Department of Pacific Affairs

Coffee in the Highlands of Papua New Guinea: The Early Years

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Discussion Paper 2018/7

In approximately 80 years, the amount of coffee grown, processed and marketed for export annually in Papua New Guinea (PNG), nearly all of it from the Highlands region[1] , has increased from negligible to between 44,000 and 89,000 tonnes (Coffee Industry Corporation 2017). While this still represents only around one per cent of total global output, which is dominated by Brazil and Vietnam, the crop's significance for the country's political economy is considerable. Apart from being a leading source of national export income, growing, harvesting, processing and marketing the crop fundamentally affects rural life in the country's most populous region.

This importance can be understood in part by the extent to which households depend upon coffee for income. According to the Coffee Industry Corporation:

> Production is dominated by village-based small farmers, who produced 85% of the annual crop. It is estimated that there are some 400,000 rural households in PNG that depend upon coffee to provide all or part of their income (ibid.).

Explaining how that dominance arose and its continuing main characteristics is the central objective of this Discussion Paper and a subsequent essay to be published elsewhere. The latter will deal primarily with the post-independence years, when coffee's importance became even more entrenched in the region. In this later period, during dramatic price increases followed by substantial falls, the extent to which coffee had come to 'imprison' people, *kopi kalabusim mipela* (coffee imprisons us/my people), became obvious. For this Discussion Paper, however, the central concern is when continuously expanded plantings reached maturity and initially provided 'the money that grows on trees' (Brookfield 1968) and the early ascendancy of a particular form of production by smallholders for international markets.

Section one of this Discussion Paper shows how coffee's establishment and subsequent dominance in the Highlands region was part of an international direction that commenced in the 19th century. Capitalism had been reshaped in an

> emerging global countryside … constituted by the technologies of commodification, whereby small lots of peasant-produced jute fibres, cotton bolls, cocoa beans, and rubber sap were transformed into exchange values in European markets (Ali 2018:4).

Over a similar time period, coffee, too, came to belong on the list of major international smallholder crops.

Establishing smallholder production of coffee in PNG after World War II was both part and parcel of this international transformation and a later addition with distinct local characteristics. Households that produced the bulk of the country's coffee through the employment of family labour processes upon smallholdings were immediately joined to international markets as producers of one of the most important traded commodities. This commodity was priced internationally in United States dollars, assessed for its qualities according to internationally-determined criteria, mainly in terms of the arabica (other milds) category, and came from bushes grown from seed derived initially from imports to the Highlands and external to PNG. For more than 200 years, coffee yields and the characteristics preferred for consumption had been changed, increased and altered by research conducted mainly at state institutions in many countries before coming to PNG. In short, the coffee grown by households in PNG was an internationally-produced industrial crop without endemic, locally-derived features. In the Highlands, unlike in coastal and island locations, the form of the plant grown was and remains *Coffea arabica*, of less importance for soluble instant coffee and utilised mainly for ground and roasted, higher-priced specialty coffee.

With the introduction of Australian currency to the Highlands after World War II, smallholding households sold coffee for a new medium of exchange that displaced previous forms, such as shells. This change made it possible for Indigenous growers to increasingly rely upon earnings from sales of the crop to supplement self-provisioning, often termed subsistence farming, and local sales of food crops. Section two of this essay details the rapidity of the spread of coffee growing and marketing, with an emphasis on how household production became predominant.

Section three outlines the central role of the colonial state and a particular view of development held by colonial officials in Australia and PNG which drove the establishment and expansion of coffee production (Wright 1999; MacWilliam 2013; MacWilliam 2018). This view also placed smallholders at the centre of colonial policy, securing the post-war expansion of capitalism in the country and the Highlands region. Large holdings, most of which were owned and operated by European settlers, were allocated an instrumental role for this policy. Australian government trusteeship responsibilities, supervised through the United Nations, were important for containing any substantial expansion of large holdings. Of even greater importance for the post-war direction was a change in the idea of development in which bringing development to Indigenous people became central to the role of the colonial administration. The post-war years were a ‘colonial twilight’ (Timms 1996) and also the near-end for large holding plantations owned and operated by expatriates.

The final section returns to the overarching theme that what occurred in PNG coffee growing and processing from the 1950s until the early 1970s was coupled with international changes in the production and consumption of coffee. Given the importance of the colonial administration for the introduction and spread of growing at this early stage of expansion, the domestic and international measures taken by government officials to dampen the effects of price volatility for continually increasing smallholder production of a major export are stressed. As independence loomed and coffee became integral to Indigenous living conditions in the region, the possibility of disorder due to severe price declines brought political considerations even more to the fore.

Part 1: Smallholders and the reshaping of accumulation

During the 19th and early 20th centuries, a major change occurred in the production of many agricultural commodities. Large holdings generally gave way to and were, in some locations, even supplanted by smallholders. Plantations employing slave labour had been predominant initially to produce sugar and cotton in the Caribbean and southern US (Mintz 1986; Beckert 2015). However, industrialisation in Europe, North America, India, Japan and China increased demand for a much wider range and greater volumes of inputs, including of agricultural produce, rendering the plantation form inadequate. Campaigns to abolish slavery and eliminate some of the more brutal forms of wage employment also undercut plantation methods. While plantation production continued, and in the case of PNG, commenced, for some crops, a major shift to smallholder, household growing and initial processing occurred. This shift included extending cotton production to more and more areas of the globe. Existing cotton production methods were supplanted, and in some countries governments exercised state power to force rural households to change from self-provisioning to producing for domestic and international markets (Beckert 2015:142).

While ‘until the nineteenth century, in both the United States and Europe there were many more large scale enterprises in agriculture than in [manufacturing] industry’ (Daviron and Ponte 2005:3, citing Chandler 1977:64), over the next 100 years smallholders became preponderant for the production of agricultural commodities. ('Became' is the operative word, for large holdings did not disappear in an instant, nor did the near slave-like employment conditions on many plantations, including those which during the 19th century produced coffee in Ceylon (Moldrich 1989)). Tobacco also became prominent as ‘a smallholder’s crop’ (Corina 1975:291). As Daviron and Ponte note (2005:8), the end of slavery in the US resulted in changes that had a ripple effect across the production of a range of tropical crops. 'Between the end of the nineteenth century and 1920, most tropical products switched from the plantation model to specialized household cultivation' (Daviron and Ponte 2005:8). Later still, from the early 1950s, contract farming by smallholders was extended, including as the basis for the establishment of banana growing in the Windward Islands of the West Indies (Grossman 1998).

