United Nations

Transfer Pricing of Agricultural Products

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Background and Acknowledgements

About the Committee

The United Nations Committee of Experts on International Cooperation in Tax Matters (the "Committee") comprises twenty-five members appointed by the Secretary-General, after notifying the Economic and Social Council, to serve in their personal capacity for a four-year term. Selected for their expertise in tax policy and administration, the members reflect diverse geographical regions and tax systems. The Committee is globally recognized for its normative and policy-shaping work and for the practical guidance it provides in tax policy and administration.

Committee Mission

The Committee develops tools and resources for governments, tax administrators, and taxpayers to help strengthen tax systems and mobilize financing for sustainable development, as well as strengthen international tax cooperation. The work aims to prevent double taxation and non-taxation while helping countries broaden their tax base, strengthen administration, and combat tax evasion and avoidance. The Committee places special emphasis on addressing the needs of least developed countries, small island developing States, and landlocked developing countries.

Committee Working Methods

The Committee meets twice annually—in spring (New York) and fall (Geneva). Between these sessions, Subcommittees work on specific topics under the Committee's oversight. These Subcommittees, whose participants also serve in their personal capacity, prepare proposals and draft guidance for review and approval by the Committee. This collaborative approach ensures thorough, multi-disciplinary and multi-stakeholder examination of complex tax issues, while maintaining the Committee's ultimate responsibility for all published guidance.

Transfer Pricing and the Sustainable Development Goals

At its Twenty-third Session in 2021, the Committee's 2021-2025 membership decided to establish a Subcommittee on Transfer Pricing, with a mandate to consider, report on and propose guidance on transfer pricing issues that:

— Reflects Article 9 of the United Nations Model Convention and the arm's length principle embodied in it, and is consistent with relevant commentaries of the Convention

- Identifies and considers transfer pricing topics where guidance from the Committees is most useful
- Reflects the realities and needs of developing countries at relevant stages of capacity development
- Gives due consideration to relevant work in other forums, such as the Inclusive Framework on Base Erosion and Profit Sharing (BEPS), including through broad consultation.

During its Twenty-fourth Session, the Committee approved the Subcommittee's ambitious workplan, consisting of guidance on the following topics:

- Transfer Pricing during the COVID-19 Economic Downturn
- Transfer Pricing Compliance Assurance—An End-to-End Toolkit
- Transfer Pricing of Carbon Offsets and Carbon Credits
- Transfer Pricing of Agricultural Products
- Transfer Pricing in the Pharmaceutical Industry
- Bilateral Advance Pricing Agreement/Arrangement Programmes—Frequently Asked Questions

This initiative served to develop guidance products to address priority challenges faced by developing countries in implementing effective transfer pricing regimes and make capacity development activities as practical, targeted and effective as possible. By strengthening their approach to transfer pricing, countries can reduce the risk of double taxation, thereby facilitating cross-border trade, fostering a more attractive investment climate, and increasing tax revenues. In turn, this can support greater domestic resource mobilization, enabling increased investment in achieving the Sustainable Development Goals (SDGs). The Subcommittee comprises a number of Committee members and other participants from tax administrations and policy-makers with wide and varied experiences related to transfer pricing, as well as people from academia, international and regional organizations, and the private sector.

This Publication

This publication, "*Transfer Pricing of Agricultural Products*", is part of a series of guidance products developed to strengthen transfer pricing capacities in developing countries. It provides practical advice to both tax authorities and multinational enterprises (MNEs) on applying the arm's length principle in two agricultural products industries; namely the coffee and soybean industry. This publication, reviewed, refined, and approved by the Committee during its Twenty-seventh and Twenty-eighth Session in October 2023 and March 2024 provides countries with practical advice in applying the arm's length principle to agricultural products.

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Disclaimer

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Contents

Abbreviations

B2B	Business to business
B2C	Business to consumer
B3	Brazil Stock Exchange and Over-the-Counter Market
CBOT	Chicago Board of Trade
CIF	Cost, insurance and freight
COGS	Cost of goods sold
CPM	Cost Plus Method
CUP Method	Comparable Uncontrolled Price Method
DAEMPE	Development or acquisition, enhancement, maintenance, protection and exploitation
ESG	Environmental, social and governance
FAO	Food and Agriculture Organization
FOB	Free on board
ICA	International Coffee Agreement
ICE	Intercontinental Exchange
IoT	Internet of Things
ISIC	International Standard Industrial Classification of All Economic Activities
MNE	Multinational enterprise
NACE	Statistical Classification of Economic Activities in the European Community (*Nomenclature statistique des activités économiques dans la communauté européenne*)
OE	Operating expenses
PSM	Profit Split Method
R&D	Research and development
SDGs	Sustainable Development Goals
SIC	Standard Industrial Classification Codes
TNMM	Transactional Net Margin Method
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UN TP Manual	United Nations Practical Manual on Transfer Pricing for Developing Countries (2021)

Executive Summary

This guidance was prepared in response to the need, often expressed by developing countries, for practical advice in applying the arm's length principle to agricultural products. All tax administrations, but particularly those from developing countries, face resource and capacity constraints in a specialized area such as transfer pricing. These constraints make it important to target the limited resources of tax administrations as efficiently and effectively as possible.

In addition, agriculture is of great importance to all countries, both developed and developing, and has a huge impact on the global economy. Multinational Enterprises (MNEs) are active in agricultural production and along agricultural global value chains. Agriculture also intersects with many other industries, including chemicals, logistics and machinery. Given agriculture's relevance and size, the goal of this guidance is to provide practical advice for tax authorities and MNEs in the industry.

The guidance commences with an overview of agricultural products and the industry in general. It then focuses on case studies of two specific agricultural industries: coffee and soybeans, detailing their scope, global value chains and key value drivers. It addresses practical issues related to transaction delineation, comparability analysis and the application of transfer pricing methods, followed by illustrative examples.

Three appendices provide additional context. Appendices 1 and 2 present statistics on agricultural production, sales and international trade. Appendix 3 lists potential questions to ask in a tax audit as part of a functional analysis of agricultural producers.

The analysis in this document may not reflect the particularities specific to all countries. It takes a systemic approach, describing the most pertinent general features of agricultural products and related transfer pricing issues. The United Nations Practical Manual on Transfer Pricing for Developing Countries (UN TP Manual) applies to agricultural products; the current guidance should be read in conjunction with the most recent version of the Manual. References in this document are to the 2021 edition.

1. Introduction

Agriculture includes "all forms of activities connected with growing, harvesting and primary processing of all types of crops, with the breeding, raising and caring for animals, and with tending gardens and nurseries".[1]

The global production value of agricultural products in 2021 was $4.8 trillion, up from about $1.5 trillion in 2000.[2] Trading data by UN Comtrade[3] allows analysis of each country's global value chain participation as a percentage of its gross exports. In these calculations, the global value chain is defined as a series of stages of the production of a commodity or service that encompasses at least three countries.

This guidance discusses global value chains and business value drivers for MNEs in the agricultural products industry, particularly as these affect developing countries. MNE involvement in an industry's global value chain varies from product to product and from country to country, with value creation affected by a range of factors. These include, among others: natural conditions, farming know-how, technology development, marketing intangibles, group synergies, cost savings and hub structures. The share of value added generated in, and retained by, developing countries in the agricultural products industry is of great importance for the economic development and long-term growth of developing countries, and for the achievement of the Sustainable Development Goals (SDGs).

Agricultural global value chains cover a broad range of activities, such as seed development, breeding, cultivation, planting, harvesting and composting. The activity segments (e.g., harvesting, ripening, freezing, distillation, blending, bioplastic production, animal feeding and distribution) may also involve relevant research and development (R&D) and marketing activities. Technology development can be an important value driver in primary production activities, covering issues from seed adaptation to various climates, variety breeding, herbicides and fertilization, among others. Environmental, labour and fair-trade standards have an increasing impact on both production costs and reputational risks for agricultural producers that may also necessitate additional local functions. Financial operations can be of material importance since international trade in commodities and some specialty products (e.g., malt) relies mostly on financial marketplaces (e.g., hedging activities).

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1 Joint International Labour Organization (ILO)/World Health Organization (WHO) Committee on Occupational Health (1962). Occupational Health Problems in Agriculture: Fourth Report of the Joint ILO/WHO Committee on Occupational Health. World Health Organization.

2 Statistics are from FAO (Food and Agricultural Organization of the United Nations), available at: https://www.fao.org/faostat/en/#data/QV.

3 Statistics are from the United Nations Comtrade Database, available at: https://comtradeplus.un.org.

This guidance discusses why it is important to analyse how companies within an MNE group add value, and whether and how actual development or acquisition, enhancement, maintenance, protection and exploitation of intangibles (DAEMPE) functions should be assessed by tax administrations. The guidance provides insights on practical issues relating to the accurate delineation of the controlled transaction, comparability analysis and the application of transfer pricing methods to the agricultural products industry through the use of industry-related transfer pricing examples. The examples examine a variety of common transfer pricing issues related to agricultural products from a developing country perspective.

This guidance focuses on two agricultural products: soybeans (part of the protein foods group) and coffee (part of the beverages group). Appendix 1, on global production values in 2000 and 2021, indicates the increasing relevance of soybeans and coffee globally. Soybeans rank among the top agricultural products, with an increase from 1.9 to 3.4 per cent of global production value over two decades. For some economies, such as Argentina and Brazil, soybean production ranks second after meat, with a share of 20 to 25 per cent of the total production value in 2021. Coffee has risen from 43 to 35 in global production value rankings, with a compound annual growth of nearly 6.5 per cent. For several countries, coffee scores among their top 10 agricultural products; it is mainly grown in and exported from developing countries.

Appendix 2 provides an analysis of global value chain participation data by region. It shows that, depending on the region, participation rates for agricultural products, particularly for food and beverages, ranged from 27 to 37 per cent in 2022.[4] The data demonstrate the importance of international trade and how a high portion of country-specific value added comes from agricultural products. Given that MNEs can have significant shares of agricultural product trade flows and global value chains, the transfer pricing question of how to properly price transactions between associated enterprises is highly relevant for all countries.

This analysis supports the usefulness of transfer pricing guidance for those two products as examples of agricultural products. Both the coffee and soybean industries are important in global production value, in absolute and relative terms, and highlight aspects relevant to other agricultural products. MNEs are active along their global value chains MNEs are active along their global value chains in both developed and developing countries. By examining global value chains in two different but important agricultural products industries, this guidance aims to highlight many global and local challenges faced by tax administrations when pricing cross-border transactions involving associated enterprises.

4 Global value chain participation is defined as the sum of backward and forward linkages. Measurement in United States dollars refers to the participation level. The participation rate is derived from this level by dividing it by gross exports.

2. Transfer Pricing Analysis for Agricultural Products

2.1. Overview

The industry background provided in this guidance is designed to help conduct a transfer pricing analysis involving agricultural products. Transfer pricing analyses start with a comparability analysis.[5]

A comparability analysis, following section 3.1 of the UN TP Manual, involves two distinct but related analytical processes:

- Developing an understanding of the accurately delineated transaction, which includes:
  - Identifying the economically significant characteristics and circumstances of the controlled transaction, i.e., the transaction between associated enterprises; and
  - Identifying the respective roles and responsibilities of the parties to the controlled transaction, as part of a functional analysis.
- Comparing the prices and other conditions of the controlled transaction (established in the first step) with those prices and other conditions in uncontrolled transactions taking place under comparable circumstances; the latter transactions are referred to as "comparable uncontrolled transactions" or "comparables".

The comparability analysis is used in selecting the most appropriate transfer pricing method and applying that method to arrive at the arm's length result. Selected aspects are outlined below for the agriculture industry.

2.2. Accurate Delineation of the Transaction

As the first step in transfer pricing analysis, the accurate delineation of the transaction involves defining a transaction (or group of transactions) between two or more commonly controlled entities (typically, affiliates in an MNE group). Defining and accurately delineating the relevant transaction frames the scope of the transfer pricing analysis. It also guides the application of the arm's length principle, since the arm's length price for a transaction between two or more associated enterprises must be based on the actual transaction (or transactions) between the related parties.

The examination of the controlled transaction involves analysing the written contract, as a starting point, as well as the conduct of the parties and other relevant

5 See the UN TP Manual, section 3.

factors. If the conduct is inconsistent with the written contract, it should be treated as the best evidence of the actual controlled transaction. For multiple transactions, it is necessary to determine whether they should be evaluated separately or can be reasonably aggregated.

Accurately delineating transactions can be complex in the agricultural products industry as key activities related to economically significant risks may be fragmented across different entities within a multinational group. It will also be necessary to consider the business model used by the taxpayer. Contractual arrangements may be difficult to analyse due to their technical nature and language.

The types of controlled transactions in a particular industry and country will vary depending on the industry's global value chain, the importance of countries and MNEs at different stages in that value chain, and how MNEs configure their affiliates and transactions at the country level within the value chain. The agricultural products global value chain includes a wide range of upstream and downstream activities. Cross-border trade and related-party transactions can take place at any of these stages.

Typical activities along the agricultural products global value chain include:

- Upstream activities, for example, seed cultivation, planting, farming and harvesting. This may comprise cross-border and related-party transactions, such as granting rights to use protected seeds; sales of non-processed and processed products, such as green coffee and roasted coffee; and related activities, including the intercompany sourcing of intermediate products, such as fertilizers and machinery.
- Intermediate stages involve processing, preparation and packaging. MNE affiliates start by purchasing semi-processed or non-processed products and add further value through processing. The products are also packed, possibly labelled or marked, and sold to wholesalers, retailers or other industrial customers for additional downstream processing or resale.
- Downstream stages include marketing, distribution and retailing. Typical cross-border transactions encompass central sourcing, the sale of products from production to distribution entities and the granting of trademark licenses.

2.3. Comparability Factors for the Controlled Transaction

Five comparability factors must be analysed as they affect the delineation of the transaction and the selection and application of the most appropriate transfer pricing method. The following examples cover each comparability factor with respect to agricultural products.

- **Contractual terms:** date of delivery, port of delivery or destination, Incoterms,[6] quotation period, price reference (e.g., a C-price on the

6 The International Chamber of Commerce publishes a set of rules that clearly define the responsibilities of sellers and buyers in the trade of goods. These rules encompass all

Intercontinental Exchange may need a significant adjustment before it can be considered a comparable for transfer pricing purposes), etc.

