

# Market Demand Study for Papua New Guinea Coffee







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### **Further Information**

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# Acronyms

Unless otherwise specified, all references to dollars (\$) are to United States dollars, and all references to tons are to metric tons.

ACE Alliance for Coffee Excellence

CEBR Centre for Economic and Business Research

CIC Coffee Industry Corporation

COE Cup of Excellence

ECF European Coffee Federation

EPA Economic Partnership Agreements
ICO International Coffee Organization

ITC International Trade Centre

MSME Micro, Small and Medium-sized Enterprises

NGHCE New Guinea Highlands Coffee Exports

PPAP Productive Partnership in Agriculture Project

SCA Specialty Coffee Association

SMEs Small and Medium-sized Enterprises

UK United Kingdom

UKTP United Kingdom Trade Partnerships Programme

USA United States of America

# **Executive summary**

The coffee industry of Papua New Guinea faces an uncertain future, a future in which global production is becoming increasingly concentrated, with the top five origins currently accounting for almost three quarters of world production, up from two thirds just five years ago. Papua New Guinea coffee production, however, has been in long-term decline, although the industry is showing signs of stabilising and even perhaps, some very small green shoots of future growth can be detected.

The good news is that global consumption continues to expand, rising in all regions of the world although rates of growth do vary. Nevertheless, demand will have been impacted by the COVID 19 pandemic, especially in the short term, with a marked switch to in-home consumption following the lockdown of many out-of-home coffee outlets. The early indications are that the rate of growth has slowed but remains positive. There is also evidence, albeit mainly anecdotal, that this slowdown has been accompanied by a switch in demand preferences, with sales of mainstream blends gaining ground at the expense of premium quality coffees. There are, however, high hopes that despite the current hiccup, demand will resume its strong upward growth trajectory, once things return to whatever constitutes the new normal.

Leading that charge upwards will be the specialty coffee sector and whilst there remains some debate over how to define the sector, it is a well-recognised product category in all the major consuming markets and one that commands a price premium over mainstream blends.

This paper looks at the opportunities that exist for the Papua New Guinea coffee industry to add value to its exports and specifically at ways small and medium-sized enterprises (SMEs) might increase their participation in the specialty market, especially in the European and United Kingdom (UK) marketplaces. Crucial to this analysis has been an examination of the way Papua New Guinea coffee is perceived in the target markets as well as benchmarking Papua New Guinea coffees against coffees from other origins.

In order to build a broad and representative picture, a large number of interviews were carried out with a range of industry players including large and medium sized trade houses, specialty importers, roasters and retailers. The picture that emerges from these interviews is mixed with many buyers seeing an optimistic future for Papua New Guinea coffee especially in the specialty market. The specialty end of the coffee market is always on the lookout for something new – a new coffee, a new story. The appetite for the unusual or rarity amongst 3<sup>rd</sup> wave coffee entities is insatiable. The research also highlighted that Papua New Guinea coffee has many unique and positive characteristics. In the mainstream market Y grade is considered excellent value for money, as its fruity cup profile can give a lift to the overall cup quality of many a blend.

On the other hand, industry opinion also pointed to quality inconsistencies, the difficulties of trading with an origin that is considered remote and unknown to many consumers and the industry's perceived focus on Y grade production rather than focusing on the requirements of todays' consumer demand. In this regard, however, it needs to be acknowledged that the Coffee Industry Corporation (CIC) seems well aware of many of these perceptions and is taking steps to address them, as outlined in its Coffee Industry Strategic Plan 2019- 2018.

The paper explores how the industry can add value and identifies the following four integrated strategies that should enable growers to retain more of the value of the product they produce.

Quality Improvement – It is acknowledged that a significant amount of work is being undertaken, not only CIC but also many actors in the internal supply chain, to upgrade the quality of coffee produced. This is evidenced by the investment in washing stations and in adherence to certification standards. The new grading system is also seen as a positive step in this regard but perhaps, inevitably, there is a degree of unease surrounding the introduction of the system, given the significant change it brings. Consequently, there is a clear need to explain and promote the new grading system aggressively to the Trade, highlighting the positive features of the system but at the same time assuring buyers that their requirements will still be met.

<u>Marketing</u> – The bulk of PNG coffee is used in blends and whilst some of the better-quality coffees find their way into the specialty market, many of the industry participants appear to be unaware of what this highly profitable market segment requires. On the positive side there is ample evidence that quality is improving and indeed there are a number of encouraging success stories demonstrating that new entrants can make a success of exporting coffee from Papua New Guinea. Even so, there is a clear need for further education, especially about how the specialty coffee market operates and the requirements of its participants, much of

which is readily available online. The industry and in particular new exporters need to embrace new approaches including direct trade, specialty auctions and e-commerce. However, the value of traditional methods of approaching new buyers through sending samples and sampling should not be forgotten as this can, and often does, produce remarkable results.

**Branding** - Papua New Guinea has many evocative images and stories to tell which make the coffee a marketing professional's dream, but somehow the potential remains largely untapped, especially in Europe and the UK. So, while it is possible to argue that the coffee may have a degree of rarity value in those markets, the fact that very few people have heard of it and other small origins have a higher profile in these markets, means that its rarity credentials are, for the most part, negative. There is therefore a clear need for promotion not only of the coffee but also of the country itself. New consumers want to try new and different products but need to know that they exist. More participation at trade shows is required as is greater exposure of the fact that this unique country also produces some very fine coffees indeed.

Roasted coffee — Marketing roasted coffee domestically clearly adds value and indeed exporting roasted coffee to regional markets is an option that many PNG roasters should explore further. However, given the numerous logistical hurdles that exist to exporting roasted coffee further afield, it comes as no surprise that exports of roasted coffee from coffee producing countries only accounts for 0.57% of global exports. Anyone wishing to market roasted Papua New Guinea coffee in Europe and the UK will have to accept that it will be extremely difficult, involving large volumes and huge risk and at the very least requires a permanent physical presence in those markets to succeed. Even e-commerce channels are unlikely to be that profitable for coffees roasted in Papua New Guinea, although the larger the quantity involved the greater the chance of making a positive return. An alternative approach, which is being experimented with by some coffee producing origins, is to roast coffee under licence in the target market often in association with a local partner. This can overcome huge transport costs, shelf-life concerns and other logistical obstacles but requires a greater injection of capital in the whole enterprise while at the same time yielding a much slower rate of return on that investment.

The paper concludes that the current marketing system of Papua New Guinea is backward looking, focusing on what it currently produces rather than looking forward and producing what the market wants. There is evidence that this re-orientation is taking place, but more is required for the full realisation of the country's potential in the European and UK Specialty markets. This does not mean abandoning Papua New Guinea's existing customer base or ignoring the success of many of the existing exporters in gaining a solid and reliable foothold in the specialty market. But new exporters (and maybe some of the existing exporters as well) need to be aware that access to the specialty market is not something that can be achieved passively, but rather, it demands a more aggressive stance, which sees their active involvement in seeking out and developing new markets. The country needs to work on its brand image and understand that building such an image is a long-term commitment, which will involve active marketing by all involved in the supply chain. The basic ingredients for success in all specialty markets are Promotion, Quality, and Branding.

# CHAPTER 1 INTRODUCTION

# The United Kingdom Trade Partnerships Programme (UKTP)

The United Kingdom Trade Partnerships Programme (UKTP)¹ will support eight African, Caribbean and Pacific countries to promote trade and take advantage of the duty-free, quota-free access to European Union (EU) and UK markets. Under this programme Papua New Guinea will be encouraged to implement and maximise the benefits of the existing EU Economic Partnership Agreements (EPAs), which, it is anticipated, will be replicated by UK EPAs as the UK exits the EU after 31 December 2020. The project, of 2.5 years duration, seeks to address export related challenges faced by micro, small and medium-sized enterprises (MSMEs) by providing targeted support to improve the trade and business support environment, MSMEs capacities to export, and market opportunities.

The ultimate goal of the programme is to iron out trade barriers and create a longterm enabling export environment. With EPA awareness, capacity building, market access and export promotion, the business sector will be well equipped to deliver improved and extended services resulting in increased trade to the EU and UK and local job creation.

In Papua New Guinea, the target sector is coffee with the focus on improving the competitiveness of new and emerging SMEs coffee exporters. During the design phase of the programme, discussions with local stakeholders revealed that, in order to have a positive impact on smallholder livelihoods, one of the goals of any project must be to improve market access to high value specialty markets. Previous productivity improvement programmes had not, adequately, addressed the capacity building needs of national independent exporters, and not concentrated on the specialty market. Whilst the limited resources and relatively short duration of this project will not allow for a large industry-wide impact, it will endeavour to improve the competiveness of the MSMEs to participate in the specialty market, to receive a higher percentage of the value, which, in turn, they will be able to transfer to the farmers within their supply chains.

### Papua New Guinea Coffee

On the world coffee stage Papua New Guinea is a small player, but producing coffee that has historically found high demand, principally for its commercial Y and Plantation grades. Unfortunately, as the coffee industry has evolved to a point where nearly three quarters of world production comes from five producing origins, there is an urgent need for both productivity and quality improvement, to achieve the consistency and reliability that the buyers demand. Whilst producing a solid commercial coffee has to be the priority, the growing specialty coffee market presents opportunities for value addition, but requires a huge amount of attention to detail in supply chain management, product quality, as well as information flow and storytelling. At the same time would-be specialty exporters must not lose sight of the fact that, whilst high quality cupping coffee can achieve high premiums, the volumes will be relatively small, especially when it comes to micro-lot trading. One of the biggest obstacles the national companies face is the difficulty to gain access to buyers to even begin to market themselves. Many will not have a website, and the quality of those that do may be too low to capture the imagination of a European buyer looking for direct trading opportunities.

# Market Demand Analysis

This paper will present an overview of the global and European/UK green coffee market, with particular emphasis on the specialty segment. It will discuss the different options available to Papua New Guinea exporters who, up until this time, have had limited opportunity to capture added value through lack of market knowledge and access. Whilst the multinational export companies have a global trading network to support their businesses, and are better positioned and informed to understand buyer requirements in terms of quality and delivery, the local companies are disadvantaged in this regard. Having concentrated until recently on coffee procurement by volume, which they have sold to the multinationals,

¹https://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/UK\_partnership/UK%20Trade%20Partnerships %20ProjectProgramme-15August.pdf

they are lacking in ability, reputation and marketing skills to secure direct market linkages. Added to this they have little knowledge of the idiosyncrasies of the specialty market with regard to quality, delivery, and information flow.

Value addition can be achieved through different ways and is not limited to green coffee but also to selling roasted coffee. Currently very little roasted coffee is exported from Papua New Guinea, and the small amounts that are sold for export, stay in the region, as roasted coffee sent further afield usually falls victim to both cost and quality disadvantage. The study will look at the various options and their requirements.

In order to build a broad and representative picture of buyer requirements and perceptions, a large number of interviews were carried out with a range of industry players including large and medium-sized trade houses, specialty importers, roasters and retailers. A SWOT summary can be found in Appendix I, which highlights the main strengths, weaknesses, opportunities and threats that may impact the future of the coffee industry in Papua New Guinea. All of the input for this came from those interviewed during the market demand research stage.

The study is, therefore, largely based on buyer feedback rather than the opinion of the authors. Its ultimate aim is to provide the Papua New Guinea stakeholders with a comprehensive record of what is required from their side to improve their ability to supply the specialty market, and it will also provide guidance as to other project activities that will build capacity. These might include training in the areas of agronomy, GAP, branding, marketing and communication as well as promoting direct access to market through attendance of coffee fairs or online sales and auctions. A full list of the companies that contributed to this study can be found in Appendix II.

# CHAPTER 2 COFFEE MARKET

### Global Market trends

### **Production**

According to the latest statistics from the International Coffee Organization (ICO)<sup>2</sup>, global coffee production in crop year 2019 amounted to just under 166 million bags, almost 9 million bags less than the record 175 million bags produced the year before. The 2019 total is 8% higher than it was five years ago and 37% higher than ten years ago. Indeed, global production has been on an almost continuous upward trajectory for more than three decades, although the bulk of this expansion can be attributed to a handful of origins, namely Brazil, Vietnam, Colombia, and Honduras, which account for around 92% of the increase in global production witnessed over the last ten years.

Although some 70 countries produce coffee on a commercial scale, there has always been a significant degree of concentration in world production, primarily as a result of the dominance of Brazil, which accounts for more than one third of world output. Over the last five years this degree of concentration in coffee production appears to be increasing at an accelerating rate. In 2019 the 5 largest producing countries accounted for almost three quarters (72.8%) of world production up from 68% in 2014<sup>3</sup>, a percentage, which had, more or less, remained constant since the turn of the century.

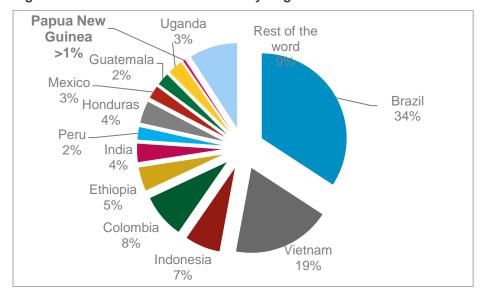


Figure 1 World coffee Production by origin in 2019

Source: ICO

Vietnam, which thirty years ago was producing around 1.4 million bags, now occupies the second spot producing over 30 million bags or just under 19% of world output<sup>4</sup>. Colombia continues to be an important origin, despite a difficult period in 2008 when a rejuvenation project cut its production by more than a third. It has since recovered and today accounts for approximately 8.5% of world output<sup>5</sup>. Honduras, which produced roughly the same as Papua New Guinea in the early 1980's, now produces almost five times as much as it did then at 7 million bags, which is double what it produced ten years ago<sup>6</sup>.

