How Asia Works

SUCCESS AND FAILURE IN THE WORLD'S MOST DYNAMIC REGION

Joe Studwell

PROFILE BOOKS

This paperback edition published in 2014

First published in Great Britain in 2013 by
PROFILE BOOKS LTD
3A Exmouth House
Pine Street
Exmouth Market
London EC1R 0JH
www.profilebooks.com

1 3 5 7 9 10 8 6 4 2

Designed and typeset in Garamond by MacGuru Ltd
info@macguru.org.uk

Printed and bound in Great Britain by
CPI Group (UK) Ltd, Croydon CR0 4YY

A CIP catalogue record for this book is available from the British Library.

ISBN 978 1 84668 243 8
eISBN 978 1 84765 409 0

Contents

Part I

Land: The Triumph of Gardening

'I am the son of peasants and I know what is happening in the villages. That is why I wanted to take revenge, and I regret nothing.'

Gavrilo Princip, assassin of Archduke Franz Ferdinand of Austria[1]

Why should land policy be so important to development? The simple answer is that in a country in the early stages of development, typically three-quarters of the population is employed in agriculture and lives on the land. East Asia after the Second World War was no exception. Even in Japan, which began its development in the 1870s with a three-quarters rural population, almost half the workforce was still farm-based at the start of the war. With most resources concentrated in agriculture, the sector offers poor countries the most immediate opportunity to increase their economic output.

The problem with agriculture in pre-industrial states with rising populations, however, is that when market forces are left to themselves agricultural yields tend to stagnate or even fall. This happens because demand for land increases faster than supply, and so landlords lease out land at increasing rents. They also act as money lenders at high rates of interest. Tenants, facing stiff rents and expensive debts and with little security of tenure, are unable to make the investments – for instance, in improving irrigation or buying fertiliser – that will increase yields on the land they farm. Landlords could make the investments to increase yields, but they make money *more easily* by exacting the highest possible rents and by usury, which adds to their land holdings when debts cannot be paid and they take over plots that have been pledged as collateral. A situation arises where 'the market' fails to maximise output. At the time of the Second World War, this scenario was present – in varying degrees – everywhere in east Asia, from Japan to China to Indonesia.

In conditions of a growing population, low security of tenure and no restrictions on the charging of interest, a market in land arises in which concentration of ownership trumps improvement of yields as the easiest source of income for land owners. The problem has plagued agriculture in poor countries around the world. What is different in some states in east Asia is that after the Second World War they made radical changes to land distribution and structured a different kind of agricultural market. It was a rural arrangement in which market forces tended to maximise output. There has been no equivalent policy change of such magnitude and effect anywhere else.

The vehicle for the change was a series of land reform programmes undertaken in China, Japan, Korea and Taiwan. Although the first was orchestrated by communists, and the second, third and fourth by anti-communists, the objective was the same in all cases. It was, roughly speaking, to take available agricultural land and to divide it up on an equal basis (once variation in land quality was allowed for) among the farming population. This, backed by government support for rural credit and marketing institutions, agronomic training and other support services,

created a new type of market. It was a market in which owners of small household farms were incentivised to invest their labour and the surplus they generated towards maximising production. The result was hugely increased yields in all four countries.

Output booms occurred in conditions in which farming was essentially a form of large-scale gardening. Families of five, six or seven people tended plots of not more than one hectare. To most economists, theory dictates that such an arrangement must be inefficient. So-called 'free marketers' and Marxists are united in insisting that scale is fundamental to efficiency. For Marxists in China, North Korea, Vietnam (and Russia before them) this – fatally for millions of people – meant switching household farming to large collectives.

In reality, the question of efficiency depends on what outcome you are looking for. Big capitalist farms may produce the highest return on cash invested. But that is not the agricultural 'efficiency' that is appropriate to a developing state. At an early stage, a poor country with a surfeit of labour is better served by maximising its crop production until the return on any more labour falls to zero. Put another way, you might as well use the labour you have – even if the return per man hour looks terribly low on paper – because that is the only use you have for your workers. A gardening approach delivers the maximum crop output, as any gardener knows.

