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Bikpela wok na liklik mani: smallholders' decisions on cash crops in PNG

By Michael Bourke
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When my late colleague Tom Betitis and I were surveying village agriculture on Bougainville Island, we stopped in Igau Village in the Kieta area. As we walked with villagers to the garden area, I noticed a few chili plants and asked the landowner whether his family grew them for sale. He responded:

> *Bifo mipela i salim sampela sili. Tasol mipela i les long sili. Emi bikpela wok na mipela i kisim liklik mani.*
>
> Previously we sold some chilies. However, we grew tired of growing chili for sale as this required a lot of work for a small cash return.

"*Bikpela wok na liklik mani*" – "big work but small money". Comments by villagers on how much income they earn from growing and selling a certain crop compared with how much work this entails are common in Papua New Guinea, and indeed elsewhere in Melanesia.

The cash income from agricultural enterprises compared with the labour inputs is an important consideration when people decide what to grow for sale. The technical term is "cash returns per labour input". Villagers do not use such a term, but their decisions are based on such an analysis.

In a recent policy brief, I have calculated the rate of return on each day's labour input for 26 actual or potential cash crops in PNG. The output of that analysis is the return (in kina) per person-day labour input to grow, process and sell that commodity. The analysis is based on the best available estimates of crop yield, price received by growers (after marketing costs), cash outlays and labour inputs.

My analysis shows that, at current prices, the greatest returns on labour input came from vanilla, kava, betel nut, oil palm, some temperate climate vegetables, sweet potato, Irish potato and firewood. Balsa, nutmeg, improved cocoa, galip nut, peanuts and charcoal also gave a good return.

Cocoa grown in the traditional manner and Arabica coffee gave lower returns. Among the crops examined, the lowest return was for turmeric, cashew, Robusta coffee, rubber, cardamom, pepper, copra, rice and patchouli.

Villagers rarely make such a comparison prior to planting a new crop. Rather they plant a novel crop and then decide whether it is worthwhile persisting with it once they evaluate the financial rewards for the effort to grow, process and sell it.

The rate of return can, and often does, change over time as prices change. The price that coffee growers in the Highlands receive now is much less than in past decades when one considers what one can purchase with that income. Many Highland villagers who have good access to the Highlands Highway have moved away from growing coffee. They now focus more on growing and selling sweet potato, potato, cabbage, carrots, oranges, pineapples and other fresh food.

Kristie Benjamin, of Kuka Village in the Asaro Valley west of Goroka, explained this in 2017:

> *Bifo mipela weitim kopi sisin tasol. Mipela komparim na mipela painim kaukau mani em i winim kopi mani. Mipela i no gat inrist nau na olsem mipela i rausim kopi. Kaukau em i laif bilong mipela nau.*
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> Previously, we depended on seasonal income from coffee. We compared the income from coffee with that from sweet potato and found sweet potato to be superior. We are no longer interested in growing coffee and have removed it. Sweet potato supports us now.

Many reasons have been suggested by outsiders for the stagnation of coffee production in PNG – ageing trees, poor road conditions, theft of berries, land grabs and security issues. These factors all exist. However, the most important reason is that returns on villagers' labour inputs for coffee are lower than returns they can get from growing and selling fresh food.

Of course, this depends on the ability to sell the produce. For those living further from the Highlands Highway, transport and security issues mean that selling fresh food is more difficult, so coffee remains the main source of cash income from agriculture. The cost of marketing coffee from more remote locations is greater, so the income from coffee is even less. Hence, as for many people living in more remote locations, their income is much lower than for people living closer to market centres.

Perhaps the greatest case of promotion of a crop that has not resulted in significant production because of low returns on labour inputs is rice. This has been vigorously promoted to smallholders since 1918 by the Australian administration, PNG government, some churches and NGOs. Despite this, there is negligible production of rice in PNG – only a few hundred tonnes grown each year – because the return on labour inputs is low in terms of both cash returns and food energy. The price of imported rice would have to be many times greater before rice is attractive to people as a cash crop.

While the rate of return per labour input for a commodity is an important consideration in people's decision making, it is not the only one. Other factors that influence their decisions include:

- the need for cash income prior to major life or social events
- the need for cash income when subsistence food supply is inadequate, such as during a major drought or frost
- gender – women and men may respond differently depending on their perception of the cash received by them within the household.

This analysis of these 26 crops is not the final word. The prices that growers receive varies over time. This is particularly the case for export crops, but it also applies to fresh food sold within PNG. This can be seen in the price that growers receive for vanilla which is currently attractive to growers, but it has been very much lower in the past. Villagers have responded to higher prices by producing much more vanilla – exports from PNG have increased from about one tonne in 1997 to over 400 tonnes in 2021.

Prices for fresh food can also vary significantly within PNG. Prices are generally higher in or near larger urban areas than in more remote locations.

Crop yield inputs can also change over time, for example, if a higher yielding or disease-resistant variety becomes available to growers. This is where agricultural research can help growers obtain higher yield. Crop yields also vary between locations, depending on the climate and soil fertility. Labour inputs may also change, for example, by adopting improved processing techniques.

I am sharing the Excel spreadsheet used for this analysis so that different price, yield or labour input data can be used to generate new estimates. Labour inputs for other temperate climate vegetables are also available, as are recent prices for fresh food in some fresh food markets.

Making the best estimate of the cash returns for the labour input prior to promoting a cash crop is an important step. This way villagers will not waste their efforts and abandon production, as did the chili growers in Central Bougainville.

About the author/s

Michael Bourke
R. Michael Bourke is an honorary associate professor in the College of Asia and the Pacific at the Australian National University.

Australian National University

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