaps explains a predilection for using carefully calculated Internal Rates of Return when we are measuring the expected financial consequences of our actions rather than facing up to the more stringent discipline of Net Present Value calculations based on Discounted Cash Flow including the burden of taxation.

It has fallen to another economist, rather than a forester, to point out the errors in Treasury's original thinking. A paper published by Ed Vos of Waikato University entitled Net Present Value vs Internal Rates of Return — Another Misunderstanding, The Accountants' Journal, June 1986 [iii] uses detailed theoretical arguments to effectively demolish the equally theoretical Treasury case published in the March White Paper. It behoves all foresters to read both if they wish to be responsible for investment decisions in the future or indeed if they expect to have any budgets with which to carry out such decisions! You may not follow completely the mathematics and theory but in both cases the messages are clear. It is important however that the conclusions are at such variance and that the tax gatherer's spokesmen have more power in the land than the academic defender of long-term investment. Vos's conclusions are important to the future of NZ forestry and should be studied and understood by anybody who plans to invest in forestry — with either his own or others' money. There are many passages in the paper which it would be useful to reproduce here but one will suffice as a warning to both the Government and investors: —

> "What motivation is required on the part of an investor to invest in a long-term project so that the tax collector gets a present value income and cannot sustain a loss, and the investor *may* get a present value income and must sustain all the risks and uncertainty over long-term investment?"

What motivation indeed? One can but conclude that the only people who will now invest in creating further forest assets in New Zealand are those who have a blind faith in the hope that common sense will at some time return to the Treasury benches.

It will be a tragedy if this only happens after serious disruption of the sustained build-up of a most valuable national asset and the diversion of hours of executive time to preparing and presenting submissions. An even greater loss will be the probable dispersal of both a professional corps of foresters to overseas positions and a skilled rural workforce to the stultifying dependence on social welfare in an alien urban environment.

References

(1) Consultative Document on Primary Sector Taxation. Minister of Finance. March 1986.

(2) Report of the Consultative Committee on Primary Sector Taxation. June 1986.

(3) Vos.E. "Net Present Value vs Internal Rates of Return — Another misunderstanding" The Accountants' Journal. June 1986.

Whose forest when?

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"Property," wrote the 19th century anarchist Pierre-Joseph Proudhon, "is theft." Fifty years later, G. B. Shaw was to commend this as "the only perfect truism that has been uttered on the subject". Surprisingly, there is some recognition of this principle from an unexpected quarter — statute law; the concept of absolute ownership clarifies the Crown's ultimate power whilst the ownership in "fee simple" (freehold) by which we "possess" our greater or lesser sections is legally a lower authority delegated from the Crown. This status is not only bluntly revealed by the non-ownership of water, minerals and oil on our land, the easements of public utilities, or the planning controls of district schemes, but even by the justification of estate duty in terms of a levy for the privilege of passing on wealth to one's descendants rather than having it redistributed to ensure fresh equality of opportunity for the next generation.

A mere quarter of a century ago, arguments for nationalisation still held the stage supported by "market failures" of private enterprise in generating such unwanted externalities as toxic waste or omitting to produce desired ones such as a social conscience; now privatization has replaced it amid mounting evidence of public enterprises' failure to deliver goods at acceptable cost or even the right goods at whatever cost. Yet the debate only becomes sensible if it is recalled that the criterion by which both institutional forms are judged is the efficient economic allocation of society's resources, that is, creating a state where the comfort of the beneficiaries of economic activity simply cannot be bettered without worsening the plight of the others, even after allowing for compensation. The apparent preference of economists for private ownership as the most efficient form has been alleged by some critics, including a Nobel Laureate in economics, to stem from the structure of the discipline itself rather than empirical observation.

Familiar assumptions are that private enterprise is leaner, more industrious, more responsive to the marketing environment, and more innovative.

Against this background, forests are assets with the rare quality of a high proportion of State ownership (perhaps three-quarters) world wide. Even in the United States, Federal, State or local Government owns 27% of forested land and over 60% of the softwood saw log resource. This degree of State ownership can also be found in most Scandinavian countries and Japan, but with the very important difference that corporate industrial ownership is very low, and "small" private tenures constitute most of the resource. Other countries occupy intermediate positions, such as the United Kingdom with similarly low corporate forest but higher State forest levels. Often local, collective, communal and even religious tenures are important, and in yet other nations a very high level of State ownership may disguise effective control elsewhere: for example, corporate access to forests in British Columbia through residual value stumpage appraisal systems, forests under collective farms in the Soviet Union and de facto use by local farmers in India.