Try this at home

Fruit and vegetable gardeners will tell you (indeed they may already have done, at length) just how much you can produce on a tiny plot of land if you put your mind to it. What they omit to mention is the grotesque amount of labour involved. The techniques that maximise output in a backyard garden of a hundred square metres are also broadly those that will maximise yields on a small family farm of 10,000 square metres (one hectare, or 2.47 acres).

The list of time-consuming interventions is almost endless. One of the most effective is to start off seeds in trays indoors so that they are only put in the ground for the more rapid maturation process. Soil-bed temperature also greatly affects yields and can be regulated by using raised beds in temperate climates or pits in tropical climates. Compost is most effective when applied with diligence – high-yield fruit and vegetable gardeners deploy fertiliser on a plant-by-plant basis. Targeted watering (taller plants, for instance, tend to need more) and constant weeding also have a big effect on crop size.[2] The most productive plots utilise an almost solid leaf canopy because close planting minimises water loss and discourages weeds; but this rules out access for machines. The use of trellises, nets, strings and poles – all set up by hand – maximises yields through 'vertical' gardening; a

single tomato plant can produce 20 kg of fruit. Inter-growing of plants with different maturities saves more space (the *cognoscenti* place radishes and carrots in the same furrow because the radishes mature before the carrots begin to crowd them out; but then the radishes can only be harvested by hand). Equally, shade-tolerant vegetables like spinach or celery can be raised in the shadows of taller plants to ensure that no space is wasted; but again, this must be done by hand.

The world of the home fruit and vegetable gardener – including that of the contemporary, rich-world family growing its own organic produce – is very familiar to the post-war east Asian peasant family with its mini-farm. Of course each person in the Asian family tends an area of soil thirty or more times greater than that of the hobby kitchen gardener. But the logic of the labour-intensive gardening approach to cultivation is the same wherever you do it: it gets more out of a given plot of land than anything else.

In the United States, as one example, well-managed vegetable gardens yield 5–10kg of food per square metre (1–2lbs per square foot) per year, which equates to USD11–22 per square metre at shop prices. In 2009 Roger Doiron, a blogger for the popular website Kitchen Gardeners International, weighed and checked the retail prices of all 380kg of the fruit and vegetables that his 160-square-metre kitchen garden produced; the garden's retail value was USD16.50 per square metre. That meant a total value from his plot of USD2,200 – equivalent to USD135,000 per hectare (USD55,000 per acre). As a very loose benchmark, the *wholesale* price of the US's most common and successful crop from large-scale farming, corn, equated to USD2,500 per hectare in 2010.[3]

So why doesn't everyone do it? The problem is that the gardening level of output needs so much labour. If Mr Doiron gardened full time, he might be able to maintain his yields for 1,000 square metres of land. But that would still require ten Mr Doirons to earn USD135,000 across one hectare before costs. Consequently, American farmers are sensible and use big tractors to grow corn on farms that average 170 hectares. Indeed, the agglomeration of US farms, which started out – except in the southern plantation belt – as much smaller units in the early nineteenth century when the country was opened up by immigrants, is the story of gradually rising labour costs and the consequent pressure for mechanisation over two centuries.

After the Second World War, China and the north-east Asian states were countries in which agricultural labour was far more abundant than in nineteenth-century America, and about to become more abundant because of rapidly rising populations. These countries were ready-made for high-output gardening. In Taiwan, for instance, surveys before and after the shift to equalised household farms showed that there was an increase of more than 50 per cent in the work days

invested in each hectare of land after the shift.[4] Although the island continued to produce large volumes of rice and sugar, its new boom crops of the 1950s and early 1960s were asparagus and mushrooms – two of the most labour-intensive crops there are. Taiwan, the most successful agricultural development story in the whole of Asia, really is a story that vegetable gardeners can relate to.