4 ibid

<sup>&</sup>lt;sup>2</sup> www.ico.org

<sup>&</sup>lt;sup>3</sup> ibid

<sup>&</sup>lt;sup>5</sup> ibid

<sup>&</sup>lt;sup>6</sup> ibid

There are only a few other origins, which are producing more than they did five years ago but the vast majority have either stagnated or contracted further. Papua New Guinea's output has waxed and waned over the period but its output in crop year 2019 at 752,0007 bags is the second lowest total over the last five years and approximately 30% lower than it was throughout the 1980's. Today, Papua New Guinea ranks 17th in world coffee production, accounting for just 0.45% of global output.

### Consumption

Over the last 5 years global coffee consumption has been growing on average by around 2.0% per annum although the rate of expansion has varied from region to region.

Global Consumption Trends ('000 bags) Table 1

	2014	2015	2016	2017	2018	2019	Average annual rate of growth
Total	150,841	155,279	157,970	159,847	167,837	168,392	+2.2%
Broken down into:							
Importing countries	104,336	107,930	109,636	110,161	117,562	118,189	+2.5%
Exporting Countries	46,505	47,349	48,334	49,686	50,275	50,203	+1.5%
Or by region:							
Europe	50,991	52,147	52,045	53,199	56,052	56,287	+1.9%
North America	27,363	28,934	29,559	29,941	31,779	31,983	+3.2%
Asia & Oceania	31,596	32,863	34,395	34,832	36,466	36,542	+2.9%
Africa	10,706	10,739	10,689	9,701	11,061	11,135	+0.8%
Mexico & Central America	5,230	5,295	5,172	5,252	5,321	5,326	+0.4%
South America	24,955	25,299	26,111	26,922	27,156	27,120	+1.7%

Source: ICO

The ICO estimates that in coffee year 2019/20 (Oct./Sept.) global coffee consumption will rise by 0.3% to 168.39 million bags. It believes that, during the first half of the current coffee year, global coffee demand continued to grow strongly, following on from the significant increase witnessed during 2018/19. It further reports that there was a clear surge in demand at the start of the global Covid 19 pandemic and that the increased at-home consumption helped to limit the fall in demand, caused by the temporary closure of many restaurants and coffee bars as result of national lock-downs. During the latter half of the coffee year, however, the ongoing pressure from the global economic downturn and the limited recovery in out-of-home consumption significantly impacted, but did not eliminate, the upward trend.

In its Coffee Break Series entitled 'Impact of Covid-19 on the Global Coffee Sector'8 the ICO states that a 1% fall in GDP growth in the top 20 coffee-consuming countries leads to a lower growth rate of global demand for coffee to the tune of 0.95% or 1.6 million bags. Furthermore, coffee prices have experienced

<sup>7</sup> ibid

<sup>8</sup> http://www.ico.org/documents/cy2019-20/coffee-break-series-1e.pdf

multiple spikes and high volatility since the outbreak of the pandemic, despite the fact that world market prices of many major staple foods have remained relatively stable. The organization stated "The novel coronavirus represents an unprecedented joint supply and demand shock to the global coffee sector, constituting an enormous challenge to coffee growers, farm workers, and downstream value chain actors". This volatility in coffee prices was initially attributed to supply side uncertainty and market tightening, as fears of labour supply shortages and poor harvest prospects grew. This was followed by downstream problems related to the pandemic. Port and shipment delays, currency fluctuations, panic buying and stockpiling, as consumption moved from out-of-home to at-home, all served to aggravate coffee's price fluctuations. With the world seemingly facing a second wave of the pandemic and thus the increased likelihood that global economic growth will be impacted further, the outlook for any growth in demand during 2020/21 looks rather bleak.

Whilst the available evidence suggests that global demand is holding up better than expected, there are anecdotal reports suggesting that reduced household incomes may have translated into a lowering of demand for quality or specialty coffees. It needs to be stressed that at the moment there is little hard evidence for this, although quarterly reports published by some of the major roasters<sup>11</sup> suggest that demand for many mainstream blends is increasing at the expense of their higher quality offerings. Furthermore, it appears that amid the Coronavirus lockdown in Japan, much of the out-of-home arabica consumption was replaced with in-home instant (utilising more robusta) coffee consumption. This would certainly explain the significant shift from Brazil to Vietnam being Japan's largest coffee supplier<sup>12</sup>. Nevertheless, caution is recommended as this may well just be temporary blip, caused by the initial pandemic-inspired panic buying. Prior to the pandemic, global demand was expanding fairly rapidly, particularly in new emerging markets and in America, both growing by around 3% per annum over the last 5 years.

### **European Market**

Demand in Western Europe, although more stable, has still seen positive growth of just over 4 million bags over the past 5 years or roughly 1.9% year on year. Accompanying this growth in all regions of the world has been a dramatic change in the nature of demand with the expansion of the out-of-home market led by the explosion in the number of new specialty coffee shops and bars in the High Street. Allegra Strategies report that the number of branded coffee shops in the 24 national European markets included in the survey grew by 6.0% in 2018 to total 33,745 outlets and they also forecast that by 2023 the total number of coffee outlets in Europe will have risen to over 42,000, an increase of around 4.8% per annum<sup>13</sup>. However, this prediction was made before the pandemic struck and it seems reasonable to anticipate that these figures will be severely impacted with the closure of many independent outlets as well as the already announced contraction in the branded chain sector.

According to the European Coffee Federation (ECF) and Euromonitor International <sup>14</sup>, in terms of coffee volume, the share of out-of-home consumption differs significantly between the different markets of the EU. In the Czech Republic, prior to the pandemic out-of-home consumption accounted for 37% of total consumption while in Estonia it is only 7%. In Croatia, Spain and the UK it accounts for 32%, in the Netherlands and Sweden 29%, while in Austria, Germany, Italy, Latvia, Lithuania, Luxembourg, Slovakia, and Slovenia it is under 20%. In the United States of America (USA), the National Coffee Association estimated that 36% of all coffee consumed in 2019 was consumed out-of-home.

In-home coffee consumption is also going through profound change with the rapid adoption of single cup brewing technology, primarily involving pod machines, but also home espresso machines. The market share of pods has been growing steadily especially in Europe and America. Again, adoption varies from country to country with pods accounting for 32% of the coffee market in France but only 1% in Sweden. In the UK the percentage is 13%. It is thought that the pandemic will accelerate the expansion of single serve brewing technology in all countries and regions, although just prior to the

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<sup>&</sup>lt;sup>9</sup> http://www.ico.org/research.asp

<sup>&</sup>lt;sup>10</sup> Between mid March and mid May 2020 the ICE futures price for arabica coffee ranged between US Cents/lb 102.6 and 129.95

<sup>&</sup>lt;sup>11</sup> See 2<sup>nd</sup> quarter reports for Nestle, Keurig Green Mountain and J. M. Smuckers

<sup>&</sup>lt;sup>12</sup> See All Japan Coffee Association trade data September 2020

<sup>&</sup>lt;sup>13</sup> Allegra World Coffee Portal European Branded Coffee Shop Report 2019

<sup>&</sup>lt;sup>14</sup> European Coffee Federation Report 2018/19

pandemic, there were a few tell-tell signs that in some markets (notably the Netherlands and Ireland) demand for pods was beginning to wane. In the Netherlands pods accounted for 35% of the volume consumed in 2016, but in 2018 this had fallen to 31%. Similarly, although more dramatic, pods accounted for 32% of consumption in Ireland in 2016 but only 16% in 2018.<sup>15</sup>

### The UK Market

According to ICO data, coffee Imports into the UK in calendar year 2019 totalled 5.55 million bags but exports totalled 1.78 million bags suggesting that net imports totalled 3.77 million bags (Green Bean 2.98 million bags; Roasted 0.65 million bags; and Instant 0.14 million bags). The top five origins for green coffee were Vietnam (1,056,158 bags), Brazil (880,843 bags), Colombia (255,436 bags), Honduras (231,198 bags and Indonesia (144,617 bags). Imports of green coffee from Papua New Guinea amounted to 6,010 bags or 0.2%, although the trend is upwards with the 2019 total the highest for 5 years. The chart below shows the evolution of green coffee imports into the UK for the top 5 origins over the last five years.

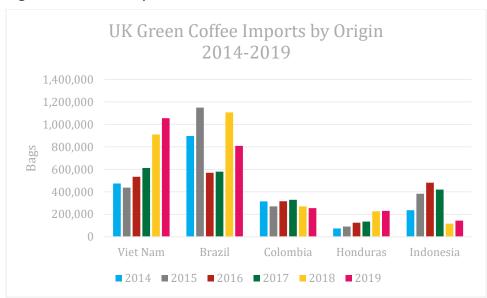


Figure 2 Coffee Imports into UK

Source: ICO

Gross imports of roasted coffee into the UK have doubled over the past five years rising from 576,000 bags in 2014 to 1.18 million bags in 2019, 96% of which came from E.U. countries. Imports of roasted coffee from producing country origins accounted for just 2.1%. The UK however, exported 534,000 bags of roasted coffee, almost 72% of which went to EU countries, demonstrating the interconnectivity of the EU coffee market. UK exports of roasted coffee to producing country origins in 2019 virtually matched the volume of imports from such sources at around 29,800 bags. Imports of soluble coffee totalled 1.2 million bags 20% of which came producing country origins and 78% from the EU. Exports of soluble coffee totalled just over 1 million bags with 80% going to EU countries and 1.5% going to producing country origins. Again, demonstrating the interconnectivity and the significant cross trading of products and brands throughout the EU.

It has been estimated by the Centre for Economic and Business Research (CEBR) in association with the British Coffee Association that in 2017 approximately 95 million cups of coffee were consumed per day with the average consumer drinking 2 cups of coffee daily. The bulk of coffee consumed continues to be instant, accounting for around 52% of the total turnover generated by all coffee products sold in the retail sector in 2019<sup>16</sup>, although this is down from 63% in 2012. In fact, 80% of UK households buy instant coffee for in-home consumption, particularly those aged 65 and older. Out-of-home consumption

<sup>&</sup>lt;sup>15</sup> ECF European Coffee Report 2018/19

<sup>&</sup>lt;sup>16</sup> Euromonitor

in 2017 accounted for 33% of the volume sales of all coffee products. Turnover in the UK coffee sector in 2017 was estimated to total £7.24 billion and employed over 114,000 people full time.

### **Covid Pandemic**

The Covid-19 pandemic has certainly had a major impact on the UK coffee market, although overall consumption does appear to be holding up, albeit with greater in-home consumption and lower out-ofhome consumption. The Government enforced lockdown in March 2020 caused many coffee shops to close or at best stay open for take-away only. Many reopened during August and the Government's "Eat out to help out" scheme provided a much-needed boost to the hospitality sector including many cafes and coffee bars. Nevertheless, one estimate suggests that around one third of all coffee shops in the UK have remained closed and there must be every chance that many of these will not reopen. Many coffee-based businesses are also laying off staff with SSP Group<sup>17</sup>, owner of Caffé Ritazza and Upper Crust, cutting 5,000 jobs because of plummeting sales. Pret a Manger plans to cut nearly 2,900 jobs and Costa Coffee has said that up to 1,650 staff members working in its cafes in the UK, more than one in 10 of its workforce, will have to be laid off. Nevertheless, it is still too early to make an accurate assessment of the pandemic's effect on the industry especially as, at the time of writing, a second wave of the virus appears to be spreading across the country and the reintroduction of many restrictions looks inevitable. Anecdotal evidence suggests that there has been a rise in the number of consumers in the UK buying a coffee subscription service as well as buying coffee online, although at the moment, there is very little hard data to support this. If this is true, then the pandemic may have a polarising effect on sales where we see a growth in the major and own brands sold in supermarkets, in particular instant coffees, accompanied by a growth in online sales of top-quality coffees, effectively squeezing sales of those coffees, which sit in between this quality range. The same is probably true for many other countries in Europe.

<sup>17</sup> https://en.wikipedia.org/wiki/SSP\_Group

# CHAPTER 3 MARKET STRUCTURE, QUALITY AND PRICING

### General overview

As a rule, the global coffee market can be divided into three separate quality categories. At best, these categories are ill-defined, and they are further complicated by the fact that the divisions between each category are somewhat blurred at the edges. Nevertheless, it is a division, which most people in the coffee trade recognise and agree with. The three categories are:

- 1. **Mainstream**: accounting for between 70% and 75% of the total market. Such coffees are widely available and usually defined using commercial quality definitions, with a taste that is described as acceptable. These coffees are mainly used in blends, but not always. Final buyers tend to be medium or large sized roasters and soluble coffee manufacturers.
- 2. Premium: accounting for between 20% and 25% of the total market. Such coffees have a better-quality definition than mainstream coffees and usually have a defining taste characteristic or emanate from a single region or area of an origin. Many relationship coffees, certified coffees or coffees that conform to certain sustainability parameters, such as organic coffee, would fall within this category. Final buyers range across the size spectrum, but tend to be the smaller to medium sized roasters and such coffees are usually sold as a single origin rather than as a blend.
- 3. Exemplary: accounting for between 3% and 5% of the total market. Such coffees are of exceptional quality and taste, usually scoring well in excess of 85 under the Q Grading system. They tend to be from a specific region/farm/or even single farm plot and almost always are a single defined variety. Such coffees come with full traceability back to the farm and often sold as unique micro-lots. Final buyers tend to be micro, small or medium sized roasters, small coffee-shop chains and even sometimes single coffee shops. They are always sold at a large price premium.