- **Product characteristics:** stage of processing (raw, intermediate, final), labelled or unlabelled, single or bulk, volume, packed or unpacked, quality level or grade (and any related quality features such as variety, size, oil content, etc.), patented or unprotected crop, region, country of origin
- **Functions, assets and risks**
  - **Functions:** crop or plant development; protection; sourcing of supplies such as fertilizers, pesticides or irrigation water; harvesting; processing; packaging; storing; transport; brand development; labelling; quality testing; wholesale; distribution
  - **Assets:** tangible assets (property, plant, equipment, etc.), intangibles (patents, tradenames/trademarks, know-how, plant breeders' rights, geographic or sustainability certifications)
  - **Risks:** related to development, product expiration or perishing, processing, pricing, disease, storage, markets, environmental contamination or pollution, reputation
- **Economic/market conditions:** weather; regional insect or fungal infestations that might also have an impact on product quality; agricultural, trade or environmental policies and standards; subsidies; global market conditions; price controls; timing
- **Business strategies:** market penetration, expansion and maintenance strategies

2.4. Transfer Pricing Method Selection and Application

The most appropriate method for the delineated transaction must be selected based on the functions, risks and assets of the parties. Method selection depends on the facts and circumstances of each case and should be determined on a case-by-case base.

This section discusses two transfer pricing methods for agricultural products: the Comparable Uncontrolled Price (CUP) Method and the Transactional Net Margin Method (TNMM). While the following sections focus on these two methods, this does not imply that they would be the only options for agricultural products. Rather, the sections aim to provide useful industry specifics when applying either of these two methods.

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types of trade transactions, including shipment, insurance, and where to collect and deliver the traded goods. The rules are simplified into acronyms for different situations called "Incoterms". Periodically, the rules are updated. See the International Chamber of Commerce Incoterms Rules, available at: https://iccwbo.org/business-solutions/incoterms-rules/.

2.4.1. Comparable Uncontrolled Price Method

Comparability analysis for agricultural products focuses on both the price and conditions of the transaction. The CUP Method is often seen as the best method for standardized and publicly traded products, often referred to as commodity transactions,[7] when external market information is available.[8] The lack of information and/or reliable comparable transactions on external markets, however, can limit the reliability of the method.

For many MNEs in the agriculture industry, comparable uncontrolled transactions may be obtained by the taxpayer from its own transactions with unrelated parties. Where the controlled entity buys the same products from, or sells the same products to, unrelated parties, this creates an "internal comparable" that may be used in the comparability analysis.

The CUP Method for agricultural commodities, for comparability, requires a price or set of prices for the same or similar product under the same or similar circumstances. Crucial comparability factors are the date of sale, the quality of the products and the Incoterms. Typical Incoterms are cost, insurance and freight (CIF) and free on board (FOB).

Comparability analysis for agricultural products also focuses on the conditions of the transaction. Not all transactions with unrelated parties are likely to be similar to those with related parties. Differences may occur in terms of volumes, product quality, contractual terms, geographical markets or business strategies. When these differences in facts and circumstances would have a material effect on the price or results of the transaction between unrelated parties, the internal comparable may not be reliable.[9] This may lead to either rejection of the method or the need for adjustments to increase comparability.

As many agricultural commodities have publicly quoted prices, an external CUP can be a reliable measure, especially in the upstream segment. Material differences in conditions, such as contractual terms, product quality, location and quotation periods, should be considered when using a publicly quoted price as an external CUP. A typical problem relates to the date of the transactions (box 1).

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7 Even though the term commodity is not clearly defined, it typically refers to standardized products such as raw materials or basic merchandise traded on commodity exchanges, such as the ICE, Buenos Aires Grain Exchange and the Chicago Board of Trade. See the United States Library of Congress, Commodities: A Resource Guide, available at: https://guides.loc.gov/commodities/markets-instruments.

8 Platform for Collaboration on Tax (2017). A Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses.

9 See the UN TP Manual, section 3.5.2.4.

Box 1: Differences in contract dates and consistent pricing

A lack of reliable documentation on the contract date could lead the taxpayer to choose a date from a range of possible options that yields the most tax beneficial quoted price, particularly where the taxpayer can select the date based on hindsight. This could result in transfer mispricing. In some countries, local legislation requires using the date of the shipment (or some other specific date) for determining the date of pricing for transfer pricing purposes. This is because such a specific date provides certainty and can be supported by official documents, such as boarding and customs papers. An alternative approach could be to require including export contracts (with the date of completion) in an official register in advance of the transactions.

Sometimes, local rules need to be factored into comparability factor adjustments. The UN TP Manual (section 3.5.2.15) provides additional guidance on the appropriateness of quoted prices.

2.4.2. Transactional Net Margin Method

The TNMM examines the net profit margin relative to an appropriate base (e.g., costs, sales or assets) that a taxpayer realizes from a controlled transaction (or transactions appropriate to aggregate).[10] Because the TNMM compares net margins, it is less sensitive to differences on a transactional level and different accounting standards compared to gross margin approaches.

The TNMM is often identified as the most appropriate transfer pricing method when there is one party to the transaction that is performing relatively routine functions that can be benchmarked (taking into account assets used and risks assumed). Where both entities employ unique and valuable intangibles, the TNMM is not appropriate. In the agricultural products industry, it is typically applied where no internal or external comparable transactions can be identified and no reliable adjustments can be made to transactions to render them comparable. In those cases, the CUP Method cannot be used.

The application of the TNMM entails an analysis of the tested party, typically the entity that is less complex in terms of its functions performed, assets employed and risks assumed. Examples may be producing entities that harvest or further process agricultural products at the direction of another entity in the MNE group. Another example could be a distribution entity with no or limited influence on pricing, market and product strategies, and does not bear market and bad debt risk.

Applying the TNMM calls for analysing the functions, assets and risks of the tested party. Comparable entities can then be identified using a benchmarking study. For more details on benchmarking studies, see section 3.5 in the UN TP Manual.

10 See the UN TP Manual, section 4.5.2.

In some countries, including several developing countries, comparables to apply the TNMM may be difficult to find for several reasons.[11] It is even harder to define reliable comparables when the geographical location of the activity (e.g., farming or processing) is a material comparability factor as databases often do not cover all regions sufficiently. For several crops, hardly any comparables exist. The selection of suitable comparables needs to determine whether a function assumed by a potential comparable is sufficiently comparable to the tested party or not. This process should also consider that the concept of the interquartile range already factored into that comparability may not be perfect. Hence, in specific cases, geographical location and the specific crop may be less relevant to identify suitable comparables.

2.5. Use of Hub Structures for Centralized Activities

MNEs will often centralize certain business activities, where one entity acts as a service provider to the rest of the group.[12] Examples of such hub structures may include, for example, administrative functions (e.g., human resources management, finance, accounting), supply chain activities (e.g., purchasing, logistics, distribution) and strategic business activities (e.g., R&D and intellectual property activities, marketing and brand management, business development).

In the agricultural products industry, centralized procurement (purchasing) hubs are a common organizational structure within MNEs.[13] Raw materials, packaging and services must be in the right place at the right time; however, global supply chains can easily be disrupted by natural events (e.g., hurricanes, floods) and macroeconomic shocks (e.g., an exchange rate crisis). Such disruptions can lead to price volatility and/or capacity constraints; such risks can be reduced through centralized purchasing hubs. Hubs may have strategic responsibility for managing the global sourcing function of the MNE and/or operational responsibility for

11 First, information relevant to a specific jurisdiction may only be accessible through the purchase of a license from database providers, and the financial cost of acquiring access to such databases is typically high. Second, existing databases may have little relevant information for a specific country or even region; in some cases, available data are limited to some industries. The reasons could include a lack of reporting obligations or the availability of similar companies. Third, in-country reliable comparables are often missing because the local market has few uncontrolled buyers or sellers, or may be distorted due to differences in available information. Fourth, where local information does exist, it may exhibit material differences compared to the transactions under review, requiring the use of imperfect data or data from foreign markets. The Platform for Collaboration on Tax has a useful toolkit for addressing these difficulties. See The Platform for Collaboration on Tax (2017). A Toolkit for Addressing Difficulties in Accessing Comparables Data for Transfer Pricing Analyses.

12 M. Lagarden and R. Risse (2022). Transfer Pricing in the Fast-Moving Consumer Goods Sector. In R. Petruzzi et al., eds., Fundamentals of Transfer Pricing, Volume II: Industries, Regions, New Technologies, and Other Topics. Kluwer Law International.

13 Ibid., section 3.3.1.

"source to pay" procurement for specific supply chains within the enterprise's global value chain.[14]

The UN TP Manual provides advice on transfer pricing and centralized activities in sections 5.2.4 and 5.6 to 5.14. Centralized procurement activities may offer significant cost savings based on economies of scale from bulk purchasing if one entity in the MNE buys raw materials on behalf of the group and sells them to related parties for further processing.

As the UN TP Manual notes (section 5.6.2), however, developing countries may encounter aggressive tax arrangements whereby a centralized procurement agency appears to lack economic substance. The fact that procurement is a relatively mobile function enables the MNE to locate the centralized hub in a low-tax jurisdiction and engage in profit-shifting. An important consideration for the tax administration is whether there are cost savings, the size of savings and whether they can be attributed to the centralized procurement agency. Two important issues are the fees for procurement activities and whether and how they should be related to per unit cost savings, and compensation to the procurement services provider for functions, assets and risks. These issues are discussed in depth in the UN TP Manual.

Depending on the circumstances, sales, marketing or distribution activities may be centralized for economic reasons. As noted in paragraph 5.2.4.4 of the UN TP Manual, however, offshore marketing companies often require further analysis. The Manual notes that "the attribution of sales and marketing functions and risks to a centralized entity should be carefully analysed, especially if the arrangements are not common between independent enterprises in the industry or the potential for profit shifting is significant because of the taxation regime to which the centralized entity is subject."[15]

2.6. Hedging for Agricultural Products

A further relevant aspect for several agricultural businesses is hedging, which can be defined as the assumption of an offsetting position in a closely related product or security to reduce risk exposure.[16] Firms in the agricultural products industry use physical or financial hedges to mitigate risks from fluctuating commodity prices.

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14 Source-to-pay covers all steps in the procurement process, from sourcing (finding needed materials and suppliers) through contract negotiations, ordering and receiving the materials, and making payments. Procure-to-pay starts after the sourcing stage, using preapproved lists of suppliers. See A. Jain (2023). Source-to-Pay vs. Procure-to-Pay: Which Is Right for Your Business? Capterra.

15 On transfer pricing in centralized procurement hubs in the apparel industry, see J. H. McClure (2023). Centralized Procurement Hubs: A Co-Sourcing Model. Tax Management Memorandum (10 April). On transfer pricing for distribution hub structures, see J. H. McClure (2018). Distribution Hubs, Sandwich Transactions, and the Co-Distribution Model. Journal of International Taxation 29(10).

16 S. Seth (2022). How to Use Commodity Futures to Hedge. Investopedia. S. Mildner (2020). Physical and Financial Hedging—A Beginner's Guide. London Metal Exchange.

This section outlines the fundamentals of hedging along with typical questions for a transfer pricing analysis. For more guidance, see chapter 9 of the UN TP Manual.

Currencies, shares, portfolios and commodities can be traded "on the spot" or via futures. In a spot transaction, delivery and payment occur close in time (immediately or within a few days) to the trade. In a futures contract, the seller agrees to sell a specific commodity at a fixed price on an agreed date in the future. The buyer agrees to take delivery. A futures contract is "a legally binding agreement to buy or sell a specified quantity of a particular commodity for delivery in a specified time in the future."[17] Futures contracts have been an important way to manage mismatches between expenditures and the timing of planting, growing and harvesting agricultural crops, and the income received from sales of agricultural produce.

Exchange markets may operate alongside financial markets, including futures markets. The spot price for a commodity reflects the cost of purchasing it on an exchange market to be traded immediately or in a very short time. The price for a futures contract involves the spot price plus the cost of storage through the time; the futures price also reflects expectations about the future supply and demand of the commodity, and the expected rate of return for the commodity holder (i.e., the financial cost of "not having" the money).

Both the Intercontinental Exchange (ICE) in New York and the Brazil Stock Exchange and Over-the-Counter Market (B3) are relevant in this regard, including for coffee and soybean derivatives. Prices in local markets, such as Colombia, Ethiopia, Guatemala, Mexico and the United Republic of Tanzania, are calculated on the basis of exchange prices by adding or deducting discounts or premia for qualities, transport, and storage costs and grades ("differentials"). The conclusion of a futures contract can either be used to limit a company's exposure to price or exchange rate risks or for speculative reasons.

Hedging requires good knowledge of the market structure and developments. Typical situations are "contango" and "backwardation".[18] In a contango situation, the future price is higher than the spot price, e.g., due to storage costs or increased demand expectations. In a backwardation situation, the spot price is higher than the future price. Depending on the market structure, arbitrage opportunities may arise in either situation. If futures are to be used for price hedging, the hedging strategy must be closely interlinked with purchasing or sales planning. Extensive know-how is required to buy or sell the right quantities at the right time and at the best possible price, in close coordination with production planning and sales commitments, and considering the forward price curve. If the same quality is to be maintained in mixed processes, production planning must factor in the seasons and the market situation.

A successful hedging strategy can produce cost advantages and/or reduce volatility on the purchasing side. Typical tasks include, for example:

17 B. Folmer, ed. (2017). The Craft and Science of Coffee. Elsevier.

18 D. R. Harper (2022). Contango vs. Normal Backwardation: What's the Difference? Investopedia.

- Development of the hedging strategy with the use of future contracts for hedging price risks from the purchase and sale of raw materials as well as the sale of processed products
- Support in hedging the value of stored goods (inventory hedging)
- Support in hedging exchange rate risks (foreign exchange hedging)
- Support in the purchase and sale of raw materials and other products for further processing

The objective of an arm's length analysis of hedging transactions is, first, to allocate hedging gains or losses to group entities. A second aim is to determine the remuneration of group entities engaged in transactions related to hedging, i.e., the traders. A functional and risk analysis must look at both issues and consider the following questions, among others:

- Description of hedging (which commodity), how (e.g., future), where (e.g., Chicago) and under which conditions (price)
- What are the hedging gains or losses?
- How did the profit or loss occur?
- Are futures used for hedging or speculation?
- Which entity sets the hedging strategy?
- Are there written guidelines for the hedging strategy? Are centrally created hedging policies implemented by traders?
- What autonomy do traders have?

2.7. Summary

Section 2 discussed selected topics for transfer pricing for the agriculture industry in general. The following two sections provide detailed studies of two agricultural products, coffee and soybeans, outlining the global value chains and typical related party transactions for each. They discuss characteristics to consider in a transfer pricing analysis, with a focus on delineated transactions, comparability factors, and the selection and application of the transfer pricing method. Appendix 3 provides questions that may be helpful for tax administrations and taxpayers in looking at different functions along the global value chain.