Some economists – again, principally dogmatic free marketers and Marxists – argue that even if small-scale household farming can sometimes work, then its principles do not apply to 'cash crops' grown on plantations in some parts of Asia, such as sugar, bananas, rubber and palm oil. It is certainly true that the plants involved require different types of nurture to household vegetables or subsistence crops like corn and rice. Sugar cane, for instance, takes almost a year to grow to maturity and benefits from deep ploughing that can only be done by a tractor. It seems plausible that this kind of crop should be grown on larger, more mechanised plantations. Yet, the sugar yield on small household farms in Taiwan or China has traditionally been 50 per cent more than on pre- or post-colonial plantations in the Philippines or Indonesia.[5] From the 1960s, Taiwan's household farmers were also more successful on the world banana market than those from Asian plantation economies. In colonial Malaysia, surveys of natural rubber production revealed in the 1920s that the yields of smallholders were far higher than those of plantations. Most agronomic requirements which suggest a need for large farms can, on inspection, be overcome quite easily – for instance, by leasing a tractor or sharing one through a co-operative in order to plough sugar land or replant rubber trees. It is striking that in so many countries in both Asia and Africa, such as Malaysia, Kenya and Zimbabwe, where European colonists introduced large-scale agriculture, they actively discouraged smallholder competition by native farmers and subsidised large-scale production, either directly or more indirectly, by funnelling tax revenues to infrastructure that supported plantations.[6] If scale plantation agriculture was so efficient, this should not have been necessary.

The arguments about the efficiency of small-scale farms are not without their complexities. The very high yields achieved in Japan, Korea, Taiwan and China are not simply the outcome of farm size, but of farm size combined with complicated infrastructures that have been set up to deliver inputs like fertilisers and seeds, and to facilitate storage, marketing and sales. Without adequate supporting infrastructure, small farms struggle anywhere, as has been the case after failed land reform attempts in places like the Philippines. It is impossible to say with absolute certainty that radical land reform would have produced the stunning yield increases it facilitated in north-east Asia for every country and every crop grown in east Asia. However, the evidence of what occurred in China, Japan, Korea and Taiwan is

powerful: good land policy, centred on egalitarian household farming, set up the world's most impressive post-war development stories.

The merits of abundance

In the first ten to fifteen years following the shift to small-scale household agriculture in successful east Asian states, gross output of foodstuffs increased by somewhere between half (in Japan, which was already the most productive country) and three-quarters (Taiwan). Increases in agricultural output are traditionally represented as important by economists because they lead to increased surplus, which implies more savings which can then be used to finance industrial investment.[7]

However, big yield gains also mean big increases in rural consumption – something that may be even more important when farmers create demand for consumer goods. Famous east Asian corporations from Meiji Japan to post-war Korea and contemporary China made their first millions adapting products to the exigencies of extensive but cash-limited rural markets. Local firms learned critical lessons about marketing from rural populations with whom they had a natural cultural affinity. Examples from Japan include Toyota and Nissan building robust cars for unpaved roads on small truck chassis after the Second World War, or Honda's early 50cc engines being used to convert cycles into motorcycles. More recently, in China, firms have grown to scale through rural markets for rooftop solar water heaters and cut-price mobile phone systems that use existing fixed-line infrastructure.[8]