Without a precise definition of *Specialty Coffee*, it is difficult to quantify the size of this segment of the market. Different associations have attempted to provide a definition, but so far none have been consistent or easily quantifiable. Whilst it is true that all exemplary coffees would fall in the specialty category, it is also true that not all coffee that is sold as specialty necessarily falls in the exemplary category, nor for that matter into the premium category either. The Specialty Coffee Association (SCA) defines Specialty Coffee as coffees scoring over 80 under the Q grading system, but while the Q grading system is recognised as being a rigorous and reasonably objective system of ranking coffee, it is not yet universally applied by all roasters selling coffee with a specialty label. Indeed, without regulation or legally enforced standards, the label specialty can be (and is) applied to any coffee product regardless of its intrinsic quality.

Specialty coffee is, therefore, primarily a product of marketing and the application of the term varies from market to market. In some ways, specialty could be said to be a collective term for different niche coffee markets, such as organic coffees, relationship coffees and/or certified socially responsible coffees, exemplary quality coffees, coffees sold through coffee shops and bars, etc. etc. Nevertheless, specialty coffee is a reasonably well-recognised coffee product category in the USA, Western Europe and Japan and although less well known, the term is still used and sought after in many other markets. As a general rule, coffee destined for the specialty market commands a price premium (often sizeable) over coffees destined for the mainstream market.

The bulk of specialty coffee is washed arabica, but there are some unwashed or natural arabica coffees that certainly fall into the speciality category, most notably many coffees from Ethiopia and from some of the more exotic smaller producing countries, like Yemen, Myanmar and Nepal. A few high-quality washed robusta coffees are also sometimes specified as specialty. Indeed, the Coffee Quality Institute<sup>19</sup> now has a comprehensive scoring chart under its Q grading system for robusta coffee, but to date the

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<sup>&</sup>lt;sup>18</sup> Source: ITC The Coffee Exporters Guide

<sup>19</sup> www.coffeeinstitute.org

volumes of robusta coffee classified as specialty continues to remain extremely small and there remains an almost in-built prejudice against robusta coffee amongst the specialty coffee roaster community.

Furthermore, there has been a noticeable and dramatic increase in interest in "Pulped Naturals" (pioneered in Brazil but now widely adopted in many other arabica producing countries) with many coffees produced using this method of processing, seen as specialty coffee. This method is also called "Semi-Washed", but in the past this term was associated with poor quality coffee and thus is not now commonly used. However, with greater attention to hygiene and cleanliness, this process is now, seen by many as, producing coffees with superior taste and body characteristics. It is also often referred to as the honey process.

Despite all the caveats and reservations expressed above about defining specialty coffee, the global specialty coffee market, assuming its' widest definition, is thought to account for anywhere between 15% to 20% of the global coffee market, that is between 25 million bags and 34 million bags. On its narrowest definition assuming coffees that score over 80 on the Q grading scale, however, it is thought to account for between 7% and 10% of the global coffee market i.e. between 11.75 million bags and 17.0 million bags. Either way it is still the fastest growing sector of the coffee industry and although its future growth prospects will have been dented by the pandemic-induced switch in quality demand, it is expected to bounce back and resume its upward trajectory once things return to a more normal situation.

### **PNG Coffee**

### In the mainstream marketplace

Whilst Papua New Guinea coffee has its own unique cup profile, it was, and still is seen as a coffee that represents good value for money basis its quality. However, the dominance of production today by Brazil, Vietnam and Colombia has led to considerable reduction of PNG usage. This can be seen in the case of Germany, still the largest importer of PNG in Europe, but where volumes have more or less halved over the past 10-20 years (see table 2). At the right price there is no shortage of demand for the popular Y grade coffee, but if prices are seen to be rising it is rather as a result of trade shorts in the marketplace than new roaster interest. Inefficiencies in production and high cost of production in PNG result in a lack of competitiveness, and as one German trade expert commented '...price matters a lot, the approach has become totally opportunistic, and Brazil and Robusta suddenly seem to be as lively in the cup.' Unlike Brazil or Colombia coffee, which form the backbone of many commercial blends, PNG will be substituted in a blend, relatively speedily, by price sensitive commercial roasters, due to price volatility.

Table 2 Comparison of PNG imports into Germany over past 15 years (bags)

	2005	2010	2015	2019
Brazil	4,536,256	6,297,912	6,563,861	6,691,893
Colombia	1,379,746	272,791	102,659	106,019
Vietnam	1,870,746	353,588	2,691,482	3,560,210
PNG	577,199	354,451	205,005	271,640

Source: ICO

There are several ways to benchmark PNG coffees against other coffees, and price is not the only important factor. Roasters will try and match their blend profiles, as far as possible, to maintain consistency and, whilst changing the blend is an option, this is a longer process often involving a lengthy consumer approval process. Therefore, there are several coffees that are similar from a quality perspective, and against which PNG coffees will be price compared. According to one major multinational trade house, they consider Tanzania, China and Vietnam Arabica to be in a similar 'basket' of coffee. Importantly, the development of PNG coffees has followed a similar path to those of the Southern Highland coffee from Tanzania, where better processing and improved good agricultural practices have resulted in a movement from the traditional Amex coffees, popular in the German market, to a larger proportion of fair average quality (FAQ) coffees with a more balanced and less winey profile. The same can be said of PNG Y grade where formerly 80% of the coffees fell under one category, now there is a split between average Y grade and Premium Smallholder Coffee (PSC) quality trading at a

substantial premium due to its superior quality. The following table compiled in October 2020, compares the prevailing differentials of these similarly considered coffees.

Table 3 Price benchmarking comparable origins/grades to main Papua New Guinea grades

Coffee Origin and Grade	October 2020 FOB cts/lb differential
PNG Y Grade	+5 to +20
PNG PSC (organic)	+30 to +50 (+35)
PNG Plantation	+60 to +85
Tanzania Amex	+15
Tanzania FAQ	+20-25
Tanzania CPU	+55 to +60
Rwanda FW15+	+50
Honduras/Peru organic	+10
China <sup>20</sup>	-2
Vietnam SW	+5
Honduras HG	+15 to +20
Cameroon SW	-30

Source: Industry sources/interviews

The following graph shows the relationship, over time, between the price differential of PNG Y1 coffees to a sample of other coffees, which are similar coffees but not necessarily direct substitutes. It is interesting to note that the relationships between the different origin coffees are not static but rather more dynamic, reflecting variations in availability (not only between these coffees but also between coffees which are close substitutes for any of the coffees listed), perceived quality differences over time and overall market conditions, when, for example, high or low prices force roasters to remix their blends.

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<sup>&</sup>lt;sup>20</sup> China has a lot of negative issues mostly chemical and specifically glyphosate levels exceeding allowed maximum residue level (MRL). It was valued by a trade source at minus 2, but current offers from origin are significantly lower.

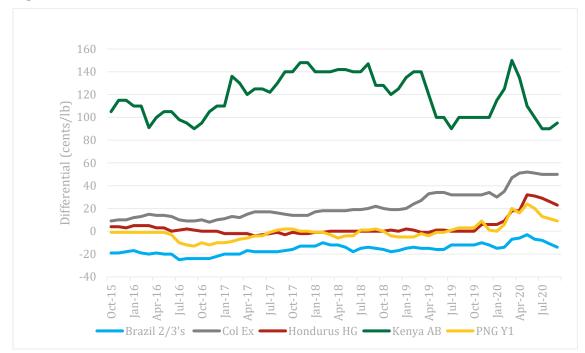


Figure 3 Price Differentials 2015-2020

Source: Various trade data sources

### Benchmarking of better qualities, plantation and estate coffees

Moving into the specialty coffee arena, the cupping score is more of the price driver, than the description or comparison to similar quality coffees. Specialty coffee pricing can be much more about the reputation of an estate, or the relationship between buyer and producer, and much of direct trade pricing hinges on sustainability and paying farmers a fair price. With the growth of the specialty market, discussed earlier in this paper, the demand for coffee of above average cupping score (SCA 85/86+) is pretty much unlimited. PNG enjoys a singular position on the global coffee map, because of its unique range of profiles. Current trading levels for these coffees from PNG, according to James Dargan from Sucafina Specialty, are between +30 to +50 FOB, whilst anything with a cup score 87/88 and above will, which includes some of the best PNG coffees from plantations or microlots from privately owned washing stations can fetch between 200-300 cents per pound. As in the case of the Y grade coffees, the comparable coffees for better PNG qualities tend also to come out of the same origins, with a good Tanzania CPU (central pulpery unit) trading at plus 55, and a Cameroon FW commanding 180-200 cents per pound (very little volume, maybe five containers per year). Demand for special/organic/plantation and good PSC coffees is seen to be scattered, but able to fetch decent premiums.

### Impact of the Covid 19 pandemic on demand for PNG coffees

Although it is still too early to make any meaningful assessment of the impact of the pandemic on the demand for PNG coffees, what can be said is that there may well be increased demand for Y grade coffees by European roasters who are witnessing an increase in sales of their mainstream blends and soluble coffees. Similarly demand for certified coffees looks set to continue to grow as younger consumers seek out such coffees from non-traditional retail sources. It is more difficult, however, to determine what might happen to demand for PNG specialty grade coffees. Demand for those coffees which clearly fit into the exemplary category will probably continue to be strong, indeed given that demand for such coffees probably already exceeds that of its supply, there is a good chance that exporters will not see any slackening in interest. What is more problematic are those coffees which can be classified as falling within the premium category, as these coffees usually end up either in some mainstream blends or in some of the better-quality roasted coffees sold in supermarkets. At this point in time anecdotal and very preliminary evidence suggests that demand for such coffees may not be as strong as it was in the past, but whether this will translate into reduced interest is hard to say. The bulk of PNG's 2020 harvest has been sold or committed for shipment already, and by the time the next

harvest begins, in earnest, in April/May 2021, the picture should have become clearer. This is not, however, a reason for complacency and the PNG coffee industry should monitor the situation closely and use the new grading system to exploit new opportunities that will inevitably open up for those agile enough to adapt.

# CHAPTER 4 SPECIALTY COFFEE MARKET

### The Specialty Market in the Europe

The tremendous growth in the consumption of specialty coffee in Europe over the past 2 decades can be attributed primarily to the growth in out-of-home consumption and in particular to the explosion in specialised coffee bars and shops in every country of Europe. National growth rates have varied, but every country has witnessed significant growth in the number of specialist coffee outlets. As previously mentioned, Allegra Strategies estimated that in 2018 there were 33,745 branded coffee outlets in the 24 national European national markets covered in their study. This is triple the 10,951 outlets estimated in 2010. Costa Coffee were the largest branded chain accounting for 2,923 outlets or 8.7% of the total, Starbucks were second with 2,611 stores and closely followed by McCafe with 2,352 outlets.<sup>21</sup>

This upsurge in out-of-home outlets has, in turn, inspired a rise in the amount of specialty coffee consumed in-home. This rise in in-home consumption of specialty coffees has been aided by development of easy to use home-brew pod machines and high quality, reasonably priced, home espresso machines but also by the increasing availability of specialty coffees, usually single origins or certified coffee, in many supermarkets throughout Europe.

Generally speaking, specialty coffee in the European sense refers to a gourmet or quality coffee from a named origin that offers the consumer a particular desirable flavour or identifiable characteristic. This is not to say that specialty or gourmet coffee excludes all blends, it does not, indeed most espressos, which fall into this category, are blends. Furthermore, there is a debate within some countries in Europe as to whether flavoured coffees fall into this category, since they remain a novelty in most European country markets. Whilst they could be considered specialty in the broadest sense of the word, they fulfil a niche demand rather than being seen as a gourmet coffee. There have also been important developments in the specialty soluble sector, which in many cases have centred on the popularity of single portion soluble coffee products such as instant cappuccinos and flavoured coffee drinks. Purists, however, do not see such beverages as fitting into the speciality category, although many consumers do.

The markets in Europe where the specialty sector is growing the fastest include the UK, Spain, the Benelux countries, (particularly the Netherlands), France, Germany and Scandinavia. In Eastern Europe, the market for specialty coffee is smaller but is expanding especially in the Czech Republic, Hungary, and Poland<sup>22</sup>. Indeed, throughout Eastern Europe the number of coffee bars and shops continues to expand at pace. Allegra reports that in Romania coffee shop culture is growing rapidly with the number of coffee shops growing by 25.1% in 2018. Although most out-of-home outlets in Europe but also elsewhere, especially the branded chains, concentrate their menu on espresso-based drinks, there has been a resurgence of demand for filter coffees in a number of markets over the last few years.

Accompanying this growth has been an explosion in the number of micro-roasters, who tend to trade mainly locally but also increasingly via the internet. They tend to specialise in a limited number of origins and to concentrate on really top-quality coffees. Exploring the internet suggests that there are in excess of 530 micro roasters in the UK and Ireland alone with Germany topping the list with over 1,500 small roasters, although it should be noted that these numbers cannot be independently verified. Small regional roasters have been a traditional feature of the Italian coffee business for decades and whilst declining in number, they still are thought to number well in excess of a thousand and thus continue to account a significant share of the out-of-home market there. An interesting feature of this segment of the Italian market is the fact that most of these small roasters tend to buy established, or in-house, blends of green coffee for roasting, directly from a small number of importers.

Despite the rapid growth that has been achieved in the specialty coffee sector and in particular in the number of micro-roasters in many countries in Europe, the coffee industry is going through a period of increasing concentration, mainly via mergers and acquisitions. This has concentrated buying power into the hands of a smaller number of larger roasters. Furthermore, these larger roasters have not ignored the growth of consumer interest in specialty coffees and have been innovative in catering to their requirements. It is not unusual to find many different single origin and specialty coffees, all roasted by

<sup>&</sup>lt;sup>21</sup> Allegra World Coffee Portal European Branded Coffee Shop Report 2019

<sup>&</sup>lt;sup>22</sup> Ibid

the major roasters on the shelves of a typical supermarket competing for shelf space with the more traditional mainstream blends. Even the European soluble sector, particularly in the UK, has recognised the importance of the specialty coffee sector and has developed not only single origin soluble coffees, but also instant cappuccinos, soluble espresso and other niche market coffee products. As a result, competition between the major brands and the small specialty roaster has inevitably limited the latter's potential market, although they have been better placed to exploit the smaller markets. Niche business is of little interest to the major roasters, although they certainly keep an eye of what their competitors are up to. For where the specialty coffee market leads today, mainstream follows tomorrow.