The striking feature of New Zealand forest tenure is not the State proportion (intermediate between the extremes of Scandinavia and Canada) but the large corporate tenures and consequent small private and local authority remainder. Owing to the special privileges accorded to existing forest owners in the transitional provisions under the new fiscal policy and the effective barriers to entry imposed, this pattern is likely to endure. But the question as to which pattern is best for the national welfare remains, and furthermore it is essential to know if there has been evolution in corporate State forest owner behaviour and if this evolution will probably continue. In 1939 Peterson in the USA listed his "Nineteen Reasons Why The Government Should Own Our Forests". Without enumerating these, it is remarkable how large a proportion of them have since been negated by private organizations showing themselves capable of undertaking operations, especially regeneration, which Peterson supposed only the State could do. Furthermore, the State has not performed some of the roles to the degree which Peterson obviously expected. Indeed the arguments are even older, as one lesson from our own history records; in 1887 the Stout-Vogel Government, which had pioneered the first forestry legislation, was ousted by the Atkinson Government which immediately put the axe into the fledgling Forest and Agriculture Branch of the Lands Department. The first Chief Conservator of State Forests, Prof Thomas Kirk, who was to be dismissed at the age of 60 with £110 18s 6d compensation, tried to counter the two main objections to State forestry which were that forestry if profitable would be undertaken privately and that forests were more economically administered by local bodies.

If these all too familiar arguments had any element of truth, it is clear this could only appear in an environment closer to the contemporary one. In 1887 as later events demonstrated, they were hopelessly out of time. But memories are extraordinarily short. In 1981, for example, a UK economist was stating in a study entitled "State Forestry For The Axe" that there had been no previous economic analysis of the subject, although he was writing only nine years after a massive cost-benefit study and subsequent technical discussion had taken place! However, to examine the extent to which these reasons might be more valid today it is necessary to look not only at changes in forest owner behaviour, but also at changes in the theory of organizations.

The firm is no longer seen as a black box in economic theory but as a nexus of human relationships governed by various contracts. Most larger modern firms have undergone some degree of decomposition away from the old separation by function to a new alignment as partially autonomous divisions, thus specializing a head office in strategic decisions and delegating authority for operating decisions to the divisions. An educational specialization has arisen to underpin this distinction, in that inspection of the pedigrees of top management would reveal dominance by what might be called the "urban-abstract" professions of economics, accountancy, law, planning, administration and financial analysis. Technologists make the operating decisions, but the upper group are specialists in decision management.

Above and beyond them are the "owners", and in this context, it does not much matter whether they are shareholders, donors, rate payers, tax payers, or whatever. The point is that they are "residual claimants" to the increase in wealth of the firm after employees, creditors, tax collectors and suppliers of goods and services have been paid. They bear the residual risk of any project, and therefore their concern is decision control. The managers' and owners' objectives will not be identical since there are not only negative deviations such as borrowing the welding equipment over the weekend or having a bigger PC than necessary or even shirking (leisure consumption on the job) but also positive ones such as ambition, willingness to learn and hiring industrious workers instead of the owners' favourites. Control of these differences involves the monitoring cost of surveillance, the bonding costs a manager willingly accepts to secure a defined area of freedom and the residual loss from a straight divergence between the owners' wishes and the managers' actions. Collectively these "agency costs" represent a modern formalisation of the separation of ownership and control problems earlier popularised by now unspeakably unfashionable economists like Veblen and Galbraith.

How are agency costs minimised in New Zealand? Of perhaps a million-and-a-half economic entities the majority are individuals who both own and manage their principal enterprise of selling their work skills (property rights are after all just human rights); only about 130,000 companies exist, which are predominantly private, that is, closed to public analysis of their accounts and restricted to 25 shareholders; only a fraction of public companies are listed on the stock exchange and a yet smaller fraction of these have shares which are actively and regularly traded. Only a minute part of all economic activity, therefore, is subject to the intense rigours of share price monitoring (reinforced by the published opinions of investment analysts), the dread of takeover — transfer of property rights which technically limit the power of managers to pursue their own interests, and of course the market for managers itself.

Privatisation arguments rest on the belief that there is insufficient performance monitoring in the public sector and that agency costs are very high as a result. Wrist-smacking by control departments such as Treasury or State Services Commission does not, by this yardstick, belong in the same league as the threat of job loss from takeover. In 1978, another control department, the Audit Office, inadvertently set the privatization ball rolling by complaining about the inability to determine objectives or profitability from the Forest Service accounts. This year the Auditor-General has brought the whole of the public accounting system to task by highlighting distortions caused by cost accounting, activities of Government bodies outside the public accounts, and mis-statements of Government indebtedness. Nevertheless it is still hard to find data which prove the conventional picture of the performance independent tenured public servant and the performance linked flexibility of senior private managers. Recent events in both parts of the economy suggest that organizational changes leading to job losses can occur through causes quite remote from a manager's devotion to the organiztional ideas, i.e. where agency costs are low.