The guidance on the coffee and soybean industries offers useful advice not only for these agricultural products but also for other agricultural products and should be read in conjunction with the UN TP Manual and under the provisions of each country's domestic legislative framework.

3. Transfer Pricing in the Coffee Industry

Coffee has been called "the world's favourite beverage", with an estimated 400 billion cups consumed per year and an industry that "provides livelihoods for at least 60 million people, across dozens of countries".[19] Coffee is also the world's most widely traded tropical agricultural commodity.[20] This section presents statistics on global production, consumption and international trade, followed by a discussion of the global value chain in this industry and implications for transfer pricing analysis.

3.1. Global Production and Consumption

In 2022, global coffee production reached 171.3 million 60-kilogram bags of coffee beans, with Europe (31 per cent) and North America (18 per cent) together totalling more than half of global consumption.[21] Global coffee consumption was 175.6 million bags, exceeding production that year. In 2019-2020, coffee bean prices reached their highest level in 10 years (about $2.04 per pound).[22]

In 2022, 58 per cent of world coffee production was Coffea arabica (arabica coffee); the other 42 per cent was Coffea canephora (robusta coffee). Figure 1 shows the production of arabica and robusta coffee beans, in 60-kilogram bags, by region, in 2021–2022.

The production of coffee is limited to several countries due to weather conditions. Arabica coffee is grown primarily in Brazil, Colombia, Costa Rica, El Salvador, Ethiopia, Guatemala, Honduras, Mexico, Panama, Peru and Rwanda. Robusta coffee thrives in Brazil, India, Indonesia, Uganda and Viet Nam.[23] Arabica coffee is more vulnerable to environmental shocks; it grows at higher altitudes and has lower resistance to pests, diseases and weather variabilities. Robusta coffee is easier and less costly to grow, producing more fruit with higher yields per tree. Arabica prices typically are nearly twice the robusta prices.[24] Weather conditions significantly affect production quantities and hence global coffee prices.

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19 J.Sachs et al. (2019). Ensuring Economic Viability and Sustainability of Coffee Production. Columbia Center on Sustainable Investment Staff Publications.

20 S. P. Ishwarya and C. Anandharamakrishnan (2015). Spray-Freeze-Drying Approach for Soluble Coffee Processing and Its Effect on Quality Characteristics. Journal of Food Engineering 149: 171–180.

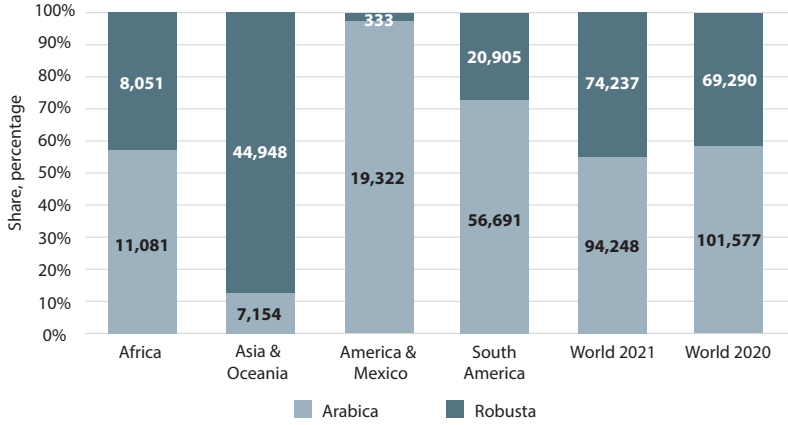
21 International Coffee Organization (2023). Coffee Report and Outlook.

22 International Coffee Organization (2023). Coffee Market Report—March 2023.

23 International Coffee Organization (2020). Coffee Development Report. The Value of Coffee. Sustainability, Inclusiveness, and Resilience of the Coffee Global Value Chain.

24 International Coffee Organization. Daily Coffee Prices. ICO Indicator Prices. Available at: https://www.ico.org/coffee_prices.asp?section=Statistics.

Figure 1: Production of arabica and robusta coffee by region, 2021–2022, thousands of 60-kilogram bags and percentage share



Source: International Coffee Organization (2023). Coffee Report and Outlook.

The top 10 coffee-producing countries in 2018-2019 were Brazil, Colombia, Ethiopia, Honduras, India, Indonesia, Mexico, Peru, Uganda and Viet Nam. In 2019, Brazil and Viet Nam accounted for nearly 50 per cent of world coffee production; another three countries (Colombia, Honduras and Indonesia) accounted for another 25 per cent.[25] Exports from coffee-producing countries in 2020–2021 went primarily to Europe (46 per cent) followed by North America (22 per cent) and Asia and Oceania (22 per cent).[26] More than 90 per cent of exports were green beans; the remaining share was processed coffee (roasted or soluble). Most coffee is exported as a bulk commodity (green beans in 60-kilogram bags) from developing countries (figure 2).

The number of coffee farms worldwide is estimated to be 12.5 million[27] with 84 per cent of farms smaller than 2 hectares (4.9 acres) and 95 per cent smaller than 5 hectares (12.4 acres). Coffee farms larger than 50 hectares (123.6 acres) are rare outside Central and South America.[28] Smallholder farms with less than 5 hectares produce 70 per cent of all coffee, typically either robusta or arabica beans.[29]

25 S. Panhuysen and J. Pierrot (2020). The Coffee Barometer.

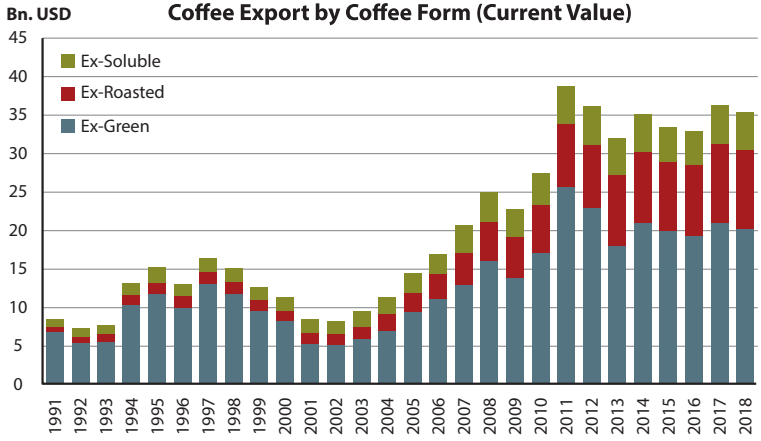
26 International Coffee Organization (2021). Coffee Development Report. The Future of Coffee: Investing in Youth for a Resilient and Sustainable Coffee Sector.

27 Enveritas as reported in Sachs et al., Ensuring Economic Viability and Sustainability of Coffee Production. See also Panhuysen and Pierrot, The Coffee Barometer.

28 Panhuysen and Pierrot, The Coffee Barometer.

29 R. Utrilla-Catalan et al. (2022). Growing Inequality in the Coffee Global Value Chain: A Complex Network Assessment. Sustainability 14(2): 672.

Figure 2: Exports of green, roasted and soluble coffee, 1991–2018, billions of United States dollars



Source: D. Gorlich et al. (2020). Fostering the Development of the Coffee Global Value Chain. Kiel Working Paper No. 2070. Kiel Institute for the World Economy.

3.2. The Coffee Industry's Global Value Chain

The global value chain includes all activities that generate revenue directly or indirectly along the coffee value chain. In addition to direct production, other stages that add value include technology development, marketing and distribution. The global value chain for coffee is complex, with a large number of stages and actors involved, ranging from small producers to large multinational enterprises. This section first discusses the production process for green and roasted coffees and then looks at soluble coffee.

3.2.1. The production process for green and roasted coffee

As described in section 1.3.3 of the UN TP Manual, the value chain analysis developed by Michael Porter describes activities performed by a company, domestic or international, in creating value for its customers.[30] This includes all value adding stages in bringing a product from inception to final consumption. Porter separated these stages into two types: primary and support activities.[31]

30 M. Porter (1985). Competitive Advantage: Creating and Sustaining Superior Performance. New York, NY: Free Press. Primary activities include direct activities involved in a particular product line, ranging from upstream purchasing and logistics to downstream distribution and final sales (that is, along the supply chain). The firm also undertakes support or indirect activities such as strategic management, regulatory affairs and human resources, which are also value creating but spread across the firm's product lines. Porter's value chain includes all supply chain and support activities that generate revenue with respect to a particular product or product line.

31 Porter's value chain is most suitable for vertically integrated (upstream-downstream) production processes, such as in pharmaceutical, agricultural and capital-intensive

The value chain can be analysed at the firm or industry level and from a domestic or international perspective. In this guidance, the focus is on the global value chain at both the individual firm (MNE) and industry levels. At the MNE level, the global value chain takes into account all the activities of entities in the group on a worldwide basis.[32] At the industry level, the global value chain incorporates all activities by all firms and countries, worldwide, in the industry.[33] Global value chain analysis therefore uses the value chain as the basic structure for giving a general/stylized overview and visual to describe an MNE or an industry, but recognizes that the various production stages have become globalized and dispersed around the world, and that, in practice, activities carried out by firms will vary in intensity.[34]

Global value chains in agriculture involve multiple primary activities from upstream stages (e.g., inbound logistics, farming) to intermediate stages (e.g., operations involving processing, preparations and packaging) to downstream stages (e.g., distribution, retailing). Support activities include infrastructure (the management of firm infrastructure), value chain governance, government policies, and the organization of firms and other actors in the industry.

The major sources of value commonly lie not in the upstream production and processing of coffee but rather in the downstream activities dominated by MNEs.[35] Explaining why this is the case begins with exploring the coffee production process. Figure 3 describes activities to create a raw product and turn it into one or more finished goods.[36]

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industries. Other production models such as value shops and value networks are more common in industries such as consulting, banking and e-commerce. See C. B. Stabell and D. O. Fjeldstad (1998). Configuring Value for Competitive Advantage: On Chains, Shops, and Networks. Strategic Management Journal 19(5).

32 See also L. Eden (1998). The Multinational Enterprise as an Integrated Business. In Taxing Multinationals: Transfer Pricing and Corporate Income Taxation in North America, chapter 3, pp. 125–166. University of Toronto Press.

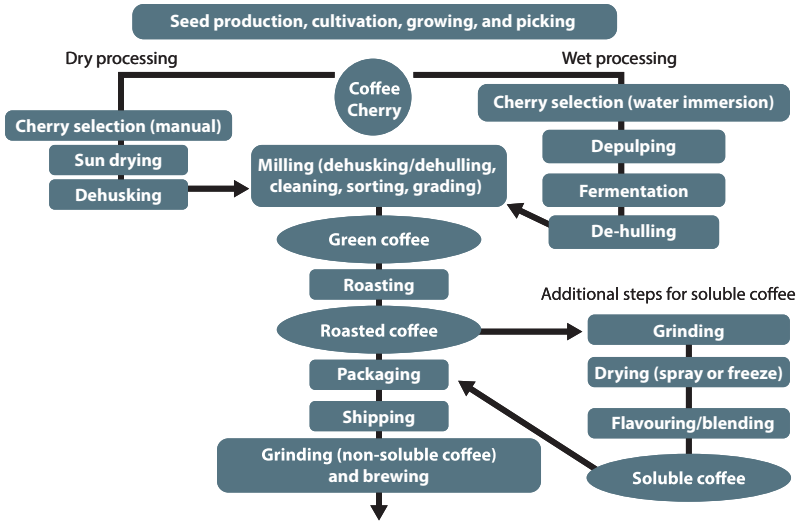
33 S. Frederick (2019). Global Value Chain Mapping. In S. Ponte, G. Gereffi and G. Raj-Reichert, eds., Handbook on Global Value Chains, pp. 29–53. Eduard Elgar Publishing.

34 L. Jones, M. Demirkaya and E. Bethmann (2019). Global Value Chain Analysis: Concepts and Approaches. Journal of International Commerce and Economics. United States International Trade Commission.

35 L. Boudreau, J. Cajal-Grossi and R. Macchiavello (2023). Global Value Chains in Developing Countries: A Relational Perspective from Coffee and Garments. Journal of Economic Perspectives 37(3): 59–86. G. Gereffi (2015). Global Value Chains, Development and Emerging Economies. Working Paper #18. Research, Statistics and Industrial Policy Branch, United Nations Conference on Trade and Development. U. Moreira Lima and K. Lee (2023). Governance and Asymmetry in Global Value Chains of the Coffee Industry: Possibility for Catch-Up by Emerging Economies. Seoul Journal of Economics 36(1): 79–111.

36 D. Zettwoch (2012). How Coffee Works. J. Barreto Peixoto et al. (2022). Sustainability Issues Along the Coffee Chain: From the Field to the Cup. Comprehensive Reviews in Food Science and Food Safety.

Figure 3: Stages in the coffee production process



Sources: Based on J. Barreto Peixoto et al. (2022). Sustainability Issues Along the Coffee Chain: From the Field to the Cup. Comprehensive Reviews in Food Science and Food Safety. WMF UK Coffee Machines Blog (2015). How Coffee Works! Steps from Shrub to Mug. See also Verite (2019). Commodity Report: Coffee.

Key steps in the production process are:

- Seed production: This stage includes the selection of varieties or hybrids, and management of coffee plant nurseries.
- Crop cultivation: This entails shade and pest management, pruning, fertilization, and soil and water management.
- Growing and picking: Coffee producers (individual growers, small and medium-sized farms, and large estates) plant and grow bushy evergreens and harvest red coffee berries called cherries, mostly by hand. Key inputs are land, labour, materials (fertilizers, pesticides, herbicides) and irrigation. The right cherry maturation needs to be considered.
- Processing: Once picked, the outer covering and pulpy fruit are removed from the cherries, leaving the seeds or beans. The two most common processing methods are dry (natural) or wet processing, although some farms are experimenting with so-called "emerging" processing methods.[37] Dry processing is the older, slower and more labour-intensive method, where beans are sorted and dried in the sun for two to four weeks. Wet processing is a water-intensive and faster method, where the berries are fermented and washed to remove the covering and pulp, and then dried. Post-harvest processing (e.g., timing, method, drying

37 G. Pereira et al. (2019). Exploring the Impacts of Postharvest Processing on the Aroma Formation of Coffee Bean—A Review. Food Chemistry 272: 441–452.

and storage processes) can significantly affect the quality (e.g., aroma, flavour) of green coffee beans.[38]

- Milling: The beans are milled to remove any remaining fruit or parchment and refined (polished, sorted, washed and dried) to become "green" coffee beans.
- Roasting: Large commercial machines are used to roast the beans.
- Packaging: Roasted beans are packaged in cool, dark, dry, airtight containers with escape valves for gases, mainly carbon dioxide.
- Shipping: Packages are shipped and sold to customers (wholesale and retail outlets).
- Grinding and brewing: Roasted coffee beans are ground, either before or after retail sale, and brewed to make coffee using coffee filters, brewing machines and water.