### Specialty market in UK

Although remaining a predominantly a market for instant coffee, the UK has been one of the more rapidly expanding market for specialty coffee in Europe over the past 20 years. Indeed, recognition of this led to the Speciality Coffee Association of Europe (SCAE) establishing its headquarters in the UK and after merging with the SCAA, the newly formed Specialty Coffee Association (SCA) maintained its European headquarters in the UK. This growth, of specialty coffee in the UK, has been led by the explosion of coffee-focused bars and shops, on High Streets throughout towns across the country. Allegra Strategies put the number of branded chain coffee shops in the UK in 2019 at 8,653, up from 4,498 in 2010<sup>23</sup>. The total number of coffee outlets, which includes independents as well as all other coffee outlets (Petrol Stations, Department Stores, etc.) in 2019, is put at 26,807. CEBR estimates that 80% of people who visit coffee shops do so at least once a week and that around 16% visit on a daily basis.

More recently, and almost as a direct result of the growing consumer interest in specialty coffee, there has been an upsurge in the number of micro and small roasters. Accurate statistics on the number of micro roasters do not exist but the number based in the UK is thought to be in excess of 400, many of whom are also importers of small volumes of exceptionally high-quality coffees. These small roasters have found a ready market, not only, among independent coffee shops and bars, but also, among consumers looking to create that out-of-home coffee experience in-home. Many sell via the internet, but increasingly many have found that subscription, a new innovation in food retailing, has provided a very lucrative channel for the sale of these specialised coffee. This is where buyers, in return for a monthly or annual fee, are sent a variety of different coffee at different times throughout the year. The audience for these micro roasters appears to be consumers, mainly younger but not exclusively so, who are looking for exceptional quality coffee products and appear to be prepared to pay sizeable premiums to get what they want. A recent survey suggested that 79% of coffee consumers in the UK are keen to try new origins or varieties at home<sup>24</sup>. The desire for, what has been termed, the "barista experience at home" has also led to the rapid expansion of the use of coffee pods for various machines. In 2018 13% of UK fresh coffee sales were pods, up from 10% in 2016. Preliminary data for 2019, however, suggests that while the sale of pods continues to expand, the rate of growth is significantly less than over the past five years. Some analysts attribute this to concerns over the environmental impact of not being able to recycle many coffee pods, while others point to Brexit and concerns over the rising costs of imported products.<sup>25</sup>

Environmental and ethical concerns appear to be a major driver behind the purchase choices of many consumers in the UK and for that matter across Europe. Indeed, expenditure on ethically and environmentally certified products is rising exponentially as more and more products become certified. Fairtrade report that over 4,500 products sold in the UK carry the Fairtrade logo. It appears that those in the lower age cohort are more likely to state that "ethically sourced" credentials are an important factor in their purchase decisions than those in the older cohort. This is certainly true for coffee.

### **Certified Coffees**

The demand for certified coffees continues to grow, although collecting hard data on the whole market segment to prove such a statement is problematic. It has been estimated that between 25.8% and 45.3% of the land devoted to coffee production globally in 2016 was registered as producing certified

<sup>&</sup>lt;sup>23</sup> Allegra Project Café 2020

<sup>&</sup>lt;sup>24</sup> Mintel UK Coffee Market Report 2020

<sup>&</sup>lt;sup>25</sup> ECF European Coffee Report 2018/19

coffees, with an average 8.3% growth rate between 2011-2016.<sup>26</sup> The range is large because many farmers are registered with more than one agency, meaning that it is extremely difficult to eliminate double counting. It is, however, unfortunately important to highlight that the data also suggests that the demand for certified coffee is lower than supply of such coffees. Unified data on demand for certified coffees is not readily available, primarily because each agency reports its sales data in a slightly different way. For example, Utz coffee (which has now merged with Rainforest Alliance) reports on the amount purchased from Origin by the 1<sup>st</sup> buyer i.e. the one who paid the premium to the grower, has grown from 224,028 tons in 2013 to 365,091 tons in 2017 (+10.2% p.a.). Fair Trade reports on the amount sold to consumers using their logo on the label, which has grown from 179,723 tons in 2015 to 214,335 tons in 2017 (+ 9.5% p.a.). While 4C reports that roasters purchased 9.9 million bags of 4C certified coffee in 2019 up by 11% over that purchased in 2018. Combining all three sets of data would be misleading.

According to CIC, exports of certified coffees from Papua New Guinea have grown more rapidly than the expansion in consumer demand, growing by 18.8% per annum over the last 5 years. Furthermore, certified organic coffees accounted for more than 55% of the PNG exports of certified coffees in 2019 with Fair Trade/Organic double certified coffee accounting for almost 32% of the total.

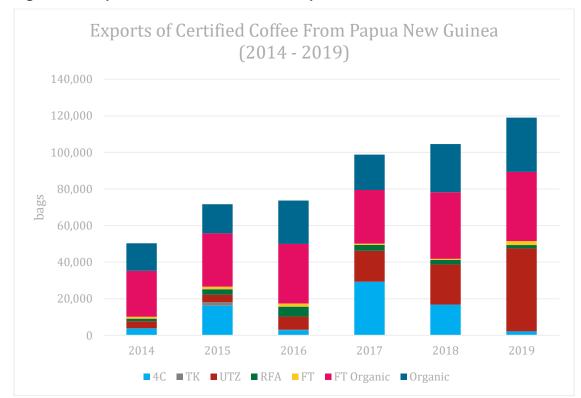


Figure 4 Exports of Certified coffee from Papua New Guinea

Source: PNG CIC

### Papua New Guinea and the Specialty Market

Classifying which PNG coffees fall within the specialty category under the existing grading structure is somewhat problematic, given the varying definitions of specialty, but for the sake of analysis the following export grades from the old grading system can be classified as specialty: AA, A and PB. Similarly, the bulk of Fair Trade/Organic double certified coffee would also fall within the specialty category. A significant proportion of coffee exported under grades B/AB, C, X/AX, Organic X/AX, PSCA and PSCX/AX could be classified within the premium range. However, it would be hard to argue that all of this could be considered as specialty coffee, even using its widest definition, as most, even though

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<sup>&</sup>lt;sup>26</sup> ITC – The State of Sustainable Markets 2018

of premium quality, is destined for the mainstream market. The grade of many certified coffees, that are exported from Papua New Guinea, is unfortunately not always recorded. Nevertheless, much of this coffee can probably be best classified as premium coffees, and not necessarily be seen as specialty. The table below shows the author's breakdown of the export data into the different quality categories, i.e. specialty and mainstream coffees as well as roasted coffee over the last 5 years.

Table 4 PNG Coffee Exports by Grade (bags)

Grade	2015	2016	2017	2018	2019	Average
Specialty	78,004	104,429	80,081	130,120	136,568	105,840
Mainstream	633,285	1,020,662	713,866	739,731	650,777	753,263
Roasted	193	89	153	83	53	114
Total	711,482	1,133,180	794,100	869,934	787,393	859,218

Source: Author's estimates using CIC data

It is interesting to note that the proportion of the crop that this analysis suggests can be placed into the specialty category has increased significantly over the past 5 years, rising from around 11% of total exports in 2015 to around 17% in 2019. However, industry sources suggest that the proportion of the crop that actually finds its way into the specialty sector is only around half this total. Nevertheless, the trend appears to have been one of continual improvement. Whilst this improvement will assist the country gain better access to the specialty market, it is important to emphasise that the bulk of coffee exported from Papua New Guinea will continue to be used within the mainstream sector. Whilst Papua New Guinea is a small player in global terms, it has an established position in the mainstream market, which it must defend and indeed also nurture. Consequently, while the speciality coffee sector offers the country an attractive opportunity which must be exploited to the full, it is essential that the requirements of the mainstream sector continue to be serviced.

During the research phase of this market analysis report, most of the importers and roasters painted an optimistic picture for the future of PNG coffee in the specialty coffee arena. The specialty end of the coffee market is always on the lookout for something new – a new coffee, a new story. The appetite for the unusual or rarity amongst 3<sup>rd</sup> wave coffee entities is insatiable.

As discussed previously, industry sources believe that approximately 90-95% the coffee from Papua New Guinea is used in commercial blends, and whilst some plantation coffee may be used in the higher quality products, the price sensitive market segment uses the lower priced Y grade, with its fruity cup profile which can give a lift to the overall cup quality. This leaves only 5-10% of production being used in the specialty and mostly single origin market segment, although several of the companies interviewed for this study did confirm that they, too, may use some PNG in their espresso blend.

Another industry source drew a parallel between Uganda Washed Arabica, claiming that it presented better value than the similar cupping but much higher priced Kenyan or Rwanda coffee, arguing that the quality arbitrage was creating a sales opportunity that other origins are unable to enjoy. There is opportunity for a higher growth ratio and improved prices in origins that are not already over subscribed. If PNG farmers and exporters are willing to invest in capacity building, and some processing innovation (e.g., producing honey washed coffee), the better qualities will undoubtedly benefit from healthy consumer demand.

Most importers and larger sized roasters are not using more than 1 or 2 containers of PNG coffee a year. Indeed imports into the UK in 2019 were only 6000 bags, so it is important to realize that adding value by offering something unusual and distinctive will reap better results than concentrating on volume.

# CHAPTER 5 VALUE ADDITION

The PNG buyer for one of the world's leading specialty roasters and retailers, based on the West Coast of United States of America, confirmed that 'when PNG coffee is good it is awesome – high acidity, good body and full berry and herbal flavours',<sup>27</sup> however, the same source continued by saying that it is a 'difficult and challenging origin'. In a recent article for PNG Coffee Journal 2020, Joeri Kalwij from New Guinea Highlands Coffee Exports (NGHCE) says 'PNG has to be careful to avoid a situation where coffee importers and roasters put PNG in the 'too hard' basket.'<sup>28</sup> When there are so many alternative origins and coffees to choose from, it becomes key that PNG should reflect on buyer preconception which may influence purchasing decisions irrespective of the quality of the coffee.

### Market perception – barriers to trade

As previously discussed, PNG coffee is largely used as part of a blend, where it is able to lift the overall quality of the whole by its unique fruit forward taste profile. This can be compared to the usage of Kenya coffee, and other East African origin coffees, where the lively acidic and citric coffees are also used, in small percentages, for the same reason. Like the Kenyan coffees though, price volatility can be a determining factor as to whether it remains in the blend. Added to this there are other considerations, which may influence the choice of one coffee over another. These could include logistical challenges or quality degradation problems that might sway a coffee buyer towards a slightly lower quality of coffee but one, which promises consistency of price and reliable delivery.

During the course of the many interviews and email exchanges undertaken, with industry and trade players, as part of this study, several issues were raised, often more than once. Whilst it takes time and effort to build reputation, trust and relationships in the specialty coffee industry, a few small challenges can cause a great deal of wariness, and harm to the reputation of Papua New Guinea as a specialty origin.

# **Productivity and Quality**

- The lack of organised farmer clusters limits the progress that smallholder growers can achieve
  as individuals. However, building on the success, that is being achieved either privately or under
  the Productive Partnership in Agriculture Project (PPAP), suggests that the further creation of
  group centres will provide effective platforms for disseminating information and training.
  Improved processing practices will be made easier with economies of scale.
- Productivity is low in the smallholder sector, with volumes having languished for the past 30 years. Tim Heinze, in charge of PNG for Sucafina Specialty believes that there needs to be 'intentional focus on the skills and abilities of local individuals'. Smallholders need training at all levels of the production supply chain in best agronomy practices, in mill management and in developing sensory and cupping capabilities. Most of the buyers that were interviewed saw a need for a strengthening of extension services and making access to knowledge easier. Again, in his article for Coffee Journal, Joeri Kalwij notes that a lot of previous field level work has lacked sustainable impact, but that there is 'momentum for real change on project sites...a practical applicability that should be acknowledged, learnt from and widely applied.' SMEs should seize this opportunity to take the lead and play a major part in the revival of the industry. Investment in their supply chains will result in improved productivity which will be of mutual benefit to both themselves and the producers from whom they are sourcing coffee.
- The whole internal industry is geared up for the production of Y grade, and needs to re-focus on methods of production and modern supply chain management to create a new and positive image. At the primary processing level, machinery is often old and poor processing techniques have given rise to worries about chemical residues and coffee tainted by smoke from the drying procedures. Exporters can play a critical and vital role here translating and transmitting the

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<sup>&</sup>lt;sup>27</sup> ITC trade source

<sup>28</sup> https://www.linkedin.com/pulse/papua-new-guineas-coffee-potential-joeri-kalwij/

needs of the market back down the supply chain, urging greater investment and upgrading of facilities that are essential for creating the superior qualities that command premium prices in today's market. Phil Maloney of Peets Coffee, a big supporter of this coffee believes that growers seem to have little interest in expanding and/or increasing the amount of coffee they grow. There seems to be a lack of motivation for growing coffee given the other cash crops they produce have a higher rate of return'. Whereas the incentive for the Y grade production is volume, the processing lines for premium and micro-lot coffees, which can attain cup scores of 85+, are very different. There needs to be a good system of sorting and selection, keeping better coffees separate, even if in small volume, which would pass through a micro-mill. Value is added by producing distinctive coffee in small volume. Coffee needs to be well dried, stored in grainpro bags. However, as Joeri Kalwij of NGHCE also points out "It is evident to me that no development effort will have any real impact for the grower if a few key points are not met: a firm link between producer and buyer; and a holistic understanding of the supply chain. I am taking the opportunity to add a new but equally important point — the need for price differentiation based on quality, at the producer level."