A third way of thinking about the benefits of agricultural output maximisation is from the perspective of foreign trade. States beginning their economic development never have enough foreign exchange, and one of the easiest ways to fritter it away is to spend more than is necessary on imported food. This erodes a country's capacity to import the technology – usually, machines for making things – that is essential to development and learning. For instance, although poorly understood at the time, a large part of what undermined Latin America's efforts to industrialise after the Second World War was that the region proved itself much better at increasing manufacturing exports than at increasing agricultural output. As a result, as incomes rose and people ate more food – including meat, which is more land-intensive to produce than vegetable crops – different Latin American countries either reduced their agricultural exports or increased their agricultural imports. Either way, the net effect was that agriculture tended to bleed away any foreign exchange that industrial exports (or reduced imports) created. Latin America was undone in the 1950s, 1960s and 1970s by a developmental strategy characterised by what the economist Michael Lipton dubbed 'urban bias', or the tendency of the urban elites that run poor countries to undervalue farmers.[9] Like most developing

countries – there are strong echoes of this scenario in south-east Asia today – Latin American states paid far too little attention to agriculture. This wasn't just bad for farmers, it was bad for development overall.[10]

Finally, household farms play a vital, and much under-remarked, welfare role. Poor countries do not offer unemployment benefits or other welfare payments. In periods of economic downturn, the opportunity for laid-off migrant factory workers to return to their family farms is therefore of great importance. In Taiwan, an estimated 200,000 factory workers returned to farming during the first oil crisis in the mid 1970s; similar, temporary de-migrations have occurred in slack periods in recent years in China.[11] Asian countries where land reform has worked have avoided the legions of indigent poor or acres of squatter camps that have characterised nations with larger scale farming, ranging from eighteenth-century Britain to the contemporary Philippines.

North-east Asian states gave themselves the best possible start in their economic development by the attention they paid to agriculture. However, the impetus to development was greater still because of the means by which maximisation of agricultural output was achieved. By giving rural families equal amounts of land to farm, governments created conditions of almost perfect, laboratory-like competition. This was the kind of competition involving large numbers, no barriers to entry and freely available information about which mathematical economists fantasise (and at which many other people scoff because it occurs so rarely). But in this case conditions akin to those assumed by textbook economics were indeed created.

Every family had its bit of capital – its land – along with the ability to access technical support, credit and markets, and so competed on a remarkably equal basis with its neighbour. In the United States, American government support for land reform in Japan, Korea and Taiwan was attacked domestically in the 1950s as socialism by the back door. But it was quite the opposite. It represented the creation in north-east Asia of the most idealised capitalist free market ever established for developing economies. For once, there were no landlords born with silver spoons in their mouths and (almost) no landless peasants without capital; everyone was given the chance to compete.

Klaus Deininger, one of the world's leading authorities on land policy and development, has spent decades assembling data that show how the nature of land distribution in poor countries predicts future economic performance. Using global land surveys done by the United Nations' Food and Agriculture Organisation (FAO), he has worked out that only one significant developing country has managed a long-term growth rate of over 2.5 per cent with a very unequal distribution of land. That country is Brazil, the false prophet of fast growth which collapsed in a debt

crisis in the 1980s in large part because of its failure to increase agricultural output. Deininger's two big conclusions are that land inequality leads to low long-term growth and that low growth reduces income for the poor but not for the rich.[12]

In short, if poor countries are to become rich, then the equitable division of land at the outset of development is a huge help. Japan, Korea and Taiwan put this in place. The problem for most countries, however, in practice is that efforts to create an equitable distribution of land, and an equitable supply of resources to support the land, usually fail. To understand why this is the case – as well as the extraordinary examples of land reform success in north-east Asia – we must look more closely at the history of land policy.

A very old idea

The most advanced ancient Asian states used 'reformed' land systems more than a thousand years ago. As the world's most sophisticated civilisation in the seventh and eighth centuries, Tang dynasty China operated an agricultural bureaucracy which allocated and rotated household farming plots among families to ensure fair access to natural resources, while the ownership of most land was retained by the state. By contemporary standards, yields were very high.[13] What is called the Taika Reform in seventh-century Japan attempted to copy Tang land policy, but with more limited – and declining – success. Elites in both countries resisted interventions based on fair play, even if they led to higher yields. It was an attempt by China's Song dynasty, which followed Tang, to re-nationalise some farmland in the thirteenth century that convinced many aristocrats to throw in their lot with Kublai Khan and the Mongol invaders when they overran the country.