3.2.2. The production process for soluble coffee

About 10 per cent of world coffee exports are soluble (instant) coffee.[39] Producing soluble coffee requires additional manufacturing steps after the roasting stage (figure 3). Roasted coffee beans are ground to obtain an extract, which is dried by evaporation (spray drying) or by sublimation (freeze-drying).[40] Freeze-drying is more expensive but better at conserving quality. The soluble coffee is then packaged for final sale.[41] Soluble coffee can also be flavoured or blended with milk powders to create different types of instant coffees such as cappuccino, mocha coffee and café latte.

3.2.3. Trading activities

World coffee production is highly unstable due to crop fluctuations resulting from rain patterns, plant diseases and climate change. Together with the long maturity time of coffee berries, these factors diminish harvest volumes and create financial risks for coffee growers. Hedging strategies (section 2.6) are commonly used by traders to mitigate risks.

Coffee beans may be traded using a futures contract, where traders agree to buy or sell a specified quantity for delivery at a specified future date.[42] Coffee futures have been traded on mercantile exchanges for more than 140 years, starting with the New York Coffee Exchange in 1882. Futures contracts are an important way to manage

38 Ibid.

39 L. F. Samper, D. Giovannucci and L. M. Vieira (2017). The Powerful Role of Intangibles in the Coffee Value Chain. Economic Research Working Paper No. 39. World Intellectual Property Organization.

40 L. Wolf de Almedia Neves, S. Hamacher and L. F. Scavarda (2014). Outsourcing from the Perspectives of TCE and RBV: A Multiple Case Study. Production 24(3).

41 S. P. Ishwarya and C. Anandharamakrishnan (2014). Spray-Freeze-Drying Approach for Soluble Coffee Processing and Its Effect on Quality Characteristics. Journal of Food Engineering 140: 171–180.

42 Folmer, The Craft and Science of Coffee.

mismatches between the expenditures and timing of planting, growing and harvesting coffee beans and the income received from sales.

Between 1962 and 1989, the International Coffee Agreement (ICA), which was signed by most coffee-producing and -consuming countries, regulated the world price of coffee and allocated export quotas to producers.[43] The system collapsed in 1989 over a disagreement about the quotas. Since then, prices have fluctuated widely in response to demand and supply shocks and the bargaining power of producers and customers.[44] Coffee futures trading has become even more important for producers, traders and customers to manage trading risks.

Coffee bean futures are now traded on the ICE, referred to as the "C Market", a global market for coffee and many other commodities with exchanges in several locations.[45] The two main markets are in New York (arabica beans) and London (robusta beans), involving both current and futures contracts.[46] Both physical trades and the trading of coffee futures take place on the C Market.[47] The C-price of coffee is therefore the price of green coffee beans on the C Market, recorded as both spot and futures prices that change minute by minute. The C-price is the reference price for purchase offers to producers and other sellers in producing countries.[48] The "open market price" refers to the C-price. Robusta coffee can be purchased more easily in bulk form than arabica coffee and its C-price is typically about one third lower; however, prices for both coffees are highly volatile.[49]

A C-price on the ICE may need significant adjustment before the price can be considered a comparable for transfer pricing purposes. This often creates difficulties for both taxpayers and tax administrations, as export (or import) transactions of some products frequently involve related parties, making external comparables more difficult to find. Sections 3.2.4 and 3.2.5 discuss why the C-price for coffee may need adjustments to arrive at an arm's length price.

3.2.4. Technology development

Technology development affects every stage of the coffee global value chain. At upstream stages, technology influences the breeding and selection of seed varieties,

43 Utrilla-Catalan et al. Growing Inequality in the Coffee Global Value Chain.

44 A. Ghoshray and S. Mohan (2021). Coffee Price Dynamics: An Analysis of the Retail-International Price Margin. European Review of Agricultural Economics.

45 E. Nadelberg et al. (2017). Trade and Transaction—Market and Firm Dynamics. In B. Folmer, ed., The Craft and Science of Coffee. Elsevier.

46 Utrilla-Catalan et al. Growing Inequality in the Coffee Global Value Chain.

47 ICE Futures U.S. Coffee "C". Available at: https://www.ice.com/publicdocs/ICE_Coffee_Brochure.pdf.

48 For more information on the ICE, see: https://www.ice.com/products/15/Coffee-C-Futures.

49 ICE Futures U.S. Coffee "C". Available at: https://www.ice.com/publicdocs/ICE_Coffee_Brochure.pdf. See also A. Hill (2016). Seven Things You Must Know about Coffee Futures. Trading Sim.

the use and types of fertilizers and pesticides, the design and efficiency of farming and agro-industrial equipment, the management of soils and water resources, and methods of harvesting and storage. Coffee producers — like all firms — are incentivized to invest in technology development only when expected returns exceed costs.

The situation of coffee producers has been uncertain amid climate change, price instability and rising costs, however, discouraging technology development in the growing and harvesting stages.[50] Coffee farming, like other forms of agricultural production, faces climate and environmental challenges from weather extremes (too much or too little water or sunshine, variations in temperature, etc.), changing climate patterns, and pests and diseases. In many cases, the size of the average coffee farm is too small to profitably introduce technological developments in milling, packaging and transportation. In addition, the distribution of net profits along the coffee global value chain has been primarily to downstream buyers, not upstream farmers.[51] Lags in upstream value creation suggest a need for assistance from governments and international agencies to encourage uptake of technology.

Environmental regulation

Environmental regulations have affected technology development in the coffee industry. Food and beverage industries have, arguably, been among the earliest sectors of the agricultural products industry to be affected by the growing importance of sustainability and environmental, social and governance (ESG) regulations.

Non-profit organizations specializing in such regulations have been important in creating intellectual property rights for coffee farmers. For example, Enveritas created a sustainability verification platform for coffee farmers that provides producers with free verification of their sustainability practices, using data and field assessments.[52] Sustainable business practices are intended to redistribute income up the coffee global value chain, particularly to smallholder farmers. Evidence suggests that adoption of more sustainable practices is greater for coffee farmers who belong to cooperatives.[53] Once certified based on certain standards, coffee producers can use certification trademarks (e.g., "Fairtrade" or "Rainforest Alliance") as part of marketing and promotion to differentiate their coffee beans for consumers.[54]

Digitalization

Technological change from digitalization is affecting the coffee industry. Smart farming technologies are providing new ways to track environmental hazards and

50 L.F. Samper and L.M. Vieira. The Powerful Role of Intangibles in the Coffee Value Chain.

51 D. Zografos Johnson (2012). Using Intellectual Property Rights to Create Value in the Coffee Industry. Marquette Intellectual Property Law Review 16(2).

52 Enveritas (2023). Sustainability Standards for Coffee Producers.

53 A. Bro et al. (2019). Determinants of Adoption of Sustainable Production Practices Among Smallholder Coffee Producers in Nicaragua. Environment Development and Sustainability.

54 D.Z. Johnson. Using Intellectual Property Rights to Create Value in the Coffee Industry.

improve coffee production. For example, Internet of Things (IoT) sensors can monitor, collect and analyse data on growing conditions (e.g., soil moisture, sunlight, temperature) to make adjustments and improve productivity.[55] New information and digital technologies now enable coffee producers to collect specific data on their own growing and harvesting (e.g., precise locations, soil moisture levels, harvesting dates) and share that information and best practices with other coffee growers and downstream buyers.[56] Coffee traders[57] and roasters[58] are using digital technologies to improve coffee grading inspections and lot evaluations, as are coffee manufacturers, wholesalers and retailers in assigning stock-keeping units to better track stock and inventory.[59]

Intellectual property rights based on geography and plant varieties

Creating intellectual property rights in the coffee industry has been an important way to generate value and incentivize technology development.[60] For example, origin coffees are associated with a particular geographic location and command a premium price. Single-origin coffees may come from one farm, region or country.[61] Coffee producers can receive intellectual property protection based on geographic indications for a specific location, region or country under the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.[62] While it can be time consuming, locational certification may help differentiate products such as coffee. Certification and collective marks can then be registered and protected at the national level (e.g., Jamaica Blue Mountain Coffee).[63]

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55 J. Rodríguez et al. (2021). IoT-Agro: A Smart Farming System to Colombian Coffee Farms. Computers and Electronics in Agriculture (190): 106442.

56 For example, CROPSTER is a mobile application available to key actors along the coffee global value chain (producers, traders, buyers and roasters). The app enables coffee professionals to share information and best practices.

57 Cropster (2022). Green Grading Coffee.

58 M. Young (2023). Lot Evaluation, Sample Types & Sample Groups. Cropster.

59 Cropster (2021). Introduction to Stock Keeping Units (SKUs).

60 D. Zografos Johnson (2012). Using Intellectual Property Rights to Create Value in the Coffee Industry. Marquette Intellectual Property Law Review 16(2). See also I. Puranik (2020). Intellectual Property in the Coffee Industry. International Journal of Law Management and Humanities.

61 L. Mowery (2017). Here's Why Single Origin Coffee Is More Expensive but Worth Your Dollars. Forbes.

62 Article 22.1 states that geographic indications "identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin." The purpose of Article 22.1 is to create collective intellectual property rights through which coffee and other agricultural producers can capture the location-related value embodied within their products.

63 Zografos Johnson, Using Intellectual Property Rights to Create Value in the Coffee Industry. See also J. Chen (2018). Intellectual Property in Coffee: Who Really Owns the Story? Sprudge, 12 October. Other examples of geographic indications for

The development of new plant varieties offers the opportunity for coffee plant breeders to acquire intellectual property rights that give the creator control over how new varieties are distributed. The International Union for the Protection of New Varieties of Plants provides and promotes plant variety protection rights to encourage new varieties, including coffee plants.[64] Breeders' rights require that the breeder make the new variety available to other breeders for research, encouraging the diffusion of new plant varieties.

3.2.5. Marketing

Coffee prices are affected not only by demand and supply but also by the quality of beans, which depends on their physical, chemical and sensory properties.[65] Coffee beans are classified based on size, appearance and quality. Product differentiation based on origin, quality and certification segments the global coffee market into different categories, strategies and prices.[66]

Quality-based certifications are an important method of differentiation that can create "variety rights" for coffee farmers in addition to geographic indications (section 3.2.4).[67] Determining the quality of coffee beans is labour-intensive and time-consuming,[68] requiring physical analysis by trained panellists using cup-testing standards first introduced in 2004 by the International Coffee Organization. The organization plays an important role in creating variety designations through its "cupping" standards, which assess coffees on a 0 to 100 score in terms of their sensory attributes (e.g., aroma, flavour, aftertaste and sweetness). Certifying a coffee rated by cupping professionals above a minimum cupping score is also a differentiator. For example, specialty coffees are single-origin coffees with cupping scores of 80 or more.[69] Such quality designations may create higher pricing opportunities that benefit

coffees can be found in Colombia, Indonesia and Kenya. See X. F. Quinones-Ruiza et al. (2016). Insights into the Black Box of Collective Efforts for the Registration of Geographic Indications. Land Use Policy. D. Barjolle et al. (2016). The Role of the State for Geographic Indications of Coffee: Case Studies from Colombia and Kenya. World Development. J. Neilson, J. Wright and L. Aklimawati (2018). Geographic Indications and Value Capture in the Indonesia Coffee Sector. Journal of Rural Studies.

64 See the website of the International Union for the Protection of New Varieties of Plants, available at: https://www.upov.int/portal/index.html.en. See also International Union for the Protection of New Varieties of Plants (2011). Draft Guidelines for the Conduct of Tests for Distinctiveness, Uniformity and Stability: Coffee.

65 See also N. A. Febrianto and F. Zhu (2023). Coffee Bean Processing: Emerging Methods and Their Effects on Chemical, Biological and Sensory Properties. Food Chemistry 412: 135489.

66 Bureau for the Appraisal of Social Impacts for Citizen Information (2018). Coffee: The Hidden Crisis Behind the Success: Study on Sustainability Within the Coffee Industry.

67 See also the discussion on variety rights in soybeans in section 4.2.1.

68 See also Febrianto and Zhu, Coffee Bean Processing: Emerging Methods and Their Effects on Chemical, Biological and Sensory Properties.

69 For coffee cupping protocols, see Specialty Coffee Association of America (2015). Protocols and Best Practices: Cupping Protocols.

high-quality coffee producers. The Specialty Coffee Association is currently introducing a new Coffee Value Assessment designed to score coffee on four aspects (physical, descriptive, affective and extrinsic), which will enable further differentiation.[70]

Within the category of specialty coffees are certified coffees produced in compliance with internal or external specifications that can be verified by an independent third-party auditor. A variety of certification standards exists; most are associated with sustainability along the coffee global value chain.[71] The "Fairtrade" designation is perhaps the best-known standard by consumers worldwide. Launched as a social movement by non-governmental organizations, its purpose is to promote inclusive and sustainable globalization through fair international trade that responds to the interests of all stakeholders and protects the most vulnerable.[72] The Fairtrade designation (similar to other certifications) was designed to differentiate products, segment the market and attract a higher price. Consumers pay a price premium for Fairtrade coffee, knowing that coffee growers receive a higher share of the net income. Evidence to date suggests that the coffee farmer receives about one sixth of the price premium paid by consumers of Fairtrade coffee.[73]

Product differentiation, from a marketing perspective, has resulted in dividing the coffee industry into three market segments:[74]

- First-wave (conventional) coffees: This is the largest segment of coffee consumption by volume and value, representing 65 to 80 per cent of global consumption and 45 per cent of total market value. Target consumers drink their coffee at home. Products are standardized as packaged coffee beans (whole or ground), soluble coffees and single-serve coffee capsules. Purchasing decisions are driven by price and coffee origin is typically not important. Roasting and packaging, using standardized mass production techniques, produces standardized quality coffee sold through grocery stores and food service outlets.
- Second-wave (differentiated) coffees: This segment, from a marketing perspective, targets individuals consuming coffee (typically espresso-

70 E. Gibbs (2023). Understanding the New Specialty Coffee Association Coffee Value Assessment. See also Specialty Coffee Association (2023). A New System to Assess Coffee Value.

71 Coffees may be certified under a variety of standards, including Fairtrade, organic, Rainforest Alliance, Smithsonian bird friendly, Utz Certified, and 4C Common Code. Each standard has its own mission, market focus, scope, traceability and accreditation standards.

72 R. Zhu, S. Li Sun and Y. Huang (2021). Fair Trade Coffee and Inclusive Globalization: A Metamorphosis of Institutional Entrepreneurship. Multinational Business Review.