This predominance of smallholders continued during the 20th century, with Vietnam being the exemplary case where state policy and practice drove a major expansion of coffee growing. So powerful was this drive that by the end of that century and into the current one, Vietnam became the second largest coffee producing nation (Summers 2014; Menker 2016; Research and Markets 2017).

Households also became sites for the consumption of industrial goods produced in the factories of major capitalist countries. Ali (2018:37–66, 94–107) details extensively how from the late 19th century to the early 20th century the rising, as well as falling, international price of jute affected households' consumption and politics in the Bengal Delta. Factory production, which appeared as the quintessential form of capital's advance, was joined with household production in an extended and expanded form of global capitalism. That is, households in occupation of smallholdings were capitalised, not as landless factory workers living in growing urban centres, but as producers and consumers of produce subjected to internationalised costs of production and therefore prices. While politics and cultural practices, as well as some capacity for self-provisioning, growing food, making clothes and constructing housing, remained distinct within and between countries and regions, international markets governed by accumulation (of capital) also heavily influenced these activities. Driven by capitalism's 'obsession' with continuous growth (Altvater 2001), primary or primitive accumulation (Perelman 2000) also became a continuous determinant of life in the countryside globally during booms and busts.

In Brazil in the early 19th century, coffee displaced sugar on many large holdings through a system of huge plantations based on slave labour known as *latifundia*. (Pendergrast 1999:22–23). While Brazil remained the world's largest coffee producer and exporter, the crop's spread to other, smaller South and Central American countries initially took a similar form: slave or near-slave labour working large holdings on land forcibly expropriated from previous Indigenous occupants (for the case of Puerto Rico, see Bergad 1983; Clarence-Smith and Topik 2003). Costa Rica provided an important exception, where smallholders were important from the outset (Williams 1994:44–52). While smallholders in Uganda were also important from the start, in neighbouring Kenya expatriate large holdings were at first given a near-monopoly right by colonial administrations to grow the crop. Only after World War II, through land reforms introduced in Kenya under the Swynnerton Plan, did Indigenous smallholders become major growers, supported by the late colonial and then post-colonial states (Thurston 1987; Cowen and Shenton 1996; MacWilliam 2012).

Coffee's introduction in PNG as an industrial crop followed a similar pattern to that which prevailed in other colonies. With seed brought from a range of countries, including Java, Jamaica and Kenya, small plantings of both arabica and *Coffea robusta* varieties began from the 1880s in Papua and New Guinea (Cartledge 1978:5–6; Sinclair 1995:8–29). Because the initial development in both colonies tended to be in the lowland areas, robusta, which grows best from sea level to less than 1,000 metres, was initially ascendant; only after European expansion into higher altitudes near Port Moresby and the lower foothills of the main ranges in New Guinea did arabica, which grows best in milder climates, become important. Today over 90 per cent of PNG's exports are of the latter variety. Most of the early plantings were by missionaries (often for self-consumption at missions), international firms, individual European owner-occupiers and government research stations.

In Papua, some Indigenous production occurred during the inter-war years on the large holdings forcibly encouraged by the colonial administration, but these were mostly unsuccessful. In 1940–41, total exports from New Guinea amounted to 74 tonnes (Sinclair 1995:37), and 69 tonnes from Papua in the same year (Sinclair 1995:22). While arabica growing on an expatriate's plantation at Wau utilising Jamaica Blue Mountain arabica seed was to be a harbinger of one direction of the post-war Highlands expansion, the 1930s moves to establish a research station named Aiyura in the Upper Ramu for experiments into growing cinchona, tea and later coffee became even more important.

Part 2: The establishment and expansion of coffee in the PNG Highlands

The first major account of the PNG coffee industry was researched and written in the mid-1970s, that is, around independence (Cartledge 1978), under the auspices of the Coffee Marketing Board (CMB) as it became the Coffee Industry Board (CIB). The study shows two outstanding aggregate features of the earliest phase in terms of acreage planted and output. Firstly, within two decades of the first Highland plantings in the 1930s, the area planted to smallholder coffee (10,874 acres) exceeded that of expatriate-owned plantations (6,842 acres). Secondly, within five years, once household plantings came into production, smallholder output (3,972 tonnes) exceeded that on plantations (3,032 tonnes) (Cartledge 1978:316, Appendix 23). *Never again after the early 1960s did large holding production exceed that from smallholding households.*

Ian Downs, colonial official, coffee planter and first CMB chairman, confirms this trend, noting:

> In 1965 Papua and New Guinean [i.e. Indigenous, primarily smallholder] production of coffee was 4,319 tons from 35,037 acres compared with 3,374 tons produced by Australian settlers from 12,229 acres. By 1970 local farmers were producing 22,425 tons and Australian settlers 6,258 tons (1980:185).

This disparity in output between plantations and smallholding households, in which by 1970 Indigenous growers' mainly smallholding households produced over 75 per cent of the total, has been confirmed in another long-term study. Utilising official statistics from the CIB, Herb Thompson and Scott MacWilliam (1992:126–127) updated Cartledge's data, providing in graph form the total output and relative shares of plantations and smallholders from 1960 to 1989. These figures document that the trend apparent in the late 1950s and early 1960s continued up to and after independence. In 1988, plantations totalling 30 hectares or more under coffee, and blocks of five to 29 hectares, produced less than 22 per cent of the total coffee crop (Bourke and Harwood 2009:549, Appendix Table A5.4.3; author's calculation).

The early prominence of expatriate-owned-and-operated large holdings producing coffee has driven a continuing myth about their importance. The early years have been described as 'the plantation era' (Sinclair 1995:66–347) and a period when smallholder production was less important, only becoming significant around independence (Lea and Curtin 2011:170–71; Imbun 2014:27). It is necessary, therefore, to provide a brief account of the relationship between plantations and smallholdings during coffee's initial years.

Plantations and smallholdings

Coffee was brought to the central Highlands during the 1930s, introduced by Lutheran missions and colonial officials (Sinclair 1995:4–7, 168–177). Favourable climatic conditions and fertile soil provided ideal conditions for arabica coffee growing. While the first Highlands coffee plantings probably occurred at a Lutheran mission in Chimbu around 1934 (Shand and Straatmans 1974:18), by 1936 Department of Agriculture inspector and instructor Bill Brechin planted coffee in nursery beds prepared at the Upper Ramu Police Post (now Kainantu) (Sinclair 1995:53). The next year, Brechin transferred the coffee plants, along with cinchona and tea, to the nursery at the newly-established, nearby Aiyura Research Station. These plantings thrived and in 1940, 64 tonnes of arabica coffee were produced. Of even greater importance, as Michael Bourke notes (1986:100–3), demands for coffee seed had begun to come from villagers who were showing considerable interest in growing the crop. Bourke (1986:101) cites Brechin's May 1940 Aiyura monthly report, which stated:

> It is already clear from trials on this Station that high altitude [arabica] coffee is going to be an economic crop in this area. Local people are already asking why they can not start planting themselves.