Modern land reform in north-east Asia has been based on the rediscovery in Meiji Japan of the wisdom of an earlier era. The process began with the overthrow of the Tokugawa shogunate and the formation of a progressive Japanese government under the restored emperor in 1868. Although land in Japan technically still belonged to the state, the system had long since ceased to deliver any kind of protection or equity to ordinary farmers. Instead, quasi-feudal lords known as *daimyo* (literally 'big land') operated vast estates farmed by smallholders who were, in effect, their serf tenants. The *daimyo* also controlled the grain-trading system, and hence were in a position to rig the market.

In its most important early reform, the Meiji administration pensioned off the *daimyo* (generously), gave them seats in Japan's new House of Peers in Tokyo, and gave small farmers title to their lands. One hundred and nine million certificates of ownership were issued in three years. For the first time, land could be mortgaged and sold legally. Taxes were also fixed in cash terms, so farmers kept more of

the income from higher yields rather than splitting their physical crop with their landlords through sharecropping. As a result, farmers were incentivised to invest in their land while more liquid markets for crops came into being. The Meiji leadership squeezed farmers quite hard, obtaining a peak of four-fifths of its revenues from land tax in the late nineteenth century, but the tax squeeze was no harder – and probably a little less hard – than under the shogunate.[14]

Overall, these changes produced a spurt in yields and output that ran from the Meiji restoration until around the time of the First World War. Japan's production of rice – its staple food – roughly doubled, a little ahead of a rapidly increasing population. As the industrial economy took off, there was no need to import food.[15] And not only did agriculture feed more mouths, it also supplied the leading export (and hence foreign exchange earner) of Japan's early development era – silk, produced by worms that were fed on mulberry leaves from trees that were planted on the most marginal, hilly agricultural land.

The central government hired American specialists to introduce new farming techniques, and supported the construction of a national network of training services – or what agronomists call 'extension'. The spread of fertiliser use and higher-yield rice varieties was an important driver of output growth. In addition, by the time of the First World War, Japan had brought into cultivation pretty much every acre of cultivable land, including many plots that were converted to farming through considerable investment in clearing, terracing, irrigation and so forth.

Prior to this, no country had begun a period of industrialisation with such an overwhelmingly rural population. The populations of rich European and north American countries were at least 35 per cent urban before industrialisation took off.[16] However, by throwing off feudalism in short order, switching to private smallholder agriculture and mobilising an impressive level of national bureaucratic support, Japan was able to begin industrialisation despite having a three-quarters rural populace. In turn agriculture undergirded what was already becoming, at the start of the twentieth century, the most rapid economic transformation the world had seen. The pace of development in Germany and the United States was put in the shade by Japan. In just three decades after the Meiji restoration, Japanese modernisation was such that the country could defeat China (1895) and Russia (1905) in wars, be welcomed into a bilateral military alliance by Great Britain (1902), and begin to export its goods around the world. None of this could have occurred without the food, taxes and foreign exchange supplied by the countryside. The Meiji government discovered the developmental trick encapsulated in Michael Lipton's dictum as: 'If you wish for industrialisation, prepare to develop agriculture.'[17]

Not yet perfect

Despite this early success, the rural reforms of the Meiji government were limited in their scope. Although the more feudal, absentee, large-scale landlord was swept away and small farmers were given private title, within farming communities considerable variation in landholding remained. In the context of a rising population and limited finance and marketing support, there was always the risk that returns from renting out land and lending money would again outstrip returns from investing in order to increase yields.