73 H. Naegele (2020). Where Does the Fair Trade Money Go? How Much Consumers Pay Extra for Fair Trade Coffee and How This Value Is Split Along the Value Chain. World Development.

74 L.F. Sampler and L.M. Vieira. The Powerful Role of Intangibles in the Coffee Value Chain. WIPO (World Intellectual Property Organization) (2017). World Intellectual Property Report 2017: Intangible Capital in Global Value Chains, chapter 2.

based beverages) in social settings such as coffee shops and cafés. The quality of beans tends to be higher, and more attention is paid to geographic origins, sustainability and specialty coffees. Coffee products are available through specialty coffee chains, grocery stores and online.

— Third-wave (experiential) coffees: This marketing segment focuses on sophisticated coffee consumers who have distinct preferences and are willing to pay premium prices, similar to consumers in the wine industry. Trained coffee servers (baristas), like wine stewards, focus on service and providing an experience. Marketing intangibles are most important at this stage, and coffee-roasting companies may use storytelling techniques to market certified coffee beans to consumers.[75] Third-wave coffee businesses tend to buy single-origin coffee beans directly from farmers to ensure a stable, high-quality supply of particular coffee beans. Blending and roasting is done in-house using sophisticated techniques and know-how. Coffee products are available through independent coffee retail operations and online.

Production and marketing intangibles (e.g., patents, industrial designs, trademarks and trade names) are more relevant to downstream stages of the coffee global value chain. Since ownership of intangibles is merely the starting point for transfer pricing analysis, contributions, particularly in the form of important DAEMPE functions, need to be considered.[76] Over 90 per cent of all coffee-related patents are concentrated in the processing and final distribution stages of the global value chain; less than 2 per cent of patent filings are at the farming and harvest/post-harvest stages.[77] Trademark filings are rising much faster than patent filings, reflecting the growth of second- and third-wave coffee segments, and the importance of branding in product differentiation.

3.3. Implications for Transfer Pricing Analysis

This section discusses related party transactions in the coffee global value chain and the applicability of the CUP Method.

3.3.1. Related party transactions in the coffee global value chain

There are six main groups of actors involved in the coffee global value chain:

— Seed producers and coffee plant nurseries help to mitigate the frequent lack of genetic purity in varieties planted

— Producers grow and harvest coffee cherries

— Processors use wet or dry processes to convert coffee cherries to green coffee beans

75 Chen, Intellectual Property in Coffee: Who Really Owns the Story?

76 WIPO, World Intellectual Property Report 2017, chapter 2.

77 Ibid.

- Exporters/importers/trading companies handle international trade in green coffee
- Roasters buy and roast green coffee and package and sell roasted coffee
- Wholesalers and retailers purchase roasted coffee for sales to business (B2B) and consumers (B2C) sales

Of the production stages illustrated in figure 3, the initial stages (growing and picking, processing and milling) typically take place in the coffee-producing country. The green coffee beans are then generally exported and shipped to coffee-consuming countries where the remaining steps (roasting, packaging, shipping, grinding and brewing) take place.[78]

The small share of roasted coffee bean exports from coffee-producing countries can be explained by difficult access to grocery store distribution chains in coffee-consuming countries and the shorter shelf life of roasted coffee beans. Most coffee roasting takes place closer to consumers.[79]

A trend over the last several decades has been the concentration of market power in MNEs at the trading (export/import) and roasting stages.[80] In 2019, five trading companies[81] handled more than 50 per cent of total green coffee exports, with Switzerland being the headquarters location for most trading houses. Members of the Swiss Coffee Trade Association oversaw more than 50 per cent of global coffee exports. At the roasting stage, in 2014, the five largest companies had a combined share of 48 per cent of the world coffee market. Two of them together represented 38 per cent of the market.[82] Some factors that favour shifts in the downstream stages are less important for soluble coffee, where the shelf life is longer than for green beans or roasted coffee.

Just over 30 per cent of the world's coffee production is consumed in coffee-producing countries,[83] suggesting that many may have opportunities to develop their own coffee roasting and instant coffee manufacturers. Coffee-producing countries could capture a higher share of value added at the downstream stages, such as the production of soluble coffee, as well as a greater volume of roasting and packaging.

78 I. Borrella, C. Mataix and R. Carrasco-Gallego (2015). Smallholder Farmers in the Specialty Coffee Industry: Opportunities, Constraints and the Businesses That Make It Possible. IDS Bulletin 46(3).

79 L.F. Sampler and L.M. Vieira. The Powerful Role of Intangibles in the Coffee Value Chain.

80 A. Ghoshray and S. Mohan (2021). Coffee Price Dynamics: An Analysis of the Retail-International Price Margin. European Review of Agricultural Economics.

81 Panhuysen and Pierrot, The Coffee Barometer. The five trading firms are, in order of market share: Neumann Kaffee Gruppe, Ecom Agroindustrial, Olam, Volcafe Ltd/ED&F Man and Louis Dreyfus Company. See also D. Goldstein (2018). Who Moves the Coffee Markets? Meet the World's Largest Green Coffee Traders.

82 Ghoshray and Mohan, Coffee Price Dynamics.

83 International Coffee Organization, Coffee Report and Outlook.

There are two ongoing upgrading trends in the coffee global value chain. The first is functional upgrading to include more processes such as roasted and soluble coffee. The second is product quality upgrading, leading to higher prices. Coffee industry experts suggest that functional upgrading may be more promising for robusta than arabica coffees.[84]

3.3.2. Applicability of the Comparable Uncontrolled Price Method

Given the differentiated nature of coffee as a commodity product, it may be useful to provide more guidance on the application of the CUP Method to the coffee industry.

When comparable uncontrolled prices are available, the CUP Method might be the most appropriate transfer pricing method for coffee transactions between related companies. As outlined in section 4.2.2 of the UN TP Manual, the CUP Method requires a high degree of product comparability relative to other comparability factors.

The C-price is readily available as daily spot, futures and options prices on the ICE virtual exchange. Reference prices on an international commodity exchange, however, may or may not be the most appropriate external comparables. Prices may vary enormously depending on origin, quality and certifications (section 3.2). In addition, the costs of doing business abroad (e.g., transportation and tariff costs) will affect external market prices.

Domestic market prices may also not be useful comparables if transactions involve different market conditions and types of coffee. Prices vary along the coffee global value chain, typically referred to as:[85]

- Farm gate price paid to producers that grow, pick and process cherries
- Factory gate price paid to processors for further processing cherries sold as green coffee beans
- FOB price paid to exporters/intermediaries selling green coffee beans on international markets
- CIF price paid by importers/intermediaries buying green beans on international markets
- Roaster price paid by roasters to importers (or producers) of green coffee, when the importer and roaster are not the same entity
- Wholesale price of roasted beans sold to wholesalers or retail distributors
- Retail price of coffee sold by retail distributors to final consumers

The application of the CUP Method to related party transactions in the coffee industry therefore depends on the availability of sufficiently detailed information on product characteristics, transaction terms and further comparability factors.

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84 D. Gorlich et al. (2020). Fostering the Development of the Coffee Global Value Chain. Kiel Working Paper No. 2070, section 4 (Policy implications). ECONSTOR.

85 W. Byrnes (2019). Boiling Starbucks' Roasting Down to the Essence of its Residual. Legal Studies Research Paper Paper No 19–49. Texas A&M School of Law.

3.4. Transfer Pricing Examples in the Coffee Industry

This section provides examples of how to address questions that may come up in transfer pricing analysis for the coffee industry. These are stylized examples focusing on certain problems that may arise in practice. In each individual case, specific functions, risks, assets and relevant intercompany transactions need to be analysed.

3.4.1. Example 1: General applicability of the Comparable Uncontrolled Price Method

Facts

Assume that Firm A, an independent enterprise, sells unbranded coffee beans to unrelated parties at $2 per pound. The coffee beans are of a similar type, quality and quantity as those sold by Firm B to its affiliate, Firm C. Assume that the controlled and uncontrolled transactions occur at about the same time, at the same stage in the global supply chain and under similar conditions. Both coffees are rated as commercial coffees or both are rated as specialty coffees with approximately the same cupping scores.

Analysis

The CUP Method may be particularly reliable method when independent enterprises sell or buy the same or similar products, under the same or similar circumstances, compared to the controlled transaction between two associated enterprises. That is, the price charged or paid by the independent enterprise may be a good external comparable for the related party transaction.

Adjustments should be made for material differences that affect the price. For example, the source of the coffee beans might command a price premium or require a discount on the open market, or there may be a difference in Incoterms (i.e., which entity assumes the CIF costs). Such information may be obtainable from commodity markets or deduced from dealer prices. If this difference does have a material effect on price, adjustments would be appropriate. If a reasonably accurate adjustment cannot be made, it might be necessary to select a less direct method, such as the Resale Price Method or the TNMM.[86]

In this case, delineation of the transaction and the comparability analysis suggest that the CUP Method is appropriate, and the transfer price should be $2 per pound.

3.4.2. Example 2: The Comparable Uncontrolled Price Method using international reference prices

Facts

Assume that TRADE CO, located in Country A, is the trading entity within the MNE GROUP. TRADE CO is responsible for buying robusta green coffee beans in bulk and selling them to related parties in the MNE GROUP.

86 See the UN TP Manual, section 4.5.1.4 for more details.

ROAST CO, located in Country C and another member of the MNE GROUP, is a coffee roaster that purchases bulk beans from TRADE CO, and roasts and packages them for sale to related and unrelated distributors throughout the European Union.

TRADE CO and ROAST CO have a related party agreement that specifies the type, quality and volume of green coffee beans that ROAST CO imports from TRADE CO. The transfer price specified in their agreement is fixed on an annual basis. It is tied to the International Coffee Organization's indicator price for mild robusta (the C-price on the ICE), which is an average of the ex-dock New York and Bremen/Hamburg market prices in United States dollars.[87] The contract specifies that the origin for the coffee beans must be Country B. Under the Incoterms in the related party contract, ROAST CO is responsible for the CIF costs. The CIF transfer price is $4 per kilogram.

The open market price for robusta coffee (the C-price on the ICE) for long-term contracts is currently $3.50 per kilogram for coffee exported from County B, which is the factory gate price.

Country C's tax authorities are concerned that the price that ROAST CO is paying for green coffee beans from TRADE CO may be too high. It commences an audit of the transfer pricing arrangements between TRADE CO and ROAST CO.

Analysis

The tax authorities, after delineation of the transaction and a comparability analysis, conclude that the long-term C-price is an acceptable comparable because the country of origin is the same (Country B) and the quality and volume of coffee beans are similar. The tax authorities propose using the CUP Method with an adjustment for the difference in the Incoterms. The authority determines that CIF costs are 20 cents per kilogram. It concludes that the arm's length transfer price should be $3.50, with an adjustment for the difference in Incoterms of 20 cents, for a total price of $3.70 per kilogram.

3.4.3. Example 3: The Comparable Uncontrolled Price Method with external comparables

Facts

TRADE CO, located in Country X, is the trading entity within the MNE GROUP responsible for buying robusta green coffee beans in bulk and selling them to related parties in the group.

ROAST CO, located in Country Y and another member of the MNE GROUP, is a coffee roaster that purchases bulk beans from TRADE CO, and roasts and packages the beans for sale to related and unrelated distributors throughout the European Union.

TRADE CO and ROAST CO have a related party agreement that specifies the type, quality and volume of green coffee beans that ROAST CO imports from TRADE CO.

87 YCHARTS, Coffee Arabica Price. Available at: https://ycharts.com/indicators/world_coffee_arabica_price. International Coffee Organization (n.d.). Daily Coffee Prices. Available at: https://www.ico.org/coffee_prices.asp.

The transfer price specified in their agreement is fixed on an annual basis and tied to the International Coffee Organization's forward market price for mild robusta, which is an average of the ex-dock New York and Bremen/Hamburg markets in United States dollars.[88] The transfer price, set in 2021 for 2021-2022, was $4 per kilogram.

In 2022, the open market price for robusta coffee (the C-price on the ICE) was $3 per kilogram. Country Y's tax authorities are concerned that the transfer price that ROAST CO is paying for green coffee beans from TRADE CO is too high. It commences an audit of the transfer pricing arrangements between the two.

Analysis

ROAST CO submits transfer pricing documentation to Country Y's tax authorities that delineates the controlled transaction and offers a comparability analysis covering the global value chain and functions, assets and risks. ROAST CO's transfer pricing economist concludes that the CUP Method is the most appropriate means to determine an arm's length price. The economist argues, however, that the appropriate CUP is not the 2022 spot price on the ICE or the C-price of $3 kilogram. Instead, the economist proposes that the prices negotiated by two independent distributors, ALPHA and BETA, which are also located in Country Y, should be used as comparable transactions. Both firms are independent roasters that have long-term contracts with coffee bean exporters of robusta green beans from Colombia. The uncontrolled transactions occur at about the same time and under similar conditions to the controlled transactions. Both firms have long-term contracts and paid more than the open market C-price in 2022: ALPHA at $3.70 per kilogram and BETA at $3.80 per kilogram.

The economist argues that these transactions are better comparables than the C-price on the ICE. The economist notes that a long-term contract with TRADE CO is necessary for two business reasons: (1) to ensure that ROAST CO's coffee roasting facilities can work at full capacity and (2) so that ROAST CO can provide its buyers with a secure source of roasted high-quality robusta coffee. The appropriate transfer price should be based on long-term contracts, not on spot prices.

Country Y's tax authority investigates the case and concludes that the C-price for robusta green coffee beans in 2022 is the most appropriate transfer price. It proposes a tax adjustment using a price of $3 per kilogram. ROAST CO disagrees with this decision, and the transfer pricing dispute eventually goes to Country Y's tax court.

The tax court judge concludes that the business reasons provided by ROAST CO for why the C-price in 2022 is not a good arm's length comparable are reasonable under the circumstances, and that the prices paid by the two uncontrolled distributors are possible comparables.

The judge considers whether any factors had a material impact that could create a difference between the transfer price and the uncontrolled prices, determining that the only material difference was the Incoterms. The controlled transactions were based

88 Ibid.

on a delivered price whereas the uncontrolled transactions were FOB factory gate prices. The judge stipulates that the difference due to the pricing arrangements was a material one, equivalent to 30 cents per kilogram.