Similarly, coffee was introduced to the Western Highlands during the 1930s by missions and some Indigenes who lived nearby (Dick 1978:1). In 1944, the first plantings were made at Korn Farm, a research station near Mount Hagen that had been established during the previous decade. Korn Farm subsequently became the base for extension efforts among European settlers and Indigenous growers. These efforts included training Indigenous extension officers to further increase growing by Papua New Guineans in the district (Dick 1978:2; MacWilliam 2013:129–131).

When, during the Second World War, nearly all expatriate women had been repatriated from PNG back to Australia, only expatriate males remained to work in the military and related civilian employment. Given this gender composition of the expatriate population, it is unsurprising that in so many areas important for the beginnings of the coffee industry, expatriate males were predominant (cf. Eves and Titus 2017b:Endnote 2). Some of the so-called 'expatriate embryos' from which, according to Fowkes (1995:190), 'today's prosperous Highlands industry was to spring' were also products of the overlap between Aiyura and the Australian New Guinea Administrative Unit (ANGAU): males in official employment of one kind or other.

Two such men were Jim Leahy and Jim Taylor, who became prominent as plantation owners in the Eastern Highlands. During the war, Captain Jim Leahy had been farm manager at Aiyura when experiments with coffee were conducted. After the war ended, he obtained seed from agronomist Aub Schindler at the experimental agricultural station and planted this in acreage acquired near Goroka. The price obtained by Jim Leahy in 1952 for his first coffee crop encouraged others in Australia to come to the Highlands. Unfortunately for many of the late starters, who came with little money, little agricultural knowledge and big dreams, the post-war peak in prices occurred just two years later, before many plantings matured. Later in the decade, acreages remained unplanted (see following), funds dried up and many of the owner-occupiers who could not find off-farm employment went broke. Mergers and concentrated holdings run by corporations came to dominate large holding operations (Howlett 1962).

Jim Leahy's brother Dan, acting on his brother's advice, became the first European to plant coffee during the 1940s at Kuta in the Western Highlands. Although this location proved to be entirely unsuitable for climatic and soil reasons, Dan Leahy subsequently moved to a lower-altitude, warmer location on better soils at Korgua nearer to the growing township of Mount Hagen where plantings succeeded. However, even at Korgua Leahy's commercial success did not depend upon coffee growing alone: like many of the expatriates who owned and operated coffee plantations, survival depended upon combining a wide range of activities, including mining, operating trade stores and depots for international firms plus off-farm wage employment (Hollinshed 2004). In both cases, Leahy and Taylor established familial relations with Indigenous women when there were very few single expatriate women in the Highlands.

The reliance upon multiplex operations, coffee plus trading, mineral prospecting and other enterprises as in Dan Leahy's case, also meant that managing plantations could fall to female expatriates once they arrived in increasing numbers, while men obtained off-farm work. One especially prominent instance of this gendered division of labour was John and Edith Watts at Ulya plantation in the Western Highlands. 'An intellectual and a dreamer … not a prototype of a planter' (Sinclair 1995:166), John Watts had no agricultural experience and little money. In the mid-1950s, dissatisfied with the routines of employment in Melbourne, John and Edith Watts left Australia for PNG (ibid.; Watts 1990). They acquired leasehold land that was swampy and required draining (Sinclair 1995:166). While John Watts worked off-farm, including as a book-keeper accountant for Dan Leahy, Edith Watts supervised the labour line, including men and women, which drained the land, planted a second crop of coffee after the first one failed and subsequently organised maintenance and harvesting (ibid.; Watts 1990). On top of the farm work, survival on the plantation required Edith Watts to run a private maternal and infant welfare clinic on site (Sinclair 1995:166; Hollinshed 2004).

The necessity of off-farm income derived from numerous characteristics of most of the expatriate planters. Unlike the Papua New Guineans upon whom they depended for labour who were familiar with farming in local conditions, few of the Europeans were agriculturalists, had sufficient personal funds or were temperamentally suited to work on their holding (other than for the romance of self-employment). Obtaining and supervising labourers who did not speak English and were often themselves recruited from areas away from the place of employment produced continuous tensions. Further, demands for return to previous owners soon surfaced once Indigenous people — who had previously considered the land now occupied by expatriates as their own — saw the incomes being acquired from the leaseholds (Finney 1973:52–3).

Much has been forgotten or overlooked in accounts which seek to give greater significance to large holdings over smallholder, household production (cf. Lea and Curtin 2011:170–71). It is useful therefore to briefly recount conditions during the mid-1950s, as attested to by Yasuo Baron Goto, the coffee expert from Hawai'i. In 1956 and 1959, Goto made two trips to the Highlands. When he initially came to PNG, there were 'seventy-six white-operated Highlands plantations covering 14,462 acres, [with] a little over 2,000 actually planted. More than 2,000 native workers were employed' (Sinclair 1995:178). His visit was sponsored by two major trading companies, two Australian-based banks and the recently-formed Highlands Farmers and Settlers Association (HFSA). Given the commercial backers of the visit and unwillingness to be seen to support some firms over others, the colonial administration declined an offer to support Goto's trips.

The expert's publicly-expressed evaluations, while taken as encouraging by many planters, were often highly critical. Goto's charm, hope and stated confidence in 'your success' could not hide his recognition that

> most of the existing plantations were badly under-capitalised, and there was a long-term labour supply problem that would have to be eventually resolved. Many plantations had been located on unsuitable land. Most of the best coffee land remained in the hands of the native people (Sinclair 1955:180).

Rather than providing hope, his assessment of Kainantu plantations had the reverse effect.

> Baron Goto was not much impressed with the general standard of plantations in the Kainantu district. The local agricultural officer noted in his monthly report for February 1956 that 'following Prof. Goto's visit … there is a general feeling of disillusionment among the settlers, as the majority of them are sitting on non-productive land'. Goto reported that the land on James Thorpe's plantation was 'poor for coffee', as was the land on the properties of McBeath, Plant, Burgoyne and Hodgens (Sinclair 1995:181).

Given that Goto was also a consultant for Australian banks being asked to provide funding for planters invariably short of money capital, it is hard to imagine that his reports provided privately to the banks were uniformly positive. As already noted, from the late 1950s, mergers and acquisitions became prominent among large holdings and many of the first wave of owner-occupier expatriate planters did not survive or only did so as they moved even more into off-farm activities.