Added to this many of the farmers are old, of a generation that is mistrusting of exporters and buyers wishing to build up relationships. They are slow to accept change and new modern processing practices. One trader commented "to create a (certified) supply chain will take years in PNG not months". Poor dry mill management was also cited as a limiting factor. Whilst a new grading system has been recently introduced, the quality regulations at mill level need to be enforced to preserve the intrinsic value of the exportable coffee by removing defects, stones and other contaminants that affect the reputation, and have negative impact on prices.

• Consistency of quality seems to be a major issue with several buyers. Specialty buyers can be unforgiving when arrivals do not match pre-shipment expectations, particularly in the US, where buyer terms will be contingent on approved quality. A rejected parcel will become the problem of the trade house or importing company, both for replacement and sale of the inferior quality parcel. Whilst the multi-nationals are able to trade their way out of this type of problem, it presents much higher risk for local PNG companies without fixed representation in the consuming country.

### Logistics and contract execution

- First and foremost, the remoteness, of the coffee growing areas, was mentioned as a challenging factor, as was the problem of security. The fact that some places can only be reached by boat and airplane, highlights the lack of infrastructure, which makes for a difficult trading environment.
- Contract execution in a timely and professional manner is of paramount importance to buyers.
  To a large extent this is the reason why many favour dealing with an intermediary who will take
  the worry, and more importantly risk, out of any transaction. Amongst the local exporters the
  level of export knowledge is low. There is a need for capacity building at this stage of the value
  chain.
- On top of frequent delays of coffee getting to port and then delays leaving port, transit times to Europe are long with an average sailing taking 6 weeks, as compared to a journey time of three weeks from Ethiopia. This has an impact on both financing and quality on arrival, the latter of which is of paramount importance to a specialty coffee roaster.
- It is imperative for repeat business that coffee arrivals meet with expectation. One UK/EU importer worried that his general experience from PNG was one of mediocre arrivals, and another stated that it only 'becomes a coffee of intrigue if it arrives well'. As mentioned above, delays, poor storage and, inadequate packaging can all contribute to quality degradation and reputational harm.

### Business environment

• The other most frequent comment regarding the challenges or obstacles to business was the unfriendly business environment where bureaucratic export procedures lead to export delays.

It should be noted, however, that this a common complaint levelled by the trade at practically all coffee origins.

# The path to value addition success

It is to be hoped that many of the above issues will be tackled and overcome through the Coffee Industry Strategic Plan 2019/2028<sup>29</sup>, which addresses many of these challenges and has ambitious targets for capacity building, productivity growth, creating an enabling environment and market access. The plan clearly outlines a number of key areas for improvement. Its successful implementation will enable the industry to meet the challenges involved in revitalising the Papua New Guinea coffee industry over the decade ahead. Value addition is identified as one of the thematic programme areas that needs to be addressed and is seen as critical to the plan's success. There are many routes to value addition, but, always, the aim is to enable the growers to retain more of the value of the product that they produce. This can be achieved through:

- quality improvement,
- targeting more profitable markets (i.e. via direct trade/ specialty coffee auctions etc.),
- better branding of the coffee, or
- roasted coffee production for domestic and even international consumption.

### New grading system for the new era

Revisions to the quality grades and standards governing the export of coffee from Papua New Guinea are in the process of being introduced and should be fully operational at some point in the 2020/21 season. These new grading standards have been developed to place the profile of the cup quality as foremost in determining the export grade of the coffee, thus ensuring greater alignment with the needs of the specialty industry as well as the more exacting requirements of today's buyers.

The new grading system reduces the number of grades applicable to arabica coffee from twelve to five. The new grades being: A, B, Y, Y2 and Y3 grades, but the new standards provide the possibility of also subdividing the top three grades (A, B, and Y), by screen size. Each grade is defined primarily by its cupping qualities, but the definition also includes a maximum permissible defect count, a description of raw bean colour as well as its odour. Reference to bean shape has been removed, as it no longer plays any significant role in determining coffee quality. It also increases the number of grades applicable to robusta from two to three, introducing a new top grade to allow for the possible development of specialty qualities of robusta in the future. It also renames each robusta grade (R1, R2 and RT) in order to prevent any confusion with the grading denominations used for arabica.

Concern was expressed in some interviews with regard the impact this new grading system will have on the exports of coffee from Papua New Guinea and in particular the capacity of exporters and the industry in Papua New Guinea to implement the new system effectively. Unfortunately change always brings about uncertainty and although the industry in Papua New Guinea has been planning this change for almost 5 years now, some disruption and possibly even some resistance is inevitable. The important thing is that CIC and the exporters explain and promote the new grading system aggressively to the Trade, highlighting the positive features of the system, and at the same time assuring buyers that their requirements will still be met. Concentrating on cup quality should enable the industry to improve the country's reputation for inconsistent quality deliveries. There were also some encouraging comments from several sources regarding the quality changes. Buyers like Peets coffee can now buy Plantation, A grade, screen 16+ in good volume, comfortable in the knowledge their cup profile will be met. Furthermore the removal of the smaller screen, often defective, beans has resulted in better colour in the roast and less rejection on arrival. Another trader saw the new grading system as a 'wise decision and a positive move' believing that the old system disincentivised premiums for the smallholder farmers.

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<sup>&</sup>lt;sup>29</sup> Coffee Industry Corporation Ltd (2019), Coffee Industry Strategic Plan 2019-2028

### Quality skills and certification

Most of PNG coffee is bought by middlemen supplying to the larger exporters and who are not invested in the specialty supply chain. Some of the multinational trade houses have set up their own washing stations in recent years, answering a demand for a consistent supply of higher quality coffee. The investment in field level operations has also been driven by a demand for certified supply chains e.g. Rainforest Alliance (RFA), Fair Trade Organic (FTO) coffees. Whilst the incentive for the traditional middleman was volume, the introduction of farmer training and critical control at the washing stations, has resulted in improvements in quality, which translate into healthy premiums. Trade sources talked generally of much improved qualities over the last five years, which is chiefly due to investment and training at farm level.

A focus on post-harvest processing is key, which not only includes machinery replacement, but also training in new techniques and best practices, is imperative. It is at this point in the value chain that partnerships can provide an invaluable amount of technical assistance to the longterm benefit of the smallholder farmer. There are several examples of innovative partnerships trialling new practices, for example an Australian Centre for International Agricultural Research project in the Eastern Highlands using a demucilager.<sup>30</sup> Initial results have yielded a better and more consistent quality, but importantly, according the project coordinator Dr. Reuben Sengere a 30% price premium.

However, several of the industry sources interviewed for this study emphasised the lack of agronomy skills and age of trees which both contribute to the low yields in the smallholder sector. There was the suggestion of learning by example of other origins. The overhaul of the Tanzanian coffee industry over the last 20 years has empowered producers and provided much needed access to finance and agronomy services, but there are other success stories nearer to home from which PNG could learn.

Batch processing coffee harvested on different days and roadside buying with no quality checks were just two examples of poor habits highlighted in another study in which Sengere was involved<sup>31</sup> which called for chain leaders to partner with farmer groups to provide the necessary services to produce consistent quality by stating "The current growth in the international speciality coffee market, which demands higher quality coffee and closer trading relationships between farmers and exporters, provides an opportunity for such an approach to fill the void created by the departure of plantations and their mills and also to meet the extension gap between government extension and what is required."

The production of top gourmet coffees requires a high level of skill and specialty focus. Coffee needs to undergo selection and separation, and requires expert sensory analysis. To this end, it would be helpful if those producers and SMEs trying to sell into the specialty market were better acquainted with the requirements of that market and how specialty coffee market participants think and operate. We would recommend that new market entrants or exporters in the PNG coffee industry sign up to some of the Specialty Coffee Association's courses within the "Coffee Skills' Programme" which can be accessed remotely. Whilst all courses in this series would be useful, new exporters and those involved in their supply chain should consider modules for green coffee and sensory skills<sup>32</sup>. In addition, those involved in production and quality control should also consider enrolling in one of the Coffee Quality Institute's Q Processing or Grading Courses<sup>33</sup>.

### Direct Trade

Sustainability has been one of the coffee buzz words of the decade, and the many different models of buying coffee through the most direct route fall under its umbrella. A new generation of coffee companies and buyers strive for more direct and transparent relationships with their suppliers, so that they are able to understand and tell a unique story. Local exporters and producers are able to gain knowledge of international trading and receive a price that is not at risk of global coffee price fluctuations. In this model the buyer is invested in the trading partnership, not only by paying premium prices, but often supporting suppliers in their businesses. This could come in the form of capital injection

<sup>&</sup>lt;sup>30</sup> https://aciar.gov.au/media-search/news/sweet-deal-png-coffee-growers

<sup>&</sup>lt;sup>31</sup> Forging Alliances: Coffee grower and chain leader partnerships to improve productivity and coffee quality in Papua New Guinea, Reuben W Sengere, George N Curry, Gina Koczberski, Asia Pacific Viewpoint Vol 60, No 2 2019.

<sup>32</sup> https://sca.coffee/education/programs/coffee-skills-program

<sup>33</sup> https://www.coffeeinstitute.org/our-work/a\_common\_language/q-processing/

to rehabilitate assets, funding to provide capacity building training programmes or social projects for the benefit of the whole community such as provision of clean water or improved school facility.

Final products are often branded and marketed as single origin or single farm/farmer group coffee, which provides good visibility for the producer, which can often have a snowball effect on demand. Differentiation of quality here is key, and that transcends the coffee itself, as the relationship needs to be founded also on first class level of service timeliness, logistics, transport and distribution.

Whilst direct trade implies the removal of intermediaries from the value chain, this is not always the most practical solution for either seller or buyer. The common understanding of the direct trade model is that a specialty roaster buys directly form a producer group or similar however the realities of the complexities of coffee trade in terms financing, quality and quantity consistency, reliability, logistics, etc. mean that this is guite risky for both parties and often the producer groups do not have the capabilities to trade. Purely from the perspective of economies of scale and financing constraints, it will often make sense for aspiring exporters and local community groups to build up market linkages, initially, by utilising the services of an existing local exporters and overseas importers to facilitate the transaction. As discussed earlier many roasters prefer to use intermediaries to ensure their coffee arrives at the roaster in time and in good quality, but this does not detract from their willingness to be in direct contact to source the product. In this regard, Phil Maloney from Peets commented 'Accessing specialty markets should be done through the export and import community. They are the best buyers, the best communicators, the best marketers. The importers will work to get you the best prices. He further added that local companies 'should insist on knowing where their coffee is being sold and at what price'. Most reputable traders are used to full financial transparency.' Exporters and importers are also able to fulfil the role of consolidator of smaller coffee parcels, which would be uneconomical and costly to send on their own.

A recommended resource for PNG specialty coffee SMEs interested in direct trade is the 2020 Specialty Coffee Transaction Guide (www.transactionguide.coffee)<sup>34</sup>, which has published pricing information using data collected from 81 global specialty businesses, drawing on information from almost 51,000 contracts for over 1.09 billion pounds of coffee worth over \$2.1 billion, with a median FOB price of \$2.71/lb. Many of the buyers listed as contributors to this publication are the very buyers that are already buying or would be interested in buying top quality coffee from PNG. Knowledge of this guide will provide MSMEs and farmers with a valuable bargaining tool. It provides a lot of valuable insight to pricing and the impact of volume and cup quality. Table 5 summarises the data collected from all sources over the three years, and although the information for PNG came from a very small sample of contracts, it revealed an average price of USD 1.85/lb for the same period. Whilst it highlights the fact that the PNG specialty coffees, currently, rank near the bottom of the price range, it also serves as an indication of the huge potential for increased revenue, which would be achieved through quality differentiation.

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<sup>&</sup>lt;sup>34</sup> 2020 Specialty Coffee Transaction Guide (revised) Version 3.0 – December 2020

Table 5 Three years of FOB prices (USD/lb)

Period – Oct. 1 to Sept. 30	Contracts	Lower Price (25th Percentile)	Middle Price (Median)	Higher Price (75th Percentile)
2019/2020	18,165	1.90	2.60	3.50
2018/2019	21,215	1.90	2.75	3.56
2017/2018	11,620	2.02	2.80	3.73
3 Years	51,000	1.9	2.71	3.60

Source: 2020 Specialty Coffee Transaction Guide, Version 3.0 released December 2020

Typically specialty importers will have hundreds of clients in many countries, and so targeting one of these major specialty companies, rather than many individual small roasters seems a more sensible way of market penetration. One such importer, in the UK, has over 500 microlot buyer clients in 46 countries. Another importer referred to PNG as "a discretionary' origin, it is not a must have"<sup>35</sup>. Whilst they will always carry inventory of Colombia, Ethiopia or Fine Brazil coffees, they will look at PNG as an opportunistic purchase. Another factor to consider is that, in the case of the UK market, often it is normal practice to ship the coffee to mainland Europe, where demand may be greater, and then just a few pallets will be moved over to satisfy UK demand. Undoubtedly, this will be subject to some temporary disruption after 1 January 2021 when the full effects of Brexit are felt.

An International Trade Centre (ITC) paper published earlier in 2020 entitled 'More from the Cup'<sup>36</sup> used several case studies to illustrate successful direct trade relationships, but there are also some examples from PNG that are worthy of mention and that can be used as role models for other aspiring exporters.