The court therefore adjusts the uncontrolled import price for ALPHA to $4 per kilogram and for BETA to $4.10 per kilogram. It concludes that the transfer price between TRADE CO and ROAST CO is arm's length and finds in favour of the taxpayer.[89]

3.4.4. Example 4: Application of the Transactional Net Margin Method to the centralized purchasing of coffee beans

Facts

TRADECO, a wholly owned affiliate of BEV GROUP, is located in Country B. TRADECO is a centralized procurement entity within BEV GROUP, responsible for purchasing green coffee beans in bulk and selling them to related parties in BEV GROUP and independent licensees. TRADECO buys green beans on the world market but specializes in robusta green beans of top quality. Prices have risen rapidly over the past decade, but because TRADECO buys large quantities on behalf of all entities in BEV GROUP, it has been able to negotiate lower prices. TRADECO charges a 20 per cent gross mark-up on purchases sold to associated enterprises in BEV GROUP and 25 per cent on sales to unrelated buyers.

Analysis

TRADECO purchases green coffee beans at arm's length at open market prices. Because TRADECO sells the coffee beans to independent licensees at a higher price than to related parties in BEV GROUP (cost plus 25 per cent versus cost plus 20 per cent), the entity may have mispriced its sales to members of BEV GROUP. The firm, however, benefits from the additional bargaining power generated by its large volume of purchases.

Accurate delineation of the transaction would involve the determination of activities performed by the centralized purchasing hub, and whether bulk buying (pooling) discounts are common in this industry. If pooling discounts are common, the transfer pricing issue is the determination of the size of the discount and how the pooling gain should be shared. In this example, the transfer pricing issue also involves whether the bulk buying discount should be shared with related parties but not with unrelated parties.

Sections 5.9 to 5.14 of the UN TP Manual provide detailed guidance for centralized procurement entities. In this case, the functions, assets and risks incurred by TRADECO are the same for both its related party and arm's length sales. The transfer pricing professional concludes that sales to unrelated licensees are sufficiently comparable so that they can serve as an internal comparable.

89 See the UN TP Manual, section 4.2.2, on the application of the CUP Method and its requirements and adjustments.

The UN TP Manual states that a cost-based TNMM is commonly used for purchasing functions. Net cost-plus (operating profit divided by total cost) may be an appropriate profit level indicator for compensating TRADECO for its activities. The Cost Plus Method (CPM) (gross profit divided by total cost) may also be appropriate if data are available on gross mark-ups in this industry.[90]

Since data on gross mark-ups are not available, the transfer pricing economist recommends the TNMM with a profit level indicator of operating profit over total cost. The question then becomes the size of the net mark-up over costs, given that mark-ups are different for arm's length and related party sales.

The relevant issues are the value of the pooling gain, whether the addition of non-related parties over and above BEV GROUP should be added to that gain or not, and the extent to which any of the gain belongs to the purchaser (TRADECO) or must all be shared with all members of the pool or only the related party members. These fact-intensive issues may warrant further investigation. Section 5.14.2.3 of the UN TP Manual provides more details on appropriate remuneration for purchasing versus sourcing companies.

3.4.5. Example 5: Application of the Transactional Net Margin Method to coffee roasting

MFG is a coffee roasting (manufacturing) entity that is part of BEV GROUP. MFG is located in Country C, which offers a significantly lower corporate income tax rate for manufacturing enterprises. MFG is responsible for roasting all of BEV GROUP's purchases of green coffee beans. Its functions include supply chain operations such as planning, sourcing and buying inputs, including green beans, as well as coffee roasting and the distribution of roast coffee. MFG roasts and packages the beans and ships them to warehouses in countries where BEV GROUP has distribution and sales affiliates (e.g., coffee shop operators).

MFG sells roasted coffee in bulk and packaged forms to both related and unrelated coffee shop operators. It is very profitable. For the tax year under review, coffee bean sales were 300 million euros (80 per cent of sales were to associated entities in BEV GROUP). The cost of goods sold (COGS) was 60 million euros, and operating expenses (OE) were 30 million euros, for an operating profit of 210 million euros and a return on sales of 70 per cent.

Given that MFG charges the same prices for its roasted coffee products to both related and unrelated coffee shop operators, conditions appear to be met for considering sales to unrelated parties as internal comparables.

A transfer pricing expert is hired to estimate returns that should accrue to MFG on an arm's length basis from its activities as a coffee roaster, supply chain functions and other ancillary activities (e.g., packaging and distribution to coffee shops). The expert decides to unbundle the firm's activities into three different activities: coffee roasting,

90 See the UN TP Manual, section 4.5.6, for a comparison of several possible profit level indicators that could be used with the TNMM.

packaging and distribution. After performing a functional analysis, the expert concludes that no MFG activities are entrepreneurial; all are potentially benchmarkable functions.

In the absence of third-party transactions, the expert proposes using the TNMM to determine the appropriate arm's length return to MFG for each of its activities. Using local databases for comparable entities (unrelated parties in the same four-digit industry code, making adjustments for inventory, etc.) an estimate for the coffee roasting activity breaks down the average costs and profits per pound of coffee is as follows:[91] an average cost (of goods sold and operating expenses) of $8.73, an average sales price of $9.40 and a net profit before tax of 67 cents for a net return on sales of 7.1 per cent. The expert suggests a TNMM calculation of 7.1 per cent on net sales. This rate of return is significantly lower than that recorded by MFG.[92]

3.4.6. Example 6: Application of the Profit Split Method to coffee bean exports[93]

Facts

Firm A, a member of the MNE Group, is incorporated in Country A. The firm's main activity is growing and processing coffee beans.

At the farming stage, Firm A identifies, acquires and cultivates land with extremely good soil for growing coffee. Firm A has developed extensive coffee-growing know-how, including to emphasize the desirable qualities of the coffee it grows through its cultivation methods. The properties of the soil together with cultivation methods give Firm A's coffee a highly sought-after flavour. Firm A has applied for and received a designation under the TRIPS Agreement for a geographic indication that provides intellectual property rights for its coffee beans (section 3.2.4).

Firm A processes coffee cherries and converts them into green coffee beans, using a proprietary wet processing method that was developed locally, taking advantage of a local supply of clean water. These technological and locational advantages provide additional value to Firm A. Its dried cherries need very little milling, are of higher quality, provide a unique and highly desired flavour and are available more quickly than from other coffee processors. Firm A has applied for and received a Fairtrade certification trademark (section 3.2.4). Finally, Firm A bundles the green coffee beans and exports them to its parent, Firm B, at an FOB export price negotiated between Firm A and its parent.

Firm B is responsible for the downstream stages in the production process, including roasting the coffee beans and repackaging them for sale in its target markets. It has

91 Estimates are drawn from O. Wallach (2020). The Economics of Coffee in One Chart. Visual Capitalist.

92 See the UN TP Manual, section 3.5.29, for a description of a typical search process to identify comparable profits between unrelated parties.

93 This example is adapted from the tea example in annex II of chapter 2 of OECD (Organisation for Economic Co-operation and Development (2022). OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations.

extensive proprietary know-how to roast and mix various coffees to create blends with the unique tastes appreciated by customers of the MNE Group. Coffee produced by Firm B has won international acclaim for its taste and aroma.

In addition, Firm B owns and has, by its own efforts, developed its trade name and trademark, which are both unique and valuable. Branding features geographic indicators, the Fairtrade certification, and trademarks acquired by Firm A. The coffee is marketed as single origin from the region of Firm A. Firm B has carried out extensive advertising campaigns through electronic media, the Internet, trade fairs and industry magazines, resulting in the product range becoming a market leader in a number of regions. Coffee sold by MNE Group commands a premium price.

Analysis

The related party transaction is the pricing of the green coffee beans exported by Firm A to Firm B. An accurate delineation of the transaction determines that both Firm A and Firm B are making unique and valuable contributions. As a result, a one-sided method, such as the TNMM, may not be appropriate.

If comparable arm's length transactions are available, the two-sided CUP Method may be the most appropriate option. Adjustments can be made for material differences in, for example, the quality of the beans, the time to market and transportation costs. Where material adjustments cannot be made, the CUP Method is less reliable; tax authorities should consider other methods.

If there are no available quality comparables, since both related parties are making unique and valuable contributions, the most appropriate transfer pricing method may be the Profit Split Method (PSM). It requires determining a return for the routine (benchmarkable) functions performed by each party and then using an allocation key to split the remaining profits between Firm A and Firm B.

The selection of the allocation key for splitting the non-routine (non-benchmarkable) profits should reflect the relative contributions of the two parties to their respective intangible assets. For a typical situation involving a manufacturer and distributor with intangible assets, the allocation key could be based on their capitalized amortized spending on technological and marketing expenses, for example. Timing differences (multiple years for capitalization and one time for marketing expenses) should be considered.[94]

3.4.7. Example 7: Application of the Profit Split Method to soluble coffee exports

Facts

Firm A, a member of the MNE Group, is incorporated in Country A. The firm's main activity is the growing and processing of coffee beans. The facts about Firm A in this example are the same as those in the previous example, except Firm A performs an

94 See the UN TP Manual, section 4.6.4f, on how to identify split keys when applying the Profit Split Method and how to determine the profit to be split.

additional function: it manufactures soluble coffee in Country A. The soluble coffee is packaged and sold locally under its own brand name. The coffee serves a large share of the local market due to its branding and high quality.

The soluble coffee of Firm A is also exported in bulk to Firm B, a related party distributor, which packages and distributes it for sale globally. Firm B is responsible for setting up and managing the distribution network and developing the trade name and trademark recognition in the rest of the world through extensive advertising campaigns.

Analysis

The related party transaction is the pricing of soluble coffee exports from Firm A to Firm B. The accurate delineation of the transaction determines that both Firm A and Firm B are making unique and valuable contributions. As a result, one-sided methods such as the TNMM may not be appropriate.

If comparable arm's length transactions are available, the two-sided CUP Method may be the most appropriate option. Adjustments can be made for material differences in, for example, the packaging, time to market and transportation costs. Where material adjustments cannot be made, the CUP Method is less reliable; the taxpayer should consider other methods.[95]

If there are no available quality comparables, since both related parties are making unique and valuable contributions, the most appropriate transfer pricing method may be the PSM. The PSM requires determining a return for the routine (benchmarkable) functions performed by each party and then using an allocation key to split the remaining profits between Firm A and Firm B. The selection of the allocation key for splitting the non-routine (non-benchmarkable) profits should reflect the relative contributions of the two parties to their assets (e.g., technological and marketing intangibles).

95 See the UN TP Manual, section 4.2.2, on the application of the CUP Method and its requirements and adjustments.

4. Transfer Pricing in the Soybean Industry

Soybean production has important characteristics that make it a good case study for agricultural products. These include close interdependence between farming crops and its first industrialization process, a high cost-income ratio, the importance of international trade and MNEs within the industry, and high value adding activities. Arguably, many other agricultural products, such as maize, wheat and rice, share similar primary production processes. Soybeans, however, also present interesting features in terms of increased worldwide demand for soybean by-products and the wide range of countries that import or produce soybeans.

As an oilseed, soybeans can be grown in the same type of soil (warm, fertile, well-drained, sandy loam)[96] as cereals and other agricultural products, including maize, wheat, sunflowers and sorghum. Producers usually rotate different crops from year to year, for reasons related to markets, costs and sustainability. Some characteristics of soybeans described below are common in cereal production in general.

Soybeans form the basis of several products, mainly animal feed and human food. They can also be used for energy production. The types of products obtained from soy and their markets are a starting point for analysing the soybean global value chain.

4.1. Global Production and Consumption

4.1.1. Main outputs

Unprocessed whole soybeans are referred to as soybean grains or soybeans. Soybean by-products are derived from soybeans through industrial processes.

The two primary by-products of soybean grain are soybean meal (used for animal feed, usually as pellets) and oil. It is possible to simultaneously obtain 77 to 78 per cent of soybean meal and 18.5 to 19 per cent of soybean oil from every soybean grain. The largest producers of soybean grain usually also process it to obtain its by-products.[97]

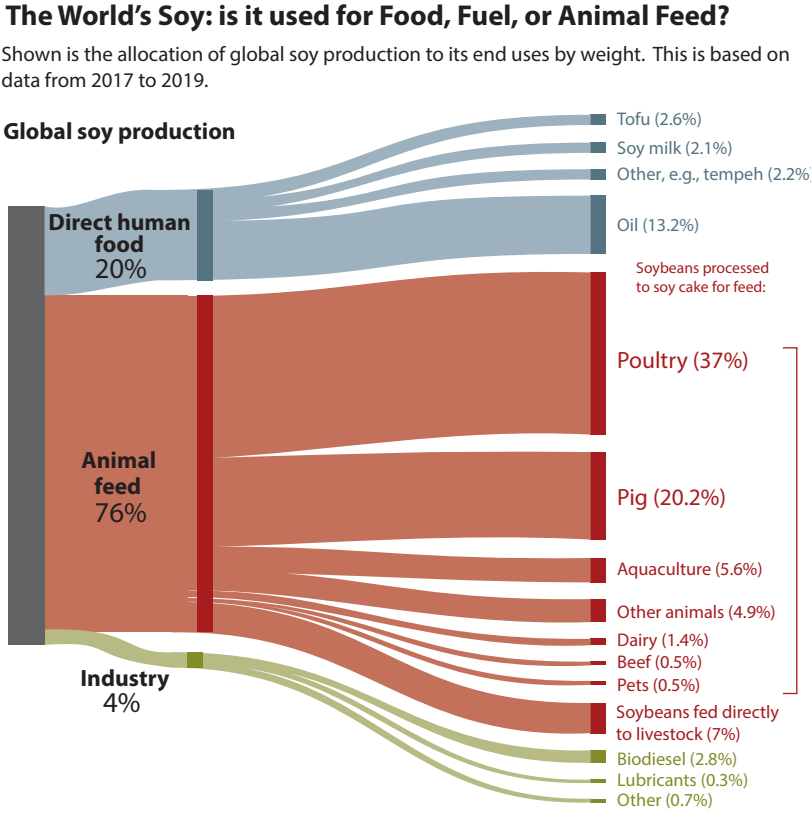
96 Britannica (n.d.). Soybean. Available at: https://www.britannica.com/plant/soybean.

97 For instance, Brazil crushed 53 million tons of soybean in 2022-2023, generating 41 million tons of meal and 10.2 million tons of oil. Of these totals, 21.5 million tons of meal and 2.45 million tons of oil were exported. Argentina, which is the world's largest exporter of soybean meal and oil, crushed 30 million tons of soybeans in 2022-2023, producing 23.4 million tons of meal, of which 21.2 million tons were exported, and 5.9 million tons of soybean oil, of which 3.85 million tons were exported. Quantities not exported are consumed within the two countries, with meal going to animal feed factories.

In the soybean industry, multiple outputs may result from using the same industrial processes in the same facilities. For instance, a processing plant may produce soybean meal, oil and chemical products.

The following sections provide a brief description of the most important products made from soybeans (figure 4). Approximately 20 per cent of global soybean production is used for human food, 76 per cent for animal feed and the remaining 4 per cent for industrial purposes (energy and other products).