By comparison with the small number of expatriate settlers, the large Indigenous population of agriculturalists provided a more substantial basis for the establishment of a major coffee industry, already producing considerable varieties and amounts of food crops and domesticated animals, especially pigs, for household consumption and local trade. Households were able to utilise their existing agricultural knowledge and household division of labour, topped up with advice from colonial extension officials and a small number of settlers, to rapidly expand plantings, as documented previously. Supported by colonial policy which restrained the settlers while encouraging and underpinning smallholders, smallholder plantings spread rapidly westward from the Eastern Highlands into nearby Chimbu/Simbu, where no plantations were permitted to exist in a densely populated, mountainous area. The further shift into the more spacious and conducive Western Highlands meant this last district soon became the major source of coffee. By the 1960s, strongly encouraged by one particular district commissioner Tom Ellis, as even more brakes were placed on large holding coffee plantings (see following), the Western Highlands became the epicentre of continuing smallholder expansion.

The speed at which coffee plantings spread among Indigenes was facilitated by other major changes then occurring in the region. Trade was the critical solvent that undercut and sometimes destroyed previous forms of existence, but not trade as had existed previously. It was trade of a particular content and form, driven by accumulation, over long, international distances, rather than the prevailing short-distance barter trade, which was the medium of dissolution. As Ian Hughes (1978:308) notes:

> Exchange behaviour in general, and currency manipulation in particular, by the advance guard of colonialism in inland New Guinea this century… was a much more profound influence in the process of establishing foreign economic and political domination than is usually recognized. In the Highlands during the 1930s, transactions initiated by government officers, missionaries and gold miners during the earliest years of the contact phase were arguably the key mechanism in the imperial process. The most potent single force was the adoption of the traditional medium of exchange, shell money, and its subsequent importation in large quantities.

Hughes has documented in detail the characteristics of what he terms Neolithic (Stone Age) trade, or, more accurately, barter, in which:

> Everyman took part in ceremonial gift exchange and bartered on his own account when opportunity offered: there were no professional traders, no merchants, no itinerant pedlars (1973; 1977:203).

Hughes has also shown how these earlier forms of exchange were undercut, 'devalued', with the reduction in the price of shells for exchange being especially striking from the late 1930s into the post-war years (1978). Routes by which shells came into and then circulated in the Highlands and locations where different types of shells were valued as a medium of exchange and for decorative consumption were altered by the establishment of colonial authority. But more importantly still, the driving force behind the change in the amount and character of the shells was transformed: for a brief period, shells became the currency used to express the price of labour and manufactured and other goods (Finney et al. 1974). This price was driven down continuously by the enormous flood of shells brought to the Highlands, not by slow, laborious overland routes, but by the most modern form of transport: aeroplanes. First shown in the reduction in the price of consumables, including pigs, wages for Indigenous labourers began to be paid in ever-cheaper shells.

While official currency — Australian pounds, shillings and pence — began to displace shells from the late 1940s, 'expenditure of shells by whites continued into the 1960s' (Hughes 1978:317). Convertibility (official currency to shells, and the reverse) extended the life span of shells as measures of price. Employers used the falling price of shells to bargain with and thus reduce the cost of employing Indigenous workers, satisfying a major requirement for capital's profitability. However, by the early 1960s,

> there was practically no market for shell in Goroka … the manager of the leading store in Goroka reports that he took all his leftover stock of shell and sold it for a nominal sum to a nearby European plantation where it was ground up to make shell grit for chicken feed (Finney et al. 1974:346).

If the devaluation of shells assisted in lowering the price of labour, particularly for plantation owners employing Indigenes, a flood of industrial goods ferried into the region initially by aeroplane, then by vehicles using an expanded road network, changed Indigenous household consumption. Previous forms of local production, including of axes, stopped (Burton 1984). Practices involving ceremonies were transformed. Exchanges of pigs and brides were increasingly given a monetary value, and industrial commodities of food, especially rice and beer, became prominent. Commodities as gifts (cf. Gregory 1982; Vickerman 1984), with equivalence expressed increasingly in monetary terms, appeared in a major efflorescence of ceremonies and ceremonial exchanges (Strathern 1971; Meggitt 1972, 1974; Healey 1990).

As industrial tools entered local consumption, they not only replaced previous equipment, but also substantially altered socially necessary labour time. The time required for clearing and preparing gardens was reduced, with an effect that was especially pronounced for males as steel axes manufactured in industrial factories overseas replaced locally-produced stone equipment (Salisbury 1962). The effect upon males in particular was further enhanced by the establishment of the 'colonial peace' that checked, even eliminated, warfare, an activity which had previously occupied considerable amounts of male labour and time (see following).

Ian Downs, founding member of the HFSA, details an important connection between the European settlers and the rapid expansion in the 1950s of smallholder plantings. He notes that,

> Settlers established their own nurseries from selected seed and gave plants to their Highland neighbours in order to establish the existence of coffee as a widespread planted crop and to lay the foundation for future coffee trading when village trees came into production (1980:180).

During the late 1950s, the role of expatriate owner-occupiers in encouraging Indigenous growing became even more important as many expatriate plantations faltered commercially. During the period when the smallholder coffee frontier was extended further across the Highlands, the demand from smallholders for assistance from the colonial administration exceeded the capacity of agricultural extension services. To increase smallholder production in areas proximate to their plantations, some expatriate settlers who had come to depend upon processing and trading in smallholder coffee to keep their own operations afloat were forced to become de facto extension officers.

Initially, some of the expatriate planters also provided a further role in the expansion of smallholder coffee. PNG coffee is wet processed, as distinct from the dry process used in Brazil. Once picked, coffee cherry needs to have processing begin almost immediately, preferably within 24 to 36 hours. The external pulp and mucilage have to be pulped and separated from the bean, which is then fermented and washed to remove the last of the external mucilage coating the bean. Beans are then dried, usually under the sun. The dried bean, known as parchment, is subsequently sent to a processing factory for polishing and grading, where it becomes green bean ready for shipment overseas. For smallholders, coffee is a suitable crop in part because, once dried into parchment, it can be stored for some time and marketed when income is required. In the earliest days — when many smallholders did not own or have access to anything other than the most unsophisticated equipment for the initial treatment process (turning cherry into parchment) — cherry was often sold to nearby planters or taken to them for processing in plantation factories.