Kosem Ltd (www.kosem.com), a local exporter since 2003, has been working with smallholder farmers for over 5 years in Jiwaka province. Like most exporters from Papua New Guinea it started trading in the commercial Y grade and plantation coffees, but has now developed an extensive supply chain of smallholder farmers that have a capacity of between 100-1000kg per annum. Its model is hinged on the formation of Group Market Centres, where farmers will form a cluster to work together, and to improve productivity and quality. A group leader will be chosen to manage the centre and keep the records, and will be a role model for and have the respect of the farmer members. Each group has its own mini wet mill, and will construct raised drying beds and a store for their coffee. For its part Kosem Ltd has installed solar electricity, in partnership with a solar power company, as most of the remote sourcing areas have no mains electricity. Through this initiative over 30 farmer centres have been established, and are being used to host Kosem's capacity building programme, comprising good agricultural practices and financial literacy.

However, working collaboratively with farmers has come at a cost, not just in the price incentives that Kosem has to offer, but also figuratively. Being involved from farm to delivery is far more complicated than a simple mill or farmgate purchase model. Their farmers lack the financial and business skills that would lead to reinvestment in their coffee. As a result, their cost of production, and risk of disease, e.g. Coffee Berry Disease, remain high, and rather than being self-motivated they need to be incentivised with price premium.

Since 2016, when Kosem Ltd. entered the National Cupping Competition, held as part of the PPAP, it has been able to enter into direct exports and sell premium and niche products at higher prices. Managing director, Mark Munnell, whilst having a basic understanding of what specialty coffee entails, recognises that to increase their exposure to this market segment, there is a need to improve quality, volume and market share. He believes that one way to regain international recognition would be to revive the plantation sector and increase premium exportable volume, which in turn would help promote

<sup>35</sup> ITC trade industry source

<sup>&</sup>lt;sup>36</sup> International Trade Centre (2020) More from the Cup - Better Returns for East African Coffee Producers. ITC, Geneva

specialty coffee exports. He also, wisely, commented that microlot business will not be the saviour of the industry as a whole and that the industry still needs the larger exporters and multinationals to provide finance and market liquidity. For their part the Government and CIC need to be involved in reducing the cost of production and providing much needed extension services.

A further example is that of WiaTrade (www.wiatrade.com) which also took part in the PPAP between 2016-1019. With an ultimate goal of quality improvement and market access, it was able to distribute seedlings, rehabilitate coffee gardens, establish mini wetmills and resource centres. Additionally, the project delivered much needed important agronomy training to over 3000 farmers as well as addressing some cross cutting issues such as financial literacy and HIV awareness. Almost 30% of these were able to achieve organic certification under the programme.

Another similar success story is that Unen Choit Cooperative, which is in Morobe province. Comprising over 1700 farmer members, the group was formed back in the 1980s, but since it became Fairtrade certified in 2016, has been able to grow its volumes and direct trade relationships, on the back of improved quality, and has direct clients in Australia, New Zealand, Germany US, China and Japan.

Finally, for a more detailed look at PNG farmer group performance over the past 10-15 years, there are two well-documented case studies in a 2016 research paper,<sup>37</sup> which provides both insight into the success and challenges of collective action, as well as plenty of learning lessons for future initiatives.

### Samples and sampling

Whilst it might seem obvious, the best way for any origin to sell coffee is to send targeted samples. Many small and medium sized importing businesses will discover new coffees through receipt of an unsolicited sample. Whilst they may already have their longstanding relationships, they are always open for something new, and unlike roasters will be willing to taste the coffee on the off chance of finding something special. The better a sample is presented the more likely it is to stand out from the many samples received. So presentation is key here, along with a good description and basic data such as variety, grade, screen size, method of process, certification and information related to source such as region, elevation, number of farmers in the group etc. Opinion on whether there should be exclusivity or widespread sampling is slightly mixed with some importers preferring a more exclusive arrangement than others who say they will taste every sample they receive. Indeed, one UK importer stated that it is 'best not to take a scatter gun approach...maybe not exclusivity but limit the supply chain.' In this way the producer can expect a scarcity premium and the importer a perceived added value from the selective relationship.

### Specialty auctions

The first specialty coffee auctions were introduced over 20 years ago, and today they are used extensively, and globally, to enhance the value and, importantly, the image and exposure of certain origins, regions or single farms.

The Alliance for Coffee Excellence (ACE)<sup>38</sup> held its first Cup of Excellence (COE) auction in 1999, when the highest bid for a Brazilian coffee was \$2.60/lb. In the 2019 event the highest priced coffee fetched was \$60.10/lb. In 2020 despite the global pandemic, ACE will have held eight auctions each comprising up to 30 winning coffees with a cup score of 87+. A typical COE will see thousands of samples being submitted for the preliminary round of judging, which include a pre-selection stage followed by assessment by a National Jury. An international jury, of highly qualified and acclaimed cuppers, is then charged with the task of selecting the winners. The high prices, these coffees can attain are very clear signal that the appetite for top and unique qualities is enormous.

<sup>37</sup> The Rise, fall and revival of the Papua New Guinea coffee industry, Reuben Wanobo Sengere, November 2016

<sup>38</sup> https://allianceforcoffeeexcellence.org

Table 6 2020 Cup of Excellence auction results

	No of lots	Highest price (USD/lb)	Variety/process (cup score) of highest priced coffee	Average price for auction (USD/lb)	Total revenue (USD)
Ethiopia	28	185.10	Sidama Natural (91.04)	28.44	1,348,690
Guatemala	30	180.20	Washed Geisha (91.06)	26.50	448,067
El Salvador	22	80.10	Pacamara Natural anaerobic (90.31)	22.53	475,607
Colombia	24	69.00	Washed Chiroso (90.03)	19.49	471,036
Costa Rica	26	66.90	Geisha Honey processed (90.27)	21.71	539,274
Nicaragua	17	36.90	Maracatuma Natural (91.2)	12.08	192,107

Source: ACE

There are other examples of auction events that are worthy of mention. One is the Best of Panama<sup>39</sup> which is held annually by the Specialty Coffee Association of Panama and which, this year, saw an Olympus Washed Geisha coffee from Finca Sophia attain a record price of \$1300.5/lb for just 100lbs of coffee, yielding its owners a total return of \$130,050, beating the previous year's record \$1,029/lb The Best of Panama is a good example of how a campaign can lift the overall exposure and perception of a smaller producer. Whilst the best estate coffees can fetch record-breaking prices, no coffee received less than \$29.5/lb in 2020. As a subsequence of this initiative, the whole production can benefit, as seen by the fact that a Panama Caturra is able command a price two or three times higher than a similar Caturra from Colombia.

Also in October 2020, the Singapore Coffee Association held its first Specialty Coffee Auction)<sup>40</sup>, using an innovative online, virtual format. Forty-nine lots, each of 30 kgs, were auctioned from twelve countries (Brazil, Colombia, Costa Rica, Guatemala, Indonesia, Kenya, Myanmar, Panama, Peru, Timor Leste, Venezuela and Zambia) with the top lot selling for \$64.50/kg (a Geisha-variety coffee from Panama). This event looks as though it will be held annually and given the publicity it gave to all the coffees entered, it is imperative that one or more lots from Papua New Guinea be submitted in future.

A specialty focus could also be achieved by concentrating on bringing a small volume of high quality microlots to the market place via an online private auction. ACE has also launched its Private Collection Auctions, which can offer the option of putting up a collection of coffees that still comply with the high COE protocols. This was the case with the Yemeni Qima Coffee (https://www.qimacoffee.com) sold in 2020, when the highest priced coffee, at this lesser-known auction fetched \$207/lb and the total revenue from the 20 lots (7145 lbs) sold was \$388,912.

There are also specialist service providers able to organise private national or individual events. One such company, Sensible Development (www.sensibledevelopment.com), held 25 such events in 2019. With a database of over 1200 buyers in 70 countries, it is able to handle the whole process for the seller, including sampling, marketing, social media feed, selling, shipping and remittance of proceeds back to growers. 39% of its buyers come from Republic of Korea, Chinese Taipei, China, Hong Kong SAR and Japan. For its part the origin or single estate needs to provide as much origin and farm detail as possible, as well as tell its own story through maps, photos, video to inform and entice.

<sup>&</sup>lt;sup>39</sup> https://auction.bestofpanama.org/en/lots/auction/best-of-panama-eauction---speciality-coffee-2020

<sup>40</sup> https://www.comunicaffe.com/first-singapore-virtual-specialty-coffee-auction-attracts-45-producers-and-56-lots/

### E-commerce

Selling successfully via e-commerce may require the services of an IT specialist. It requires good technical skills, as well as good marketing, branding and social media capabilities. Most of the specialty importers in Europe have developed websites that provide potential buyers a wealth of general multimedia information about coffee production and processing and as well as detailed material about specific origins and the coffees they produce. They will use their website to market and sell the coffees they offer, with detailed information on each and every coffee, including farm and farmer profiles, cup and roast characteristics, availability and price. Their website will also be supported by daily social media feed on Facebook, Instagram, Twitter, etc. The new generation of coffee buyers and coffee drinkers has pivoted to an online world, something we have all had to embrace to a certain extent during the current Covid19 crisis. There are some independent coffee platforms such as Cropster, Algrano that can provide exporters with similar direct e-commerce opportunities. However, any coffee SMEs or cooperatives wishing to enter the world of direct selling needs to support its sales efforts with the same kind of marketing, and any training opportunities that might present themselves should not be missed. There are many great, even outstanding coffees, from around the world, so a good image could end up being the differentiating factor.

Cropster (www.cropster.com) has developed from providing IT software to help with the management of roasting profiles to a catalogue of services that includes green and roasted coffee sales. Cropster Hub (https://hub.cropster.com) currently carries over 1000 lots for sale of which only five are from Papua New Guinea. It has also created a space for individual companies to house their own online shops and currently is being used by both origin and consuming countries. This allows small exporters and cooperatives that may lack both the finance and the technical skills for direct investment into website creation.

Algrano's roots lie in origin and come from a desire to provide online tools, which can help individual or cooperative growers link up with buyers from across the globe. It currently has 1000 users in 75 countries, and aims to promote empowerment and transparency in the marketplace. Unlike Cropster, which has clients from along the value chain, Algrano attempts to create direct producer/consumer transactions, where exporters, importers and brokers work as service providers only. For its part, and at the cost of the buyer, Algrano will provide support for quality, financing, logistics and risk management.

Above are examples of some of the most well-known, reliable and, arguably, trustworthy routes to market, but there are many more players, in this arena, that can help a producer create visibility.

### **Branding**

### Enhancing the perception

Everything points towards PNG being an interesting and appreciated coffee origin, where prices are seen to represent good value for money. With an ever-changing coffee landscape, there is huge potential for PNG to fill a market gap. However, this will not happen by accident, it will require serious investment in branding and marketing. Outside of the trade, the reputation of its coffees is pretty unknown. Historical links with Germany have translated into a healthy amount of coffee trade, even today, but elsewhere it is a little-known country, neither a tourist destination nor publicized on the many travel programmes on TV or social media. So whilst every Australian and New Zealand specialty coffee roaster might offer a single origin PNG, it is something that the European roaster might never even consider, through nothing other than simple lack of knowledge. Only one UK roasting company, Rave Coffee (www.ravecoffee.com), revealed that PNG is a central part of its espresso blend, which may seem a little unusual, until you learn that the owner of the company is Australian!

A serious PR campaign, launched by CIC at a national level, which portrays a unified and consistent story, would go a long way to lift the reputation of PNG and its coffees internationally. This should be complimented by the portrayal of a country rich in culture and natural beauty, yet with an air of mystery and exoticism.

One could argue that the fact that PNG is little known in Europe might add to the element of intrigue and rarity, which in itself can lead to a price premium, but it also impacts negatively when it is not on the consumer radar. As one UK roaster buyer stated "Lack of quality perception may in itself be an

obstacle to improving the reputation of PNG coffees on the world coffee stage." There are very few single origin products on UK shelves. In the major commercial supermarket sector only three products were to be found (Appendix IV). Thankfully, the new generation of coffee drinker is open to different types of coffee, cup profiles and beverage variety. Even the newcomer to coffee can be persuaded to try a slightly unique flavour, because he lacks the point of reference of more traditional cup profiles, and in any case, the trend towards naturals, pulped naturals, honey coffees and innovation in fermentation processes is giving rise to a larger proportion of fruitier based cup profiles.

### Trade shows

Industry coffee events are a good opportunity to promote a coffee production area as a whole, although not without significant financial investment. There are many events held every year, some of which have even pivoted to an online version in 2020. The most relevant to specialty coffee are those held by SCA in US and Europe<sup>41</sup>, which attract industry professionals from around the world. Similar important events are held in Australia, Japan and Korea. They allow producers, exporters and traders ample opportunity to showcase coffees. The event, which takes place over a few days, will comprise both an exhibition and conference with many side and social events. Thousands of exhibitors will present every kind of coffee machinery for both the origin and consuming end of the value chain. There will be origin and trade cupping events, an educational programme of talks and workshops, helping industry players to widen their education and expand coffee connections. These industry events are an ideal forum for Papua New Guinea to launch a concerted marketing campaign and for producers and exporters to learn more about the consuming side of the value chain. More often than not it is the national coffee authority that leads the initiative, creating a larger and more visible display, and providing a space for its exporters to meet potential buyers, cup coffees, etc.

With the calendar of world coffee events very much thrown into disarray in 2020, and very likely to continue well into 2021, many organizations have created virtual events such as Sintercafe (https://sintercafevirtualevent.com) held in November 2020 or The Global Coffee Festival (www.globalcoffeefestival.com) held in October 2020. Virtual cupping events have also been quickly adopted as marketing tools by industry professionals, an example of which was the highly successful 'Taste of Laos' held by Coffee Quality Institute, whereby the samples were sent to over 20 US based importers, roasters and coffee retailers, and the cupping was led by industry expert Tim Heinze from the comfort of his dining room.<sup>42</sup> In the post Covid19 world we could see a shift towards more virtual events as it becomes less desirable to travel internationally quite so much.