Figure 4: Soybean grain destinations, percentage



Source: Food Climate Resource Network (FCRN),
University of Oxford, and USDA PSD Database. OurWorldInData.org—Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.
Source: H. Ritchie (2021). Drivers of Deforestation. Our World in Data.

Food

The 20 per cent of soybean production used to produce human food ends up in products including cooking oil, tofu and soy milk.[98]

Feed

Animal feed derived from soybeans generates one third of the protein consumed by the human population.[99] This typically takes the form of pellets (after oilseed industrialization), with a small amount comprising soybeans fed directly to livestock. The annual sales of the feed market top $400 billion globally.[100] Growth in the soybean market in recent decades is due mostly to greater demand for processed animal feed (and, to a lesser degree, for biofuel and vegetable oil). Processed soybean production rose from 88 million to 277 million tons from 1990 to 2013. From 2017 to 2019, 76 per cent of global soybean grain production went into animal feed. Soybeans are a basis for animal feed for poultry (37 per cent), pigs (20.2 per cent) and aquaculture (5.6 per cent). Some 14.3 per cent of soybean grain is used to feed dairy-producing animals, cattle for beef, household pets and other animals.[101] In the United States, 70 per cent of domestic soybean production was used for animal feed in 2013, with poultry as the largest share, followed by hogs, dairy-producing animals, beef and aquaculture.[102]

Energy

Soybeans are used to produce fuel in varying degrees across countries. In the United States, 5 per cent of the soybean crop is transformed into fuel.[103] Globally, 2.8 per cent of soybean production becomes biodiesel fuel.[104] In Brazil, the use of biodiesel began in 2006, encouraged by a federal law. Of a total national production of 10.2 million tons of soybeans in 2022-2023, approximately 4 million tons ended up as biodiesel.

Other products

Other products such as lubricants, industrial cleansers and non-toxic soy crayons account for 1 per cent of soybean production.

Even though most soy grain production is used for animal feed, the main international market for soybeans and related products is the grain market, as discussed in the next subsection.

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98 H. Ritchie and M. Roser (2021). Forests and Deforestation. Our World in Data. H. Ritchie and M. Roser (2021). Soy. Our World in Data.

99 KPM (n.d.). Feed and Feed Ingredients. KPM Analytics.

100 IFIF (n.d.). Global Feed Statistics. Available at: https://ifif.org/global-feed/statistics/.

101 Ritchie and Roser, Forests and Deforestation; Ritchie and Roser, Soy.

102 United States Department of Agriculture (2015). USDA Coexistence Fact Sheets. Soybeans.

103 Ibid.

104 Ibid.

4.1.2. Major markets for soybean grain and its by-products

The soybean grain market is one of the biggest agricultural commodity markets. According to the United States Department of Agriculture, soybean production uses 135 million hectares of land compared to 200 million hectares for corn. The value of global trade in soybean products rose to $125 billion, including $78.5 billion in grain, $17.1 billion in soybean oil and $29.4 billion in soybean meal in 2021.[105] The trade value of cereals, by comparison, was $159 billion in the same year.

The main soybean-producing countries are not necessarily the biggest consumers. Table 1 provides data on production and domestic consumption for select countries in 2022. The higher the ratio of domestic consumption to production, the more the country depends on net imports of soybeans. When the ratio is below one, the country is a net exporter.

Table 1: Soybean grain production and domestic consumption 2022, millions of tons

Country	Production	Domestic consumption	Domestic consumption/ production
Brazil	155	53	0.342
United States	116	60	0.517
Argentina	27	31.5	1.167
China	20	91	4.550
India	12	9.9	0.825
Paraguay	8.8	3	0.341
Canada	6.4	Not available	Not available

Source: United States Department of Agriculture.
Note: Domestic consumption equals production plus imports minus exports. The production figure for Argentina is an outlier due to a severe drought. Normally, production is between 45 million and 50 million tons per year.

Soybean meal (animal feed)

As noted, soybean meal used in animal feed is the main product from soybean grain. The production of animal feed from soybeans is not necessarily in line with grain production in each country, however, due to soybean imports. Table 2 presents data on production and domestic consumption for top feed producers in 2022.

105 See the Observatory of Economic Complexity (OEC) on cereals (available at: https://oec.world/en/profile/hs/cereals?redirect=true), soybean oil (available at https://oec.world/en/profile/hs/soybean-oil), soybean meal (available at: https://oec.world/en/profile/hs/soybean-meal) and soybeans (available at https://oec.world/en/profile/hs/soybeans).

Table 2: Soybean feed production and domestic consumption, 2022, millions of tons

Country	Production	Domestic consumption	Domestic consumption/ production
China	72.0	71.9	0.999
United States	47.5	35.6	0.749
Brazil	41.2	20.0	0.485
Argentina	24.5	3.5	0.143
India	7.9	6.7	0.848
European Union	11.5	27.0	2.348
Mexico	5.1	6.9	1.353

Source: United States Department of Agriculture.
Note: Domestic consumption equals production plus imports minus exports.

Oil

The production of soybean oil is also not necessarily closely tied to a country's grain production. Table 3 provides data on production and domestic consumption for top oil producers in 2022.

Table 3: Soybean oil production and domestic consumption, 2022, millions of tons

Country	Production	Domestic consumption	Domestic consumption/ production
Brazil	10.2	7.9	0.775
United States	11.8	11.8	1.000
Argentina	6.2	2.3	0.371
China	15.7	16.3	1.038
India	1.7	4.9	2.882
European Union	1.8	2.2	1.222
Mexico	1.7	1.2	0.706

Source: United States Department of Agriculture.
Note: Domestic consumption equals production plus imports minus exports.

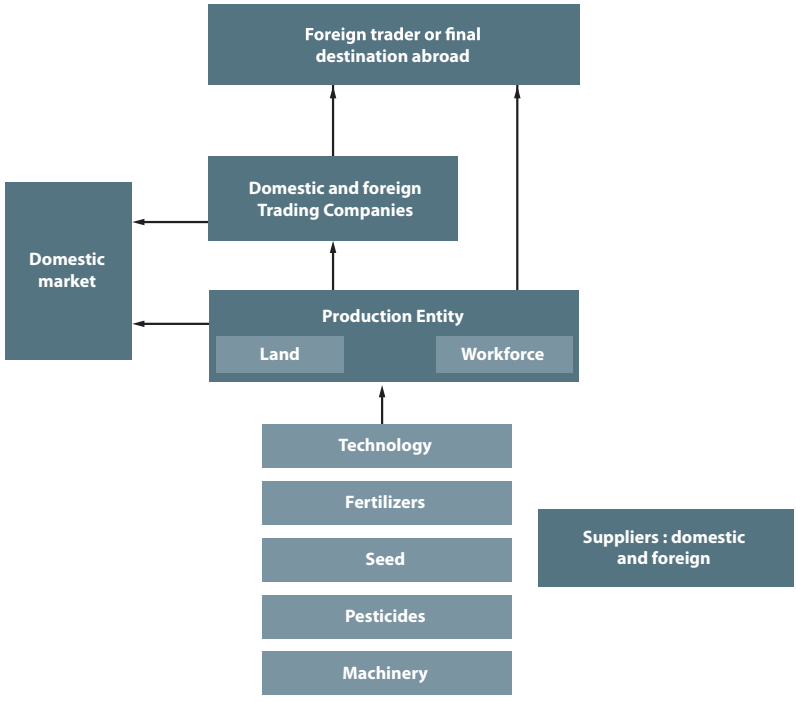
4.2. The Global Value Chain of the Soybean Industry

In addition to agricultural land and the local labour supply, soybean grain production relies on seeds, fertilizers and pesticides as well as agricultural machinery to improve the volume and quality of production. The technology used in planting and raising soybean crops is widely known. The production structure varies from country to country, with some countries dominated by large producers and others having production spread among small producers.

In general, a significant share of soybean production in developing countries is exported. Some countries, such as Argentina and Brazil, are also animal protein producers and therefore use part of their soybean production as feed in their poultry, pig and bovine industries.

When an export company is a related party to an import company, transfer pricing issues arise. Figure 5 highlights key players within the soybean supply chain, starting with purchases of raw materials and other inputs (e.g., seeds, pesticides) from upstream suppliers, followed by soybean production and downstream sales by domestic and foreign traders. Other aspects, such as financing, infrastructure (transportation) and the exchange rate, also affect the final price of soybean grain.

Figure 5: Overview of soybean grain production



The history of the soybean grain business is one of vertical integration in major markets.[106] Big firms have evolved from integrating upstream. Once firms dominated sourcing and profit margins were still low, they vertically integrated downstream into ingredients. Some companies are vertically integrated and achieve high levels of profitability, while others have struggled in turning vertical integration into high levels of profitability. Even with market power in terms of sourcing, vertical integration does not always translate into power and pricing downstream. Overall, based on industry characteristics, transfer pricing should consider the competitive nature of the sector. It may reliably draw on reference pricing from commodity exchange markets and survey data.

This section highlights relevant functions along the global value chain for the soybean industry, namely: R&D and variety rights, soybean cultivation, storage and trading, commoditization and processing.

4.2.1. Research and development and variety rights

Research in the soybean industry includes, most importantly, explorations of new, improved seed varieties. The development of robust varieties can, for example, reduce weather risks in production and/or lower production costs. Researching and breeding new crops and varieties opens scope to enter new markets and strengthen existing market positions. R&D activities generally bear some development and product-updating risks (e.g., non-compatibility for further developed seed technology).[107]

Variety rights are a key success factor within the soybean industry. The soybean yield has remained stagnant, especially where conventional breeding technologies are used. Researchers and multinationals alike are looking for novel technologies to improve soybean breeding and develop new varieties. Examples include biotech-based approaches to modify plant characteristics such as: molecular design breeding techniques, genome editing and transformation technology, marker-assisted and genomics-selection breeding, machine learning and bioinformatics technology.

Some regions, such as sub-Saharan Africa, have their own research institutes and private initiatives to develop new varieties,[108] including to cope with different climates. Almost all soybean farms in the United States have planted genetically engineered seed from 2006 onward.[109] The production cost per acre increased but so did the yield. To develop new varieties, MNEs make massive investments in R&D as a critical success factor.

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106 United States Soybean Export Council (2011). How the Global Oilseed and Grain Trade Works.

107 X. Fend, D. Yu and M. K. Bhattacharyya (2022). Editorial: Novel Technologies for Soybean Improvement. Technical Advances in Plant Science 13.

108 D. M. Khojely et al. (2018). History, Current Status, and Prospects of Soybean Production and Research in sub-Saharan Africa. The Crop Journal 6(3).

109 K. Vaiknoras (2023). U.S. Soybean Production Expands Since 2002 as Farmers Adopt New Practices, Technologies. United States Department of Agriculture.

The development stages can be described as follows:

- R&D (breeding): Development of new seed varieties with specific characteristics to suit customer needs and remain competitive in the market
- Production of basic seeds for further multiplication: This may include propagation and testing. Activities are often simple in nature
- Production of certified seeds: Multiplication of basic seeds to eventually arrive at marketable certified seeds. This is typically done through third-party farmers[110]
- Registration: At the end of the development process, a new seed variety is generally submitted to local authorities, which decide on the approval of the seed for agricultural use. After successful approval, one entity is the sole owner of the seed varieties. It correspondingly also bears the risk of non-approval. Developed varieties are registered with the authorities in countries where they are grown or marketed, which entails plant variety protection and thus the right to cultivate these varieties
- Distribution of certified seeds: Marketable seeds are sent to the final customers
- Customer service: Advice related to the seeds and promotion of client relationships

4.2.2. Soybean cultivation

Soybean production involves a series of inputs in addition to land for planting. Inputs include labour, agricultural machinery (planters, harvesters, sprinkler machines, and, in some cases, airplanes), technology, seeds, pesticides and fertilizer. Excessive rain is a risk inherent in planting soybeans as it can damage the crop, especially during the harvest season. Irrigation techniques can make up for a lack of rain but excessive rain cannot be managed as it is not feasible to grow soybeans in sheds or greenhouses.

Soybean producers often use technologies with an environmental impact due to the toxicity of some pesticides. Pesticides can also affect the quality of the soybean produced. Soybeans grow better in certain soils better adapted to the root structure of the crop, leading to a higher level of natural fertility. Land can be adapted to soybean farming with the use of technology but doing so increases the cost of production.

Activities in this stage of the global value chain involve transactions between related and unrelated parties and sometimes involve cross-border transactions. For example, seeds and other inputs may be purchased from related parties situated in another country.

110 "Farmer" means the person who owns (or has some form of right over) and exploits a piece of land. In this sense, a farmer is a producer. "Producer" means more broadly the person, group of persons, company, or joint venture that exploits the land, regardless of the legal title to exploit it (e.g., rent, co-ownership, capital contribution, etc.). Since the meaning of "producer" is more general than "farmer", the former is used to avoid confusion.

Land tenure and configuration vary across soybean producing countries. Some countries are dominated by a small number of large-scale producers owning large land areas, other countries are comprised of a larger number of producers owning smaller land units.[111]

4.2.3. Storage and trading

Grain storage

Once soybean grains are produced and processed, they are generally stored domestically. The storage process often requires some kind of specialization as well as access to various technologies, such as to maintain the appropriate humidity in storage silos and keep the grain safe from fungi and pests.

Grain storage is usually carried out by the producer or small cooperatives. Some domestic traders own warehousing facilities, storing both their own and third-party grains. The producer's right to the grain in this case would be safeguarded through warehousing receipts or a warranty. When the producer or an intermediate domestic trader sells the product to the exporter, the goods leave the warehouse and are transported directly to the port from which the grain will be shipped.

The risk of storage can be borne by the producer of the grain or the storage provider.

Trading

Once soybean grains are produced, processed and safely stored, they are traded either domestically or exported.

For trading activities, domestic traders play a crucial role as they constitute a significant part of the trading chain. Exporting traders either interact with domestic traders or with large producers and cooperatives. The larger the exporting trader, the higher the chance that the trader will buy directly from large producers and cooperatives. In some countries, purchase agents commonly act on behalf of an export company to purchase crops from small and medium-sized producers during the harvest season.

When exporting the grain, products are often physically shipped directly to the end customers rather than to an intermediate buyer. In other words, the invoice and physical flow may differ. Drop shipments to end customers are not per se evidence of transfer mispricing or fraudulent behaviour. Transfer pricing issues are more likely to arise at the trading stage, since production, processing and storage do not usually involve cross-border trade.

The selling of soybean grain is closely related to downstream activities and by-products. This means that most soybean grain is acquired by oil and soybean meal producers. This transaction may take place on the domestic or international market and between related or unrelated parties.