One downside of encouraging cherry sales to roadside buyers for onward transmission to factories was that smallholders could hold cherry in less than desirable conditions. Processing did not always begin as quickly as required to produce the best outcome. Unlike in Kenya, where all smallholder coffee was processed in centralised cooperative factories at standards comparable to those attained at estates, in PNG this did not occur, in part for reasons subsequently explained. Attempting to improve smallholder quality during the mid-1960s, one of the first acts of the newly-established CMB was to try to reduce the amount of smallholder coffee that went to individual settlers for processing and to centralise this stage at larger, better quality factories. However, even with this change, smallholder coffee in PNG invariably was categorised as lower grade Y, rather than A and B as was plantation coffee. The grade allocated determined price paid, when during this initial phase there was considerable international demand for PNG Y grade coffee (Oatley 1990). By the early 1970s, with over-production entrenched in world coffee markets, the declining quality of PNG Y grade reduced demand in the US, which had become a major market (MacWilliam 2013:198). This deterioration added to the problems faced by growers and the colonial administration, which had so strongly emphasised the importance of coffee for development in the region and soon-to-be independent country.

Part 3: Colonial development and capitalism

The role of the late colonial state and official policy continues to be misunderstood, not least regarding the establishment and initial rapid expansion of coffee in the central Highlands. As had occurred elsewhere in the worldwide spread of smallholder production, much of the driving force behind the shift from large to smallholding production was driven by the actions of governments and state officials. What makes PNG different to an important extent is that the post-war colonial regime was never in thrall to the political force of plantation owners and their representative bodies, who were powerful, even predominant, elsewhere (Wright 1999; MacWilliam 2013).

Nor was there ever any doubt after World War II about where colonial policy stood regarding smallholder, Indigenous primacy. Ben Imbun incorrectly implies uncertainty when stating that:

> While the Australian colonial administration had not been prepared for the enthusiasm with which the Highlanders embraced coffee, it had little choice but to support village-based coffee production with relevant policy and institutional infrastructure (2014:27).

Although Imbun does not explain what might be meant by an absence of preparedness, one possible meaning in the shortage of trained agricultural extension officers with knowledge of coffee is discussed as follows. Here, the more general proposition raised by Imbun of a colonial administration with 'little choice' is taken up. He states that:

> In the case of coffee in the Highlands of PNG, its genesis was not an effect of elaborate colonial policy aimed at laying the foundations for a capitalist economy. Nor was it the entrepreneurial savvy of settlers, but rather the result of the juxtaposition of gold prospectors, patrol officers, environmental factors, luck and an inquisitive Indigenous population. The introduction of coffee in the PNG Highlands region was largely by accident (2014:26).

This claim sits uneasily with that advanced in the first official history by Cartledge, who re-emphasises his assessment of the 1950s establishment of commercial coffee production in the Highlands:

> The conclusion is repeated that much of the credit must go to the Division of Extension and Marketing in D.A.S.F. for the rapid and large-scale expansion of coffee growing by native communities in the Highland areas. These people were [already] skilled farmers producing a limited range of food crops and working on ancient but proven techniques (1978:26).

Michael Bourke reinforces and extends Cartledge's explanation, stating:

> The 'coffee boom' that was reported as early as 1955 was not simply a product of vigorous promotion of the crop by DASF extension staff from 1953 onwards (or from 1949 onwards in the Kainantu area). Antecedent conditions included the familiarity with the crop and some very modest returns to a few leading men who had planted it during the ANGAU [World War II] period; the experience of men who had seen the crop whilst working as labourers at Aiyura; and the example of pioneering expatriate planters (1986:103).

Subsequently, the importance of the colonial extension officers has been qualified by pointing to their limited knowledge of coffee. Even key personnel who played a major role, including Bob Cottle and Ron Carne, with formal training and experience in agriculture from working in Australia, came to PNG with little or no knowledge about coffee. As Sinclair cites Cottle:

> It's not too much to say that it was a case of the blind leading the blind. We didn't know much about coffee nor did the planters. There were no publications on coffee. When I went to Goroka as the first extension officer in '52 I had a book on Kenya coffee I got from the department, and that was the only coffee book in Goroka, the only source of information. Actually, I was sent to Goroka to promote passionfruit, not coffee (1955:182).

None of the aforementioned assessments or qualifications suggest an accidental origin for coffee growing or address the more important matter raised by Imbun of the relationship between coffee, development and capitalism. The first section of this paper demonstrates the international trend from the 19th century for smallholders to become predominant in the production of many agricultural commodities central to the global expansion of capitalism. But there is no reason why this direction should have been followed automatically in PNG, or for coffee growing in the Highlands. It is necessary now to show how and why colonial policy played such a critical role in the smallholder dominance of production and marketing of a crop that was one of the most important traded on international markets.

Prior to World War II, there was a tendency for the spontaneous process of accumulation, rather than intentional development, to be foremost for development (Firth 1978, 1982; Gammage 1998), even as there were attempts by colonial officials in both Papua and New Guinea to protect the Indigenous population from capitalism's most damaging effects (MacWilliam 2013:24–7). However, during and after the military conflict, the balance changed fundamentally to address the problem of how to bring development without the destructive effects of accumulation becoming predominant (Cowen and Shenton 1996).

Intentional development came to the fore, and in the Highlands the production and marketing of coffee became the most important means of tempering spontaneous (capitalist) development. Instead of a negative policy, which would reduce the deleterious consequences of private capital, including by dramatically accelerating any existing tendency for landlessness or proletarianisation, a positive policy was instituted. Households were subjected to and subsumed by capital while attachment to holdings was maintained. As producers of immediately-consumed foods and other products, as well as of locally and internationally-marketed crops, households would attain higher standards of living in part by also purchasing commodities. Most of these were produced on international circuits of capital, including rice, clothes, tools and other implements, and flown into the region. Coffee sales became and have remained the principal means for households to acquire the cash needed to buy such goods (Coffee Industry Corporation 2017).

This direction, and the objective behind it, was well summarised by the Australian minister for territories Paul Hasluck (1951–63) after his retirement. He enunciated the overriding principal central to government policy during the period when household production of coffee became dominant, with expatriate large holding production instrumental for this purpose. He wrote:

> I also thought that we should be cautious about building up an urban proletariat or disturbing the attachment of people to their own family groupings and the compulsions of their own social system *until* we had some prospect that the transition to a different condition among various urban communities of landless wage-earners could be made without harm (1976:131, emphasis added).

The 'paramountcy of native interests' policy, first enunciated in a 1923 report by British colonial secretary Lord Devonshire regarding relations between Indigenous Kenyans, European settlers and Asian/Indian migrants in that colony, influenced Australian policy in PNG before Hasluck became minister. However, he was responsible for its continuing anticipatory policy implications even as the phrase itself faded from use. As his statement suggests, the two essential elements of what was briefly termed 'positive Australianism' (MacWilliam 2013) were labour and land, that is, maintaining household attachment and the likelihood of change from a prior relationship to a future, urban existence (Wright 2001). In the case of the Highlands, coffee produced for international markets by labour whose consumption was also increasingly commercialised became the principal medium for joining Indigenous households to land in a capitalised form.