### **Roasted Coffee**

### Overview

It comes as no surprise that roasted coffee, from coffee producing countries, only amounted to 0.57% of all exports in calendar year 2019<sup>43</sup>. There are numerous logistical hurdles to overcome and no producing country has, so far, been able to export roasted coffee in any sizeable quantity. A few producing countries have seen an increase in international trade, notably Colombia, Mexico and Vietnam (although the data from Vietnam is inconsistent and, therefore, possibly unreliable)<sup>44</sup>. Sometimes also, there are tariff barriers to contend with. Some countries, most notably amongst coffee producing countries, impose, what can only be described as punitive tariffs, on imports of roasted coffee. The majority of consuming countries levy relatively modest tariffs on a selective basis depending on the relationship status of the exporting country concerned. Many origins, including Papua New Guinea, are able to export roasted coffee to the main consumer markets tariff free.

Even so, roasters wishing to export their product have to accept that the distribution channels for roasted coffee in most mature consuming markets require a permanent presence of some kind. For

<sup>&</sup>lt;sup>41</sup> After the cancellation of the 2020 SCA events, the 2021 programme, Covid-19 permitting, sees World of Coffee taking place in Athens in June 2021 and the US event in New Orleans end September 2021

<sup>&</sup>lt;sup>42</sup> https://dailycoffeenews.com/2020/09/21/a-taste-of-laos-us-coffee-buyers-intrigued-during-virtual-cupping-event

<sup>&</sup>lt;sup>43</sup> ICO statistics

<sup>44</sup> ibid

example supermarkets, catering and institutional buyers all usually require regular deliveries, sometimes weekly, at multiple locations, a level of service that an overseas roaster can only provide via a dedicated distributor, agent or joint venture partner based in the target market. Furthermore, all roasted coffee has a relatively short shelf life, which not only complicates distribution and stock rotation but can also lead to financial losses, especially as many retailers or supermarkets demand sale or return contract conditions. This imposes a significantly greater burden on overseas roasters than it does on domestic roasters. Many retail outlets require the supplier to support marketing campaigns and special promotional offers. The short product shelf life also demands that the product be shipped by the fastest means possible, usually by airfreight. This is expensive and, inevitably, puts the roasted coffee exporter at a distinct competitive disadvantage against the domestic roasters. Nevertheless with determination, a full understanding of the challenges of trying to secure a foothold in a distant market, and the right strategy and the significant investment required, there is potential for some roasters to succeed. Mexico for example, exported 213,163 bags (12,816 tons) of roasted coffee in 2019 although the bulk of this (76.2%) went to the neighbouring territory of Puerto Rico and virtually all of the remainder went to the US (23.3%). Colombia exported 189,118 bags (11,347 tons) of roasted coffee in 2019 with the bulk (81%) going to the US.45

### Exporting Roasted Coffee to Europe

The EU (including the UK) imported 74,384 bags of roasted coffee from producing country origins in 2019 and the UK was the largest importer of coffee roasted-at-origin with a total of 24,946 bags (1,497 tons). Norway was a close second with 24,516 bags while Denmark was third with 9,508 bags. In the scheme of things these totals are small but demonstrate that there is a market, albeit probably niche, for coffees roasted-at-origin.<sup>46</sup>

There are a variety of ways of selling coffee roasted at origin to overseas markets that a roaster may wish to explore. E-commerce offers relatively straightforward direct access to the end-user, but requires the roaster to have an effective, highly visible and up to date website that attracts a reasonable volume of online traffic to generate sufficient sales. This can be expensive and requires continuous active usually involving regular linked social media management (see https://www.eacmarkup.org/news/latest-news/social-media-guide-for-small-and-medium-coffeeenterprises). The website must also incorporate a secure payment system for which credit card providers will charge commission varying between 0.5% to 3.5% of the transaction value. However, website generated sales, especially to retail consumers, tend to be small and need to be fulfilled via airmail, airfreight or by courier. All three options are expensive for small volumes and weights, frequently costing significantly more than the product is worth. Airmail rates from PNG to Europe, probably the cheapest option of the three for small parcels weighing up to 1kg, are still far too expensive arranging from K249/kg (£55.22) from Port Moresby to K311/kg (£69)<sup>47</sup> from Goroka, clearly making shipments of such small parcels uneconomical. Shipping larger weights and volumes (50 kgs and upwards), by courier or airfreight, to Europe can be a more viable solution, but orders of such a size tend to be restricted to either wholesale or catering outlets, rather than retail customers. It must also be noted that, when shipping more than 10 kgs of roasted coffee, the shipper must register with CIC in order to obtain permission to export. The shipment will attract the 10 toea per Kg export levy, and, must be accompanied by a valid ICO Certificate of Origin.

An alternative option is for roasters to promote their product via global e-commerce sales platforms such as Amazon, Alibaba or eBay, to name but a few of the more important platforms that exist. The fees charged by these sites vary according to the volumes sold and it is important to note that most have country or market-specific sites so multiple listings may be required. At the time of writing, the Amazon UK site charges £0.75 per item sold on its platform or will charge a subscription rate of £25 per month for higher volume products. In addition, there are referral fees, usually 15.3% of the value of the item sold, which includes the UK's digital sales tax. If the global e-commerce website is involved in the fulfilment of the order, then the cost of postage will depend upon the weight of the order. A standard parcel despatch in the UK to a domestic address, weighing less than 0.5 kg will cost £2.32. Furthermore, if the product is stored in the warehouse of the e-commerce website prior to fulfilment then an additional

<sup>&</sup>lt;sup>45</sup> ICO statistics

<sup>46</sup> ibid

<sup>&</sup>lt;sup>47</sup> Exchange rate at time of writing -K1 = £0.2218 on 30 October 2020

charge will be levied. Given the high costs of shipping small parcels from PNG, shipping a much larger volume of the product to a global e-commerce website platform warehouse for storage and subsequent fulfilment may be a more viable option. However, this option carries significant risk, as the roaster loses control of the product yet remains liable for any problems that might arise. The roaster is also responsible for the artwork required by the platform. Roasted coffee sells on the Amazon UK platform for between £10/Kg and £70/Kg for the most exotic. UK roasted and packed Papua New Guinea coffee was selling on the Amazon platform in October 2020 for between £10.14/kg (K45.72 - special introductory offer) to £27.75/kg (K125.11 - Sigri Organic)<sup>48</sup>.

Shipping larger volumes reduces transport costs but airfreight remains expensive with quotes varying according to destination and carrier. Quotes obtained online for uplifting roasted coffee from Port Moresby Airport to London Heathrow Airport ranged from K2,500 to K2,750 (£554 - £610) for 100 Kg shipment and K21,500 to K22,500 (£4,769 – £4,990) for a 1 ton shipment. Direct communication, and regular business, with the carrier would be advisable to allow shippers to negotiate discounted rates. In addition, the customer or client will have to pay any airport handling fee as well as any custom clearance fees. The charges for these services will vary according to weight and volume of the shipment and whether the client handles this or employs a specialised agent to do so.

Shipping large volumes to a single customer may well be a more viable proposition but attempting to set up a distribution channel from a distance is virtually impossible without the help of a local partner or wholesaler to manage stock rotation and inventory levels. Even then, the degree of risk can be significant, especially if the wholesaler handles the product on a sale or return basis. Furthermore, it has been estimated that wholesalers' commissions can range between 15% to 30%, of the sales value of the product.

# Exporting Roasted Coffee to Regional Markets

Selling PNG roasted coffee into regional markets appears to be a more viable option than exporting to more distant markets, simply because any reduction in transport costs makes the whole operation more economic. The supply chain table in Appendix V demonstrates quite clearly that excessive transportation costs destroy any realistic prospects of achieving profitable success.

Each market has its own set of statutory requirements, but most regional markets have similar regulations governing the import of roasted coffee. Australia and New Zealand have a bi-governmental food standard code covering food safety and labelling requirements, so it is important that the product complies with this code. A good reference document covering export of coffee including roast coffee to Australia and New Zealand is available from the following source: http://www.pacifictradeinvest.org.cn/media/1042/coffee2012.pdf. Appendix V provides a summary of the various requirements for exporting roasted coffee to different markets.

### An alternative approach

An alternative approach, which has been adopted by a small number of origin producers, is to roast the coffee under licence in the target market, often in association with a local partner, who may or may not be the roaster contracted to roast and pack the coffee. Retaining ownership of the coffee until it is sold to the retailer or final end user allows the producer to retain a much larger proportion of the value added than would have been the case had it been sold as green coffee. At the same time this approach overcomes many of the issues of shipping roasted coffee from origin. Transport charges can be significantly reduced as the need for speed is effectively eliminated. The concerns of retailers about the quality consistency and shorter shelf life are also addressed, as the product is fresher and available from a local source. The contract roaster will also take care of ensuring that the product complies with all legislative requirements. This option requires a significantly greater capital injection in the whole enterprise while at the same time yielding a much slower return on the investment. However, with the right partners this can be a very practical and profitable approach to selling roasted coffee internationally.

<sup>48</sup> www.amazon.co.uk

This route to market was discussed in the 2020 ITC publication "More from the Cup" 49, mentioned earlier, where two case studies were used to illustrate examples of producers retaining more of the value chain by roasting in the consuming market. Topeca Coffee Roasters (www.topecacoffee.com) is selling coffee from its family farms in El Salvador into the US and producer-owned Pachamama Coffee Cooperative (www.pachamamacoffee.com), which comprises 5 origin cooperatives from Peru, Nicaragua, Mexico, Guatemala and Ethiopia, roasts and sells coffee from its base in California.

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<sup>49</sup> https://www.intracen.org/publication/more-from-cup/ - page 32-34

#### CONCLUSION

It would be fair to say that, until recently, the marketing of Papua New Guinea coffee can best be described as backward looking. It has concentrated on finding markets for the coffee that it produces rather than looking forward and attempting to supply what the market wants. In other words, the marketing system has been supply-driven rather than demand-driven. Things, however, are changing and the adoption of the consumer-focused grading system is evidence of this change, but alone it is not enough.

There is still a clear need to further re-orientate the industry so that it is more forward looking or customer focused and better equipped to supply the market, especially the specialty coffee market with the types and qualities of coffee for which there is a growing demand. This involves reorientation at all levels, learning and building on the successes and achievements of those already involved in the industry, but at the same time tackling some of the underlying impediments and problems which have prevented Papua New Guinea from reaching its full potential. This is not a single strand approach but one which will involve the development of a reasonably diverse range of products, each uniquely designed to meet the needs of a particular market segment or niche but all within the overall common theme of product excellence. This does not mean abandoning Papua New Guinea's existing customer base or ignoring the success of many of the existing exporters in gaining a solid and reliable foothold in the specialty market. Consumers are increasingly educated in different origins and varieties, so the time is right to take advantage of the demand for different and new flavours. It is worth reiterating, however, that new exporters (and maybe some of the existing exporters as well) need to be aware that access to the specialty market is not something that can be achieved passively, but rather, it demands a more aggressive stance, which sees their active involvement in seeking out and developing new markets as well as taking advantage of the many resources available to MSMEs to expand their business skills and acumen.

There is, also, no need to be alone in this endeavour. One key to success will be found in value chain partnerships, which can provide access to new gourmet markets. Whilst the onus of well-prepared and well-dried coffee will rest firmly with the producers, buyer investment on the ground will result in improved quality and consistency. With a solid reputation for being an origin that can, repeatedly, produce extremely high quality coffee, the industry can look forward to a brighter sustainable future on the specialty map.

Additionally, the exporters and grower groups must be prepared to invest either directly or indirectly in the promotion of their coffee, in order to command the highest premiums. For no matter how good a coffee is, it will not sell itself and sellers must therefore undertake to build up a reputation for reliable and consistent quality as well as a brand image. This will require good marketing tools such as an attractive presentation, both digitally and, where appropriate, in hard copy, with professional photographs to depict the origin to its best advantage. In the past CIC undertook a limited amount of promotion work, which certainly generated some initial interest in the country's coffees. However, this, in isolation of active industry engagement, was not sufficient to build the necessary brand loyalty that is required to guarantee lasting premium prices. Furthermore, limited financial resources mean that CIC's involvement in generic promotion of the country's coffee has all but been eliminated. This is a mistake. CIC needs to re-engage in the marketing process by joining forces with the industry at all levels and especially with exporters and potential new exporters, to not only sell the country but also to actively promote every aspect of the coffee. Indeed, there is a clear need for local stakeholders to raise their game when it comes to promotion. Nowadays, greater use of social media is essential in both the mainstream and specialty coffee landscape. In addition to having engaging websites, exporters, and in particular small aspiring exporters, need to actively participate in Facebook, Twitter, LinkedIn and other social media platforms to promote not only their coffee but also Papua New Guinea as an origin of note. New and small exporters must also actively engage in, and take advantage of, any opportunity to participate in any of the coffee exhibitions and shows that are held at regular intervals. In particular they should look to participate in the Specialty Coffee Association's shows that are held in Europe every year as well as similar shows elsewhere in the world. Promotion, however, must be seen as a longterm commitment by all those involved in the marketing of the coffee, not just CIC, as reputations are not built overnight. Other origins have mastered this far better than Papua New Guinea. Rwanda, Panama, Guatemala, Costa Rica and Colombia (to name the more successful) all understand the importance of promoting their coffee generically consistently over the longer term, highlighting regional

taste profiles as well as the country's culture and traditions. It is against these origins that Papua New Guinea must compete.