This, gradually, is what happened. The data are not clear enough to establish a precise chronology, but there was a tipping point around the time of the First World War. The supply of new agricultural land stopped growing, while population continued to increase. At the same time, the so-called 'terms of trade' between agriculture and manufacturing – what a unit of agricultural output could buy in terms of manufactures or vice versa – began to favour manufacturing, where in the early reform era farmers had done better. This made life relatively more expensive for the rural population. And whereas early industrial development provided lots of extra income for female members of farm families through work in textile factories in rural towns, most new jobs after the First World War were created in larger-scale industry in cities.

In a country where, between the world wars, there was an average of just 1.1 hectares of cultivable land per farm household, these cumulative changes began to tell in the lives of those families that held a little less land or had fewer able-bodied members. There was an increase in money-lending to those who could not make ends meet, and when debts could not be repaid, land was forfeited. There were few really big landlords – even in 1940, less than 100,000 of 1.7 million Japanese landlords held more than five hectares.[18] It was small-time landlordism by attrition – adding a few *tan* (0.01 hectares) every year or two at the expense of some less fortunate villager. Those with too little land, or rented land, or both, often had to sell their crops as soon as they were harvested, when the market was flooded and prices were low. Landlords stored their rice, and sold it later for better prices, before offering money at interest to those who sold early and now had no money left. Between the world wars, farmer debt in Japan rose eight-fold.[19]

Tenanted land as a share of all cultivated land was around 20 per cent in the first years after the Meiji government instituted its land reform. By the time of the Second World War, almost half of arable land was under tenancy and 70 per cent of Japanese farmers rented some or all of their fields. Despite the global depression, tenant rents did not fall below 50–60 per cent of crops (and this was after the renter had paid the cost of seeds, fertiliser, implements and all taxes and levies bar the

main land tax). It was hardly surprising that output stopped rising in the 1920s. A senior official at the Ministry of Agriculture noted in 1928: 'There is a great difference between the productivity of owner-farmer land and that of tenanted land. My officials who go out into the villages tell me that even they – men who have never used a plough in their lives – can tell at a glance by the look of the crop whether the land is farmed by an owner or by a tenant.'[20] It was in this context that in the 1930s the Japanese military pitched itself as the champion of the downtrodden rural populace, recruiting its most fervent supporters from farming communities. Japanese agriculture swung back from post-feudal abundance to brutal conditions of rural capitalist exploitation.

Journey 1: Tokyo to Niigata

You can begin to understand much about Japan's agricultural history simply by driving around, because that history is so heavily dependent on topography. A journey from Tokyo north-west across the main island of Honshu to Niigata prefecture, producer of the country's finest rice, highlights the basic challenges.

First, however, you must exit from Tokyo's urban sprawl. The capital, with its silent, strange residential suburbs, its little lanes and its religiously maintained road markings, ends only in theory. In practice it merges into a series of other, less prosperous towns in a seamless continuum of low-rise clapboard houses, malls, discount stores, fast-food restaurants and car showrooms. Not only has Japan developed with an impossibly small supply of cultivable land per capita, but large swathes of that land have been relentlessly gobbled up by its urban and industrial development. This trend has long been exacerbated by a cultural aversion to high-rise building. The insistence on low-rise, sadly, has done nothing to make modern Japanese construction more attractive.

Avoiding expressways, it is a 40-kilometre, two- to three-hour grind through spirit-sapping urban sprawl, past the vast American Yokota air base, before you see anything remotely rural to the north-west of Tokyo. What happens is that eventually the hills become too steep to build on or, indeed, to farm. And that is the reason why Japan has so little cultivable land – the country is covered in hills and mountains, which in turn are covered in forests. Inside a car, the smell of pine trees announces the ascent. Japan has a lower cultivable land share than any country in east Asia – just 14 per cent of its total area. Even Korea is 20 per cent cultivable, while Taiwan is 25 per cent.[21]

Entering the forest north-west of Tokyo, highway 299 winds up through the hills until it reaches Chichibu, a sleepy, nondescript town with no definable centre. Chichibu's name is synonymous in Japan with the largest farmer rebellion of the