The colonial policy of intentional development was not conservative, hankering for a past, but liberal developmentalism in seeing the need to recognise the inevitability of a definite form of change and prepare for it (MacWilliam 2018). Central to its liberalism was the emphasis on private property and, in Hasluck's case, small property. During the late 1950s, there was a controversial battle over the imposition of income tax, which had the most effect on European settlers and other expatriates. In an oft-cited statement made at that time, Hasluck responded to his critics in a federal parliamentary speech:

> The liberal respect of property … is a respect for small property no less than a respect for a large property and … I assert that the private enterprise of every native villager is just as sacred to liberalism as is the private enterprise of any European (cited in Wright 2002:61).

Developmental intent, rather than Imbun's luck and 'accident' descriptions for a supposed absence of colonial policy (see earlier quotation), was especially pronounced and obvious regarding two connected conditions of production and consumption. The first was labour, the second, land. The first arose because of the effects of war on areas outside the Highlands and the consequences of the increased colonial authority in the Highlands region. Immediately after the military conflict ended, post-war reconstruction fuelled a demand for waged labour on coastal and island plantations by private firms and in the colonial administration (West 1956:1958; Hawksley 2001:341–342). The establishment of a handful of expatriate coffee large holdings in the Highlands further added to the demand for labour. Begun in January 1950, the Highlands Labour Scheme recruited labour for employment outside the region. During the 1950s and 1960s, the scheme pushed the wage labour frontier further and further into the Highlands. Males were working in another region of the country, leaving the operation of smallholdings to females, children and the elderly. This represented the possibility of a return to the situation of the 1930s, threatening development as it had then (MacWilliam 2013:26–27).

The problem of imposing the desired form of order was compounded by an important characteristic of the establishment of colonial authority in the Highlands: with the curtailment of tribal fighting, male idleness and increased leisure appeared (Finney 1973:11). The pool of surplus male labour had also been enlarged by the arrival of steel tools, which reduced the amount of necessary labour time required for what were male tasks in household agriculture, including clearing gardens and making fences (Salisbury 1962; Finney 1973:36). The existence of surplus males became, for colonial policy, the problem and opportunity of unemployed, under-utilised labour, a relative surplus labour population or industrial reserve army (Marx 1976:762–870). If households were to be ever more subjected to capital, then employing males as well as females in extended working days became a central concern of the colonial policy of intentional development. Building upon Indigenous practices that identified certain plants or trees as male, the behaviour of colonial extension officials when they held demonstration days mainly attended by males linked coffee with male ownership. The gendered character of labour power and other property rights was often reinforced in the growing of smallholder coffee (Barnes 1981; Johnson 1988; Dickerson-Putnam 1996; Overfield 1998).

Production of coffee for international markets was coupled with deliberate efforts to increase household production of immediately-consumed and locally-marketed crops (MacWilliam 2013). That is, in the areas of household production where female labour was often predominant, colonial policy intended that working hours be extended and intensified for women as well. New and improved crops, as well as varieties of poultry and pigs, were distributed to households by colonial extension officers to raise living standards and improve health. Both are, of course, central to the capacity to labour, a capacity which colonial officials knew was still deficient, even more than a decade after the war ended (Gunther 1958:49). Although some efforts did not turn out as intended, such as unsuccessfully trying to improve pig yields through inter-breeding with imported boars (Hide 2003:8–10), the intent of colonial policy was clear. Women, as members of households, were to be included in the objective of raising the productivity of Indigenous rural labour. Subsequently, women's labour was also further commercialised in the form of incomes from coffee and vegetables (Brookfield 1968:116; cf. Brown 1972:90–92; 1995:183; 1999:119–129). Today's empowerment of women (Eves and Titus 2017a; Eves and Titus 2017b) was for colonial policy further subjection of Indigenous labour to subsumption by capital.

The objective of intentional development – securing households upon land – faced another major threat beyond unemployment and under-employment with too much leisure. The danger arose in the form of continuing demands for more large holding land by expatriates. If met, these demands would have struck at the central pillar of post-war policy: maintaining household attachment to smallholdings. The Highlands land rush of the early 1950s was an especially prominent form of this threat (Read 1951, 1952), which subsequently also extended to other areas of the country (Timms 1996). In the face of these demands and the desire to develop a scheme of smallholder agriculture throughout PNG, the administration had to find a form of land title that gave primacy to Indigenous occupation. Faced with the absence of one single, established basis for ownership, when force, first clearance, inheritance, planting, gifting and allocation by those in positions of authority all justified occupation (Epstein 1968; Epstein 1969; Salisbury 1970; Feil 1987), the colonial authorities invented a unified form of title subsequently named as customary ownership (MacWilliam 1988, 1991). This form collapsed the multiple pre-existing bases, described as traditional ownership supposedly prevailing from time immemorial (Anderson 2015), into a new form.

Customary ownership was expressed initially in the 1952 Native Land Registration Act, through which the colonial administration intended to develop a comprehensive register of all Indigenous holdings (Larmour 1991). While little registration took place and ownership disputes continued, one principal purpose was attained: providing a legal basis to limit extensive alienation for large holdings and other major commercial operations. Another was to define a form of title that barred the use of land for obtaining loans, checking the rise of a rentier stratum and landlessness (MacWilliam 2013:90–93). This form was, as Hasluck subsequently noted, an endorsement 'without question (of) the long-established policy of protecting native land rights' (1976). That is, the 'basis of smallholder occupancy (had) become colonial … state power' (MacWilliam 1991:9). As a result, occupation of land by a population who were already agriculturalists was secured, and attention could be focused on how to increase the productivity of household labour.

Internationalising development intent through smallholder coffee growing

Given that little coffee was to be consumed in PNG, it was a central feature of the policy to increase smallholder production so that it would be tied to international conditions of supply and demand, expressed as prices set in major industrial centres. While some of the initial price stimulus for household growers and the expatriates who rushed to the Highlands in the early 1950s came from the first post-war boom, this only lasted a few years. However, for most of the 1960s and into the early 1970s, smallholdings continued to increase their output and share of total production, which was especially prominent in the Western Highlands. Here, an important stimulus was the increasing availability of commodities, internationally and locally produced, as well as the price support provided through colonial state action (see following). As David Anderson notes (1977:5), for all central Highlands households in 'the eight years to 1974–75 the rate of increase in production was 11 per cent per annum' (also cited in MacWilliam 2013:195–6).