Papua New Guinea coffees, however, have a head start in that the country itself is exotic and exciting with a wonderful array of traditional national culture and colour. The image or the story behind the coffee is only half the package – the coffee must also be exceptional if it is to command the sort of premiums many well-known exemplary qualities currently command. *Promotion, quality, and branding are, therefore, the three basic ingredients for success in all specialty markets.* 

# **APPENDICES**

# Appendix I SWOT Analysis of PNG coffee basis trade interviews

Strengths	Weaknesses
<ul> <li>Seen as exotic and unusual</li> <li>Interesting and unique cup profile</li> <li>Good range of profiles</li> <li>Good value proposition</li> <li>Much improved quality over last 5 years</li> <li>Quality arbitrage over other origins' specialty coffees</li> <li>Buyer loyalty appreciating PNG quality</li> </ul>	<ul> <li>Poorly marketed – lack of consistent and unified story</li> <li>Mostly used as blender and lack of specialty focus</li> <li>Specific demand for PNG coffee is weak</li> <li>Lack of recognition and reputation outside trade</li> <li>Undervalued in Europe as a coffee origin. The average UK consumer doesn't know where PNG is located</li> <li>Remoteness, poor logistics and long transit times</li> <li>Export information non existent</li> <li>Export process bureaucratic, laborious and inefficient</li> <li>Aged farmers</li> <li>Processing geared up for Y grade</li> <li>Poor post harvesting knowledge and processing controls</li> <li>Lack of agronomy and quality skills</li> <li>Poor traceability mechanisms</li> </ul>
Opportunities	Threats
<ul> <li>Single origin market is growing</li> <li>Specialty roasters and consumers always looking for something new.</li> <li>Buyers willing to taste samples received.</li> <li>Unlimited demand for 86/87+ coffees with high price premium.</li> <li>New drinkers – specialty and new to coffee drinkers</li> <li>Exotic, unique and rare peaks the interest of drinkers</li> <li>PNG cup profile appeals to changing tastes</li> <li>Possibility for specialty lot and microlot selection</li> <li>E-commerce is booming since Covid</li> <li>Learning by example of other origins</li> </ul>	<ul> <li>Inconsistency of quality and performance as exporter</li> <li>Price volatility</li> <li>Lack of image. PNG coffee is not a 'must have'</li> <li>Others mall origins doing a better marketing job,</li> <li>Dangerous, difficult and remote trading environment</li> <li>Farmer mistrust of industry innovation and unwillingness to break with longstanding tradition</li> <li>Tribal and cultural challenges</li> <li>Mediocre arrivals and poor quality perception is a threat to others using it, keeps it off a buyers radar</li> <li>A few issues can taint whole origin</li> </ul>

# **Appendix II Trade Interviews**

Value Chain Sector	Company	Info
Trader/Exporter	Volcafe Select	www.volcafeselect.com
	Ecom	www.ecomtrading.com
	Olam	www.olamspeciatlycoffee.com
	Sucafina	
	CTCS	www.sucafina.com
	Daarnhower	www.daarnhouwer.nl
	NKG	www.nghce.coffee.net
Importer	D R Wakefield	www.drwakefield.com
	Falcon Commodities	www.falconcoffees.com
	Sucafina Specialty	www.mercanta.com
	Mercanta	www.coffeeagents.com
	Eugan Atte	
	Supremo	www.supremo.be
	Café Imports	www.cafeimports.com
	List & Beisler	www.list-beisler.coffee
	John Burton	www.johnburton.co.nz
Roaster/Retailer	Starbucks	www.starbucks.com
	Peets	www.peets.com
	Taylors of Harrogate	www.taylorsofharrogate.co.uk
	Finlays	
	Rave	www.finlays.net
	Coffee Link	www.ravecoffee.co.uk
		www.coffeelink.com
Other	Anton Goonetilleke	anton.goonetilleke@gmail.com
	Kosem Ltd	www.kosem.com.pg

#### **Appendix III**

#### Legal Requirements for Exporting Roasted Coffee to EU destinations including the UK

All coffee products entering the EU must comply with the *EU's General Food Law*, which provides the overarching legislative framework for the safe consumption of all food products sold within the EU. Brexit will make virtually no difference to these requirements for the UK market. This law and other related legislation place the following obligations on all suppliers:

- Full traceability back to the grower;
- Demonstrable food safety hazards control compliance (HACCP) see <a href="http://www.thecoffeeguide.org/coffee-guide/quality-control-issues/hazard-analysis-critical-control-points---haccp-what-is-it/">http://www.thecoffeeguide.org/coffee-guide/quality-control-issues/hazard-analysis-critical-control-points---haccp-what-is-it/</a>;
- That the product is free of contaminants, including:
  - Prohibited herbicides, fungicides and pesticides for which Minimum Residue Limits (MRL) apply, see EU pesticide database for the minimum residue limits applying to different pesticides <a href="https://ec.europa.eu/food/plant/pesticides/eu-pesticides-db\_en">https://ec.europa.eu/food/plant/pesticides/eu-pesticides-db\_en</a>; The EU will also impose an almost zero tolerance of chlorpyrifos-methyl and chlorpyrifos, active ingredients of many pesticides, reducing the MRL to 0.01mg/kg from the 13th November 2020. In addition, the EU is currently considering reducing the MRL for glyphosate (a widely used herbicide) from 0.1 mg/kg to 0.05 mg/kg but has not done so yet. As the product is widely used it will be difficult to maintain residues at such a low level;
  - $\circ$  Mycotoxins, especially Ochratoxin A (OTA) for which a 5 µg/kg limit applies for roasted coffee:
  - Salmonella which is not generally an important consideration for coffee, but both the product and the packaging need to be free of such contamination;
  - Chemical contamination such as Acrylamide and Furan, both of which are present in roasted coffee and considered potentially toxic to human health. Acrylamide is a product of the roasting or browning process involved in cooking and thus also found in other prepared food products. Furan is a component of the coffee aroma. Consequently, neither can be avoided so the aim is to limit the presence of both in the product. Acrylamide levels peak early in the heating process and then decline, so darker and longer roasting reduces the levels of acrylamide, but unfortunately increases furan levels. The benchmark level for acrylamide introduced, in 2018, is 400 µg/kg, while the limit on Furan for imported roasted coffee is I mg/kg, see: <a href="https://ec.europa.eu/food/safety/chemical\_safety/contaminants/catalogue/acrylamideen;">https://ec.europa.eu/food/safety/chemical\_safety/contaminants/catalogue/acrylamideen;</a>
  - o Foreign Matter contamination, such as metal, plastic, animal or insect contamination.
- Fully compliant labelling, i.e. the label must display the following:
  - o Product or Brand Name under which the product is sold;
  - List of ingredients, including additives, if any. Usually "100% arabica coffee" or "mixture of arabica and robusta coffee beans" will suffice, if applicable;
  - Net quantity/weight. In the UK it general practice to include both metric and imperial weights e.g. 227 g (8 oz.);
  - Expiry Date;
  - Business name and address of the Roaster and, if appropriate, the name and address of the Seller/Distributor established in the EU;

- Origin of the coffee;
- Any special conditions for storage or use e.g. "use within 4 weeks after opening", or "keep in a dry cool place after opening";
- Batch number or identification code;
- Any applicable third-party certification identification mark or logo;
- Product bar code, although this is not a legal requirement but frequently a buyer or distributor requirement.

Packaging of all food products marketed within the EU must comply with the general requirements, which aim at protecting the environment, as well as with the specific provisions designed to prevent any risk to the health of consumers. It is important that roasters ensure with their packaging suppliers that the packaging to be used complies with all EU regulations. Even the inks and dyes used on all food packaging must comply with the relevant legislation. The relevant legislation is Framework Regulation (EC) No. 1935/2004 and the GMP (Good Manufacturing Practices) Regulation (EC) No. 2023/2006.

At first sight, compliance with the above may appear rather daunting, but essentially it is all about roasters taking responsibility for their coffee and having confidence that their product complies with the requirements. This does not mean that every bag must be tested before it is sold but rather that the roaster has taken every reasonable precaution to ensure that the product complies. If the degree of roast remains virtually unaltered for example, then testing at periodic intervals will be sufficient to give the confidence needed that the levels of acrylamide and furan present in the product are within the established limits. Public health authorities in the markets where the coffee is sold as well as distributors and buyers may also test the product from time to time, so it is important to be sure that the product is processed and handled consistently at all times.

#### Legal Requirements for Exporting Roasted Coffee to Australia and New Zealand

Essentially all coffee entering Australia commercially (that is not for personal use) must be accompanied by:

- a valid phytosanitary certificate;
- invoice;
- packing list;
- either an Ocean Bill of Lading (OBL) or an Air Waybill (AWB);
- an ICO Certificate of Origin.

The packaging of the product and its labelling requirements are identical to the requirements of the EU, except that the label must be in English. Furthermore all food products imported into Australia must be inspected by Department of Agriculture, Water and the Environment, under the country's bio-security legislation, for which there is a minimum charge of A\$33. Other charges might also apply depending upon the location of entry, quantity involved and whether any testing is deemed necessary. Such charges are the responsibility of the importer. All imports into New Zealand must go through a registered importer and similarly must be inspected. Inspection fees vary but are likely to be between NZ\$60 and NZ\$180 depending upon the time taken, location and quantity involved. Additional fees might also apply if it is deemed necessary to undertake any testing of the product, and, once again, these charges are the responsibility of the importer.

#### Supply Chain Costing Analysis Covering Exporting Roasted Coffee to the UK

The table below attempts to display the costing involved in different approaches to selling roasted coffee in overseas markets. It is based on 4 different scenarios utilising different market access channels. In each scenario the final product is sold in the UK market for a price of Kina 85/kg (£18.70), which

suggests that the coffee is superior to most mainstream brands but is below what would be considered exemplary quality. The four scenarios are:

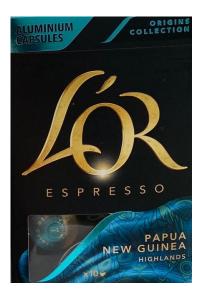
- The roaster sells via their own website directly to an intermediary consumer, i.e. café or restaurant, shipping in batches of 50 kgs by airfreight or courier. It is assumed that sales amount to 250 kgs p.a.
- The roaster sells via a global sales platform, shipping in batches of 100 kgs at a time via airfreight to a global ecommerce website warehouse for onward fulfilment. It is assumed that sales amount to 500 kgs p.a.
- 3. The roaster sells directly to a single wholesale or catering customer in batches of 100 kgs at a time via airfreight. It is assumed that sales amount to 1000 Kgs p.a.
- 4. The producer ships a container load of coffee (17 tons) by sea freight to a roaster in the UK for contract roasting.

As the table encompasses roasting at different points in the value chain, the analysis takes values back to the green bean level to enable a more meaningful comparison. However, at best, this table should only be considered as indicative as many of the costs are the author's estimates and is based on varying assumptions. The table only includes costs that are applicable to the UK market, but it should be noted that additional costs such as VAT etc. are sometimes applied elsewhere in Europe.

### Different Roast Coffee Supply Chain and Stage Costing Scenarios

Stage	Costs	Costs 1. Selling via o		own website  2. Selling via a global online platform		3. Selling to a single large customer		Outsourced contract roasting	
	Cost/kg	Stage Value	Cost/kg	Stage Value	Cost/kg	Stage Value	Cost/kg	Stage Value	
Final retail price			K85.00		K85.00		K85.00		K85.00
Less Wholesaler Margin/catering discount	25% mark- up on the wholesale value					K17.00	K68.00	K17.00	K68.00
Less referral and other online charges	15.3% plus standard selling fee (£25/month)			K13.00 +K2.72	K69.28				
Warehouse and fulfilment fees	£0.75 per month/sqm plus £2.65			K0.10 +K12.05	K57.13				
In-market distribution	Estimated							K1.00	K67.00
Promotion/Marketing costs	Variable	K10.00	K75.00	K2.50	K54.63	K2.50	K65.50	K5.00	K62.00
Transport from Origin including customs clearance & handling charges	Variable	K35.00	K40.00	K25.00	K29.63	K25.00	K40.50	K1.25	K60.75
Overhead costs (website, artwork design etc.)	Variable	K10.00	K30.00	K4.00	K25.63	K2.50	K38.00	K0.50	K60.25
Periodic testing	K500/per test x 2 p.a.	K4.00	K26.00	K2.00	K23.63	K1.00	K37.00	K0.07	K60.18
Roasting and packaging costs, including weight loss	K14.00 in PNG, K200 UK Contract Roasting	K14.00	K12.00	K14.00	K9.63	K14.00	K23.00	K20.00	K40.18
Payment processing	3.5%	K2.98	K9.02	0		K2.98	K20.02	K2.98	K37.20
Export levy	K0.10/Kg	K0.10	K8.92	K0.10	K9.53	K0.10	K19.02	K0.10	K37.10
Green Bean return			K8.92		K9.53		K19.02		K37.10

## **Appendix IV**



L'Or (Jacobs Douwe Egberts) single serve capsules, 10 per pack retailing online and in major UK supermarkets between £3.30 and £3.50.

https://www.lorespresso.com/en\_gb/espresso-papua-new-guinea

Sales account for only 0.6% of UK capsule market (industry source).





Left – Waitrose own label Fairtrade 227gm retailing at £3.50.

https://www.waitrose.com/ecom/products/n(o1-papua-new-guinea-ground-coffee/877830-711938-711939

Right - Sainsburys own label Fairtrade organic 227gm retailing at £3.50.

 $https://www.sainsburys.co.uk/gol-ui/Product/sainsburys-papua-new-guinea-coffee--so-organic-227 gat \\ \pm 3.50$ 

Sales of these two and one other product (Clipper) account for only 0.3% of the R&G market.

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