In the recent Reith Lectures, OECD economist David Henderson has stressed the policy making role of DIYE ("do-it-yourself-economics") by which a body of unwritten "truth" on economics firmly underlies major decisions. It is the influence of DIYE that makes privatization an ideological issue. A recent revolution here has seen DIYE usurped for the first time by DIME ("do-it-myself-economics") which has the modern advantage of at least being real economics but the ancient disadvantage of dogmatism. The latter by nature never retreats before spoken facts but only before reality and thus the Chilean and British experience is illuminating because although some privatization is widespread throughout the world, the sale of a controlling shareholding is much rarer. In the Chilean case, 1976 sale prices were of shares, not forests, and the accounts of some purchasers eventually showed technical insolvency with State ownership still present behind a chain of creditor's committees leading through the private banks to the State bank, except where foreign capital could underwrite the loss. In the UK examples like the National Freight Corporation and Sea-Link were successful in so far as improved performance was not confounded with a cyclic upswing in profitability; less optimism is felt for former monopoly utilities such as gas. As for forestry, the self-funding dictum naturally led to disposals of fragmented and remote blocks and not to the best (intra-marginal) State forests.

Despite the still-unfolding nature of the privatization evidence, public enterprises producing market goods are poor performers against the simple benchmark of losing or making money. But the rationale for public enterprises often resorts to the need for public goods, which by definition, are goods where customers are not in rivalry with one another and where the producer cannot exclude non-paying customers. Pure instances are hard to find — even a fine landscape takes on the attributes of a market good when the heads between it and the onlooker are too many — but one perfectly pure case in forestry is that of "option demand". This may be defined as the vicarious pleasure felt by a consumer from the knowledge a forest exists and will continue to exist, that perhaps one day he/she might visit it, that others are now doing so, and that photographs, lectures and other forest artefacts may be enjoyed without consuming the physical forest or even without ever visiting it. A fascinating phenomenon is that, although a public good, option demand for forests has been vigorously advertised and very successfully sold using market good techniques. No economic explanation has yet been advanced, but it's worthwhile noting that restriction of many of our forests to this single production output has been effected through the public sector. From there, it has quite naturally moved to the private indigenous forests with a view to turning the balance of produce from these forests (largely in Maori ownership) from private to public goods.

The complete privatization choice open to the owners of the State Forestry Corporation is subject to lesser degrees of completeness through the sale of the best forests; use of the Forestry Rights Registration Act to sell trees but retain the land over whole or fractional rotations; sale of non-voting preference shares or even a minor part of the ordinary capital; sale of marginal forests (which might be profitable with lower private overheads); formation of several independent regional corporations; or one corporation with arms-length transfer pricing between the growing and processing divisions. At the time of writing the last is proposed. Choice from along this spectrum depends on one's assessment of the magnitude of likely agency costs, the potential for monopolistic misuse of forest resource tenure in a contestable market (notwithstanding timber imports), regulatory restrictions, the degree of intelligence in setting a rate of return criterion, and esteem for public or market goods like recreation potential whose production will still be trapped into exotic forest management.

From the viewpoint of other protagonists in the forestry sector, the risks are high, since economies to scale and the sunk costs of time preclude contestability, increasing a single corporation's market power. Hobson's choice for a big processor with inadequate forest must be offshore investment, and one company has logically chosen this course of action. The lesser the owned or contractually secured New Zealand forest, the greater the offshore movement will be. Moreover, in former times the first to formulate capacity expansion plans to mill wood not yet grown could seize strategic control against competitors on social infrastructure reasoning, but in today's market-minded ethos, as noted by Alf Leslie in his study of Australian pulpwood royalties, once a mill is built it is the *buyer's* bargaining strength which is dramatically reduced.

One final word on values is in order. Much is said on the "difficulty" of valuing State forest assets (in preparation for blanket coverage by rate of return criteria), but even a cursory study of the work of registered valuers or of investment analysts working on office buildings or share price/earnings ratios will serve to demonstrate that valuation is an exacting but not an exact science.

Economists who continually discriminate against forest valuers merely expose the flaws in their own capital theory upon which we all, unfortunately, still depend. In selling (privatizing) or buying (nationalizing) assets some non-forestry examples would be salutory: British Telecom shares were shown to be underpriced by a sharemarket rise of 50% in value within one week of issue; on the other hand, as stressed by our own Auditor-General recently, 291 million *over valued* shares were bought by the Government in exchange for debt-assumption from New Zealand Steel, trading by April 1, 1986 at 53 cents compared to an assessed value of $3.93 — an extra implicit loss of nearly one-billion dollars.

The debate on privatization is clouded by ideology, do-it-yourself-economics, and single school of thought economics. But there is much more real thinking than ever before. New Zealanders now appreciate that owning a national resource may be no consolation for inefficient delivery of the product and in much the same way they have simultaneously understood that foreign ownership of productive New Zealand assets could even be better than exploitation by an over-protected domestic producer. A key feature of the situation is evolution. Different modes of forest ownership are needed at different times — freedom to transact is of the essence. It is now less a question of which forest where, but of whose forest when?