Although the Australian minister for territories Hasluck was not sympathetic to the 'anguished squeals' of expatriate coffee growers (cited in MacWilliam

2013:199, fn.147), by the late 1950s the administration was concerned at the likely effects of a looming oversupply on the world market. Efforts were made to give PNG coffee preferential access to the Australian market, then its main outlet. Given the initial prominence of plantation coffee, the action appeared at first to suggest a bias toward expatriate owner-occupiers. As smallholder output surpassed plantation production in the early 1960s, the more important target of administration concerns became apparent (cf. Stewart 1992).

In 1961, the coalition government in Australia implemented a temporary by-law to encourage manufacturers in that country to source green bean from PNG rather than other countries (MacWilliam 2013:200). During the early 1960s, investigations by the Commonwealth Bureau of Agricultural Economics and the Tariff Board switched their focus from concern with the threat to plantations of declining prices to the developmental role of coffee. The 1962 Tariff Board report specifically linked coffee growing to the trusteeship clauses of the UN Charter, which committed 'Australia to the "political, economic, social and educational advancement" of the inhabitants of Papua and New Guinea. The ultimate aim of such advancement is the independence and self-government of the Territory' (MacWilliam 2013:201).

The price downturn of the late 1950s and local as well as international attempts to support smallholder growers resulted during the 1960s and early 1970s in a further irony for expatriate plantation owners in PNG. As a condition for participating in the 1962 International Coffee Agreement (ICA), the administration committed to stopping further large holding plantings of coffee bushes, even on unplanted land of existing farms. No such barrier was or could be imposed upon smallholders. When the 1962 ICA acknowledged a developmental role for the crop (cf. Bates 1997), and local officials pressed for further plantings in their districts (Cartledge 1978:85–144; MacWilliam 2013:194–6), policy to reduce the support provided by agricultural extension officers had little effect. In part, as noted previously, this was also because plantation owners with a need for trading in smallholder coffee stepped into the breach.

If the ICA agreement favoured Indigenous smallholder growers in terms of their relative position versus plantations, it was also an attempt to maintain overall prices in a prolonged period when supply exceeded demand on international markets. While the Australian administration lobbied forcefully and successfully for PNG coffee exports to be given special favourable consideration in the export and import quotas established under the ICA, there were also important changes made in the colony's administrative framework to provide further support for coffee growers.

By the late 1950s, international marketing of PNG coffee was already centralised in the hands of a small number of firms. In an attempt to strengthen the position of growers vis-à-vis traders, the secretary of the Australian Department of Trade urged the establishment of a central organisation 'such as a marketing board' through which planters could sell their coffee (Cartledge 1978:71). While planter representatives, themselves chosen through the HFSA, played a major part in the establishment of the Coffee Marketing Board (CMB), the continuing rapid increase of smallholder production soon made the board more expressive of Indigenous household concerns. As with the ICA, the CMB was pushed by the 1962 Australian Tariff Board report to recognise that there were more urgent tasks than to be a marketing firm for PNG coffee. These tasks included the promotion of PNG coffee overseas, particularly as production came to greatly exceed Australian demand. Of particular importance was the following:

> A further valuable function of such a board would be the stabilization of prices paid to native growers for parchment coffee. Lack of stability in this respect leads to misunderstandings and some loss of confidence in the advice of Europeans (Cartledge 1978:73 summarising the April 1962 Australian Tariff Board report).

At a time when all the main trading firms and many of their buyers of smallholder coffee were expatriates, this was effectively a proposal that the CMB side with households to bolster prices. Subsequently the board went further, checking prices paid to growers by buyers, advertising prices paid domestically and pressing trading firms to promote PNG coffee overseas, particularly in new markets. The overall tendency for trading capitals to centralise and concentrate rapidly (Kay 1975), in effect becoming more powerful in markets where there were many scattered producers, was to be restrained in the PNG coffee market as smallholder production continued to expand. One consequence of the policies as production began to exceed the demand from the Australian market was to push the biggest trading firm, ANGCO, more and more into the US market (Sinclair 1995:228–249). By the late 1960s, exports to the US exceeded those to Australia.

There was widespread agreement that the combination of the CMB and the ICA, with its export and import quota arrangement, had played an important part in maintaining prices and supporting further output increases, particularly by households in the Highlands. When other producing countries, including Kenya (Gertzel 1970; Lamb 1974), had been riven by political turmoil as governments forced growers to uproot bushes and reduce production, PNG escaped unscathed until, in the early 1970s, the demand for land, including to grow more coffee, reignited tribal fighting (Government of PNG 1973; on the generational basis of land shortages, see Wilson and Evans 1975).

Part 4: The crisis of over-production

It was noted previously that one of the main characteristics of a capitalist economy is the primacy of the obsession with continuous growth. From the late 1950s, governments in coffee-producing and consuming countries grappled with how to deal with the price effects of the tendency for supply to exceed demand. This dilemma was particularly pronounced where coffee growing had become central to efforts to make development happen. The favourable terms under which Australia and PNG joined the ICA, with the latter's output netted with the former's consumption for quota purposes, emphasised how the continuing focus on increasing coffee growing in the Highlands had become part of a global effort that was leading to a prolonged dilemma.

By 1968, when the first ICA expired and negotiations over its successor became mired in the problem of excess supplies, PNG officials were in an even more difficult position than five years earlier. A permanent 'structural surplus' (Cartledge 1978:152) had appeared. Recognising that it was impossible to limit production, attention turned to arrangements for holding surplus stocks in PNG. While the main coffee producing countries, led by Brazil, worked to raise prices by limiting production, in April 1968 the CMB, in concert with Australian officials, increased the existing levy on exports to assist building up a surplus fund to pay for stocks. The surplus fund was preparatory, constructed in the expectation that the underlying problem would not disappear (Cartledge 1978:155).

Efforts to increase domestic and Australian consumption of PNG coffee, to diversify production into other crops and products and to restrain plantation expansion were largely insignificant in the face of the continued smallholder plantings noted above. Even as the mechanisms for controlling country exports, through a system of export quotas and export stamps, were retained from the first ICA, it became clear that the Australian government, the administration and the CMB in PNG faced a serious problem, particularly, how to finance surplus stock-holding.

Australia ratified the 1968 Agreement as an importer, maintaining the practice of netting and extending its membership to include production in PNG. No production target was set for PNG. While the International Coffee Organisation's executive director acknowledged that any commodity agreement 'was inevitably bound to be an imperfect instrument for regulating the differences between producers and consumers' (Cartledge 1978:193), nevertheless the official position for PNG was that the 'coffee industry fully shared in the benefits of the higher and more stable prices', which 'clearly contributed to the firm establishment and development of coffee growing in the highlands' (ibid.).

By 1970-71, PNG exports to other destinations were more than double those to Australia. Calculating netting became increasingly convoluted if Australia was to remain defined as an importing country. As Cartledge (1978:201) notes, 'A crisis developed in the marketing of P.N.G. coffee in 1972'. With stocks already large:

> Unless early remedial action was taken confidence in the existing marketing organisation was likely to fall, followed by a breakdown and chaos. Results could then be calamitous for the work of the Government in the advancement of the people of the highlands (Cartledge 1978:202).

Discussions between government officials in Canberra and PNG produced proposals for remedial action, the centrepiece of which was overdraft accommodation from the Commonwealth Trading Bank, secured against the CMB's bonds and inscribed stocks. This overdraft would facilitate the CMB buying up to 1,000 tonnes to be held as surplus, with growers, plantations and smallholders paid an initial amount of 60 per cent of the going price. Controls were to be placed on exporters, policed by the Collector of Customs, whose officers were required to inspect and validate export stamps at PNG ports (Cartledge 1978:205).

The overdraft support was only the first step. Even with a further increase in the levy on growers to bolster its funds, the CMB would not be able to hold a sufficient amount of the increasing surpluses. The Australian minister for external affairs asked the Commonwealth treasurer for assistance, 'giving details of the ominous situation confronting the P.N.G. coffee industry; where "destruction of trees or crops was both economically and politically unacceptable". Instead the minister proposed a "holding operation … involving a heavy, if temporary investment in coffee stocks"' (Cartledge 1978:206).

This proposal came during the run-up to the 1972 elections in PNG, which would lead to the formation of the government headed by Michael Somare that would take PNG to self-government in the next year. In the main coffee growing-region of the Highlands, opposition to independence was particularly strong (Wolfers 1976:3). Australian minister Andrew Peacock would have been well aware of the wider circumstances underlying his proposal for a government guaranteed loan (Griffin et al. 1979:138–235).

The loan of AUD2.5 million was to be provided so that the CMB could purchase 6,000 tonnes of surplus stock at prices close to world parity, while producers and processors were to be asked to withhold from sale as much coffee as they could. During the formation of the Somare-led government in mid-1972:

> Coffee buying reached a near standstill in the Highlands … as exporters had [already] filled their quotas for stamp sales and Australian requirements. Two of the major exporters had announced cessation of buying and the others were only buying a trickle. The main crop was well underway to completion of harvesting but the greater part remained unsold (Cartledge 1978:209).

The Commonwealth treasury advised the treasurer not to agree to the Australian government guaranteed loan and passed responsibility on to the colonial administration. In July 1972, a one-year loan to the CMB of AU$2.75 million was approved, and roadside prices where most smallholder coffee was purchased in the Highlands lifted almost immediately.

The local measures occurred after the 1968 ICA broke down. International supplies were reduced substantially, if temporarily, in part due to a minor frost in Brazil. PNG's transition from self-government in 1973 to independence two years later occurred with smallholder output at a peak, prices improving and the oversupply crisis fading. The ICO dropped controls altogether before a different crisis arose: during 1975, major frosts in Brazil destroyed crops, driving prices to an all-time high for more than a year, and sharply changing the conditions for all producers, including smallholders in PNG. After independence, the continuing dominance of smallholder production would be maintained, but in circumstances, domestic and international, that were much less favourable to growers and the Highlands's political economy.

Conclusion

By the early 1970s, the requirement of continuous growth central to a capitalist economy had been met in the central Highlands through the development of the coffee industry. The increase in coffee production from 33 tons in 1950 to over 38,000 tonnes in 1975 (Cartledge 1978:316, Appendix 23; Thompson and MacWilliam 1992:126–7) represents a major quantitative shift. That the change occurred through the production of one of the most important internationally-traded commodities, priced in internationally-traded currencies — US dollars, Australian pounds and, after 1966, Australian dollars — signifies that the shift was also qualitative, by forms of capitalised production. If this feature of coffee was most obvious for the 25–30 per cent of the crop produced on large holdings, it also held for the much larger output from smallholding households. Rather than being the principal form of production, of 'a plantation era', once the first land rush by expatriates was contained, large holdings came to perform a mainly instrumental purpose supportive of a new form of household production.

If the growth objective was met without separating the bulk of the Indigenous population into a landless proletariat, nevertheless their continued occupation of smallholding households became commercialised in a form that subjected households to international markets. By the 1960s, as coffee prices were affected by global oversupply, this subjection required more and more state support if a major disruption was to be avoided. Such disruption would not have distinguished between males and females, with all facing a major reduction in living standards as coffee prices fell globally. The imminence of self-government and then independence meant that in PNG, international and domestic attention had to deal with changed conditions from those that existed when the crop was first introduced as suitable for smallholder production over 30 years previously. Growth had produced another potential crisis of underemployment and impoverishment.

With the economic and political circumstances of the 1940s and early 1950s giving way to those of the 1970s, it remained to be seen if the newly-independent government could maintain both a growing population's access to fertile, coffee-suitable land and prices that could sustain smallholder welfare at levels necessary for continued output increases. Yet to come was something that characterised the next three decades: the major shift against the state's role in making development happen. The political drive for decentralisation that followed independence further undercut — and almost completely eliminated — any capacity for agricultural extension services to underpin smallholder production. The early years were soon to appear as halcyon days.

Acknowledgements

I am indebted to the late Michael Cowen, whose work in Kenya first stimulated my research on smallholder agriculture. Michael Bourke's writings on the beginnings of Indigenous coffee growing in the Highlands appeared just after I began work on the subject and encouraged my pursuit. Craig McConaghy and Brian Greathead provided invaluable assistance and suggestions over a number of years. Two anonymous reviewers of an earlier draft of this Discussion Paper prodded me to take a revised and hopefully improved direction. To all of the above, the editorial staff of the Department of Pacific Affairs publications series and others too numerous to mention, my appreciation and thanks for your help.

Endnotes

1. While this paper uses the term 'the Highlands', it is more accurate as far as the bulk of coffee production is concerned to refer to the central Highlands, encompassing the districts/provinces of Eastern and Western Highlands, Chimbu/Simbu and more recently Jiwaka. Similarly, while export figures include Robusta coffee produced in East Sepik province, over 90 per cent is arabica coffee grown in the central Highlands plus on the Highlands's fringe in Morobe province.

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The Department of Pacific Affairs acknowledges the generous support from the Australian Government for the production of the Discussion Paper series.