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111 L. F. Samper, D. Giovannucci and L. M. Vieira (2017). The Powerful Role of Intangibles in the Coffee Value Chain. Economic Research Working Paper No. 39. World Intellectual Property.

Individual countries have different specializations within the soybean industry focusing on the grain itself or the by-products. The level of development of the industry in each country reflects the amount of value added to exports by processing the grain before exporting.

Optimal factory capacity is key to getting the highest margin for companies processing soybean by-products. Procurement functions have to manage a high level of risk to ensure optimal capacity.

4.2.4. Commoditization and pricing

In soybean production, soybean grain and its by-products are usually sold as commodities. Commoditization is the standardization of a product where it does not have substantial differences in quality. "Each type of commodity has a standardized content that allows them to be equally perceived by buyers and, hence, freely circulate on the markets. In the absence (or minimized influence) of other features, the decisive role to purchase a commodity is dictated by price considerations."[112]

Differences among products may still be relevant for commoditized products. For instance, quality issues may arise when comparing soybeans from one region with another. It is also possible to have differences in the trading conditions from one country to another, due to, for example, export bans, regulatory restrictions, etc. These circumstances can affect prices. The range of differentiation and thus variations in the price of commodities, including soybeans, is much lower than for other products.

Commodities have several defining characteristics. First, mass production is a key element. Second, standardization means that buyers may obtain an equivalent product on international exchange markets (section 2.6). Third, an exporter must have access to a large storage capacity to manage purchasing and selling bottlenecks; as a result, the exporter typically performs inventory functions. Shipping and insurance activities are directly related to export conditions, making Incoterms outlining the responsibilities of exporters and importers crucial at this stage. In several countries, soybeans and soybean by-products are traded under FOB conditions, so the exporter does not bear risks beyond the shipping line (water's edge). Another important element is that certain cereals and oilseeds are available in temperate zones in both hemispheres, allowing market players to buy and sell goods throughout the year.

4.2.5. Processing

Processing soybeans involves technology-related value-adding functions. The production of animal feed, soybean oil, soymeal, and other by-products requires expertise in extrusion and grinding processes, as well as in the preservation of raw material. Other functions related to processing are certification for quality and food safety agencies, environmental regulations, labour issues, etc.

112 D. Brodskiy (2019). Transfer Pricing and Value Creation in the Commodities Trade Sector. In R. Petruzzi and R. Tavares, eds., Transfer Pricing and Value Creation. Vienna: Linde Verlag.

4.3. Implications for Transfer Pricing Analysis

When comparable uncontrolled prices are available, the CUP Method is the most appropriate transfer pricing method for transactions between related companies. As outlined in section 4.2.2 of the UN TP Manual, the CUP Method requires a high degree of product comparability and other comparability factors. In the soybean industry, which involves a commodity, certainty on the date of the transaction (quotation period) is needed.

It is critical to identify reliable comparables. In some countries in Latin America, such as Argentina, Brazil and Uruguay, soybean grain prices usually make indirect reference to the Chicago Board of Trade (CBOT). For many products, including soybeans, it is the world's reference market.

Domestic market prices are typically not useful comparables as these transactions take place under different conditions and with other use cases for traded goods. Further, producers, inland traders and exporters usually take CBOT prices as their reference point. Exchange markets, including in Rosario, São Paulo and Buenos Aires, publish their quoted prices or indexes with reference to the CBOT or other international commodity exchanges. In Argentina, various sources are used to value grain and oilseed export transactions. When setting the price of soybeans, Brazilian producers have the CBOT as one component of the calculation — although the CBOT price is not always what causes the greatest fluctuations in prices in the internal market. The other two components are the exchange rate and the premium at national ports of shipment.

In some cases in Argentina, without a price or index for valuing operations as FOB, independent operators choose to use the official price published by the Secretariat of Agriculture of the Federal Government. Prices published by the Grain Exchanges of Rosario, Buenos Aires or Bahía Blanca are also used. Not all these prices actually reflect international or export prices, however. In the case of Rosario, the most used port in Argentina, prices collected for publication are those of the domestic market. This may lead to making necessary adjustments to use these prices as a transfer price for grain export transactions.

Independent parties commonly settle contracts by looking at prices published by government agencies or business chambers. This may offer an opportunity to find comparable prices. For example, the Buenos Aires Grain Exchange publishes a useful index (box 2).

4.4. Transfer Pricing Examples in the Soybean Industry

This section provides examples that may come up in transfer pricing analysis for the soybean industry. These stylized examples focus on certain problems that may arise in practice. In individual cases, specific functions, risks, assets and relevant intercompany transactions should be analysed.

Box 2: Publication of indexes by the Buenos Aires Grain Exchange

Since 2016, the Buenos Aires Grain Exchange *(Bolsa de Cereales de Buenos Aires)* has published an index containing prices of the main agricultural products based on information received from its members (inland exporting companies and international brokers). Many exporting companies are local subsidiaries of large MNEs engaged in commodity trade. The Argentinian Tax Administration has cooperated with the exchange to refine and improve price accuracy.

The index is issued daily, whenever relevant quotations are available. Values correspond to the main agricultural products destined for export, both for the current and following months. The price does not necessarily mean that selling transactions take place but can also be based on the local export market as perceived by the reporting trader. Average quotes are calculated to equalize the weight of companies and brokers regardless of the amount of data they report, since brokers always transact with unrelated parties.

4.4.1. Example 1: Application of the Transactional Net Margin Method to soybean harvesting

Facts

A local entity is harvesting soybean grain and is classified as a routine entity as it does not own any unique and valuable intangibles or bear any economically significant risks. The taxpayer performs a detailed transfer pricing analysis that results in selecting the TNMM as the most appropriate method to test the harvesting activities. The local entity is chosen as the tested party. The selected profit level indicator is the mark-up on total costs. As no internal comparables are available, the taxpayer wants to use a commercial database to determine the mark-up on total costs and is wondering which industry code to consider.

Analysis

The UN TP Manual provides guidance on the identification of external comparables. "A key resource […] is that of commercial databases […]. These databases have been developed by various organizations which compile accounts filed by companies with the relevant administrative bodies and present them in an electronic format suitable for searches and statistical analysis. […] Criteria commonly used for initial screening include industry codes, scale or sales volume, ownership and related/associated enterprises, availability of financial data or certain financial ratios."[113]

The Manual mentions that a common criterion for screening is the industry code. Two standard-setters for industry codes are the Standard Industrial Classification (SIC) codes and the Statistical Classification of Economic Activities in the European Community (NACE) codes. SIC codes prevail in the United States. NACE is used in

113 See the UN TP Manual, section 3.5.2.9ff.

the European Union[114] and is based on a United Nations classification system, the International Standard Industrial Classification of All Economic Activities (ISIC). While a Standard International Trade Classification (SITC) code provides more granularity on a product level, transfer pricing analysis focuses more on functional than product comparability. Therefore, SITC codes are hardly used for benchmarking and are not discussed in more detail.

Database providers use different industry codes. As the industry code influences the search process, its correct selection and documentation are crucial. Under the SIC classification system, the soybean industry is listed as SIC 0116, "agricultural production — crop — soybean". The four-digit code is part of the three-digit SIC 011, "cash grains". Others listed under cash grains on a four-digit level are wheat (0111), rice (0112), corn (0115) and cash grains not otherwise classified (0119). The NACE system is less detailed but has a rather wide cluster named "growing of cereals (except rice), leguminous crops and oil seeds" (#01.11). If the primary product is soybean oil, NACE codes in group 10.4 may be more appropriate. Starch and grain mill products are covered under NACE #10.6.

Soybean is either part of a group of seeds (NACE) or a disjunct category (SIC). The 011 SIC does not map the 01.11 NACE entirely, as, for instance, rice is included in the SIC 011 but not the NACE 01.11.

Determining the appropriate industry code requires considering whether the business model for soybeans matches other mentioned seeds or crops. Other SIC or NACE codes that include the production of nuts, fruits and sugarcane may even be relevant, depending on industry specifics. As adding an industry code to the initial search strategy widens the set of potential comparables, one common approach is to work with more industry codes and refine potentially comparable firms through other broad screening criteria and a manual screening of their functional profiles.

4.4.2. Example 2: Application of the Transactional Net Margin Method to soybean distribution

Facts

Company A is resident in Country A where it is selling soybeans to third-party customers. It sources soybeans without significant risk and without the use of unique and valuable intangibles. The customers of Company A use the soybeans for industrial use, for further processing as animal feed and for food production.

Company A conducts a detailed transfer pricing analysis that results in selecting the TNMM as the most appropriate method to analyse the arm's length profit for its distribution function. Company A is selected as the tested party. The taxpayer wants to use a commercial database to determine the arm's length mark-up on revenue and wonders which industry code to consider.

114 The title in French is *Nomenclature statistique des activités économiques dans la Communauté européenne*.

Analysis

A first step is to classify the activity as wholesale. This yields the four-digit SIC code 5153, "grain and field beans". It is described as: "establishments primarily engaged in buying and/or marketing grain (such as corn, wheat, oats, barley, and unpolished rice); dry beans; soybeans, and other inedible beans. Country grain elevators primarily engaged in buying or receiving grain from producers are included, as well as terminal elevators and other merchants marketing grain." The others listed under the three-digit SIC 515 are livestock and others.

The NACE system is less detailed and does not mention soybeans explicitly. The closest NACE code seems to be 46.21, which includes wholesale activities for grains and seeds, oleaginous fruits, unmanufactured tobacco, animal feeds and agricultural raw material not elsewhere considered.

Under both SIC and NACE, other categories might be considered related to the sale of other agricultural products. Selling other vegetables and fruits such as pineapples, strawberries, flowers and potatoes, however, seems to differ in terms of product perishability and market structure. As another example, selling livestock and selling beans seem to differ in terms of storage and customer groups. Each case calls for a detailed assessment of the functions assumed by the tested party and the potential comparables, including market characteristics.

A further problem in identifying comparable entities selling soybeans or other suitable agricultural products is that unrelated wholesalers often also sell land, machines, fertilizers, promotion materials, lubricants and other items needed by their customers in the agriculture industry. Moreover, segregated financials are seldom available. This is especially the case if the search focuses on seeds/oilseeds and does not consider fruits and vegetables. To cross-check the screening of comparable entities, other ratios such as return on investment and inventory levels might be considered.

4.4.3. Example 3: Application of the Transactional Net Margin Method to soybean production using year-end adjustments

Facts

Company A is resident in Country A and produces soybean grain. Based on a detailed transfer pricing analysis, Company A is classified as a routine entity, as it does not own valuable and unique intangibles, works under the direction of the parent company and does not assume significant economic risks. Company A sells the soybeans to related parties in Country B. The TNMM is identified as the most appropriate method to determine an arm's length remuneration for Company A with net cost plus as the profit level indicator. The targeted markup based on actual cost plus for 2022 is 5 per cent. The markup was determined based on a benchmarking study, which showed an interquartile range of 3 to 6 per cent as an arm's length mark-up over total actual cost.

Due to an insect infestation in 2022 that affected the entire region in which Company A is located, it spent much more on pesticides than in earlier years. As a result, the

actual mark-up over actual costs was 2 per cent. The parties agreed within the contract on a year-end adjustment ensuring a margin within the target range of a 3 to 6 per cent mark-up on actual cost. If the mark-up is too low, a one-time adjustment payment will be carried out.

Analysis

Agricultural production, soybean production in particular, is affected by a host of external factors, not all of which are clearly identifiable or predictable. Prominent examples are the weather (including extreme weather events) and the effects of long-term changes in the climate. Regional insect or fungal infestations can severely affect soybean production. Other issues comprise changes in agricultural or environmental policies or shifts in global market conditions.

These factors affect the success and profitability of soybean production. In line with the risk profile of company A, this should not affect the profitability of company A. Further, third parties would ensure that an arm's length margin is reached in line with the risk profile of the entity. As such, they would agree to an adjustment mechanism that guarantees the entity a minimum remuneration. So that remuneration is not excessive, a third-party production entity would likely request an adjustment mechanism for profits above the maximum remuneration.

Against that background, it is reasonable to assume that third parties would agree on year-end adjustments so that the actual margin falls within an arm's length range. Third parties would require symmetry for both upward and downward adjustments. In their agreement, they would include the exact mechanism to adjust the margin.

To the extent that this is considered in the case at hand within the intragroup agreement, an appropriate year-end adjustment would comply with the arm's length principle.

4.4.4. Example 4: Contracts and changing the pricing date for soybean exports

Facts

SBCo company, resident in Country A, purchases soybean grain in the domestic market through a future contract correlated with the Chicago Board of Trade. SBCo resells the soybean grains to its subsidiary, SB2Co, which is resident in Country B, a low-tax jurisdiction. SB2Co sells the grains bought from SBCo to unrelated third parties in Country B.

The sales contract between SBCo and SB2Co was agreed on 1 September in year 1. The contract price is the future price for 15 March of year 2, because the cargo is expected to be shipped then. At the time of delivery and invoicing on 15 March, however, it is determined that the price for tax reasons should be based on the future price for 10 March of year 2, which is lower than the 15 March future price. The price is adjusted retroactively to the 10 March price.

SBCo also engages in currency hedging related to this transaction, incurring related costs. SB2Co operates in dollars in the resident jurisdiction and does not engage in currency hedging. The delivery contract is CIF.

SB2Co receives the goods in Country B through a flexible and endorsable maritime transport contract.[115] As the invoice was adjusted after the shipment, how should tax authorities from Country A address this situation in terms of transfer pricing?

Analysis

The change of the purchase date for soybeans based on a purportedly ideal price and diverging from the date stipulated in the contract and the contractual variances presented may give rise to inquiries concerning compliance with transfer pricing regulations.

In this regard, tax authorities from Country A, when accurately delineating the actual transaction, may question the modification of the initially agreed date and, if necessary, perform adjustments to the transaction prices between the related parties. The tax authorities should weigh the specific facts and circumstances of the transaction, considering the change in the purchase date and whether it aligns with what unrelated parties would agree on.

The determination of appropriate transfer pricing should take into account the CIF delivery terms and the flexible and endorsable maritime transport contract. Additionally, the currency hedging costs incurred by SBCo with an independent party should be factored into the usual costs assumed by the exporter. If not, the tax authorities must assess whether these costs are reasonable and consistent with what unrelated parties would typically bear under similar circumstances.

SBCo should be required to provide evidence demonstrating the similarity between the contractual terms of the maritime transport and the comparable CIF contract, particularly regarding responsibilities and obligations related to the costs and risks associated with the goods. It should also show that the prevailing factors for adopting currency hedging are necessary in the dollar-denominated operation of the comparable transaction.

Tax authorities from Country A should evaluate the pricing in relation to market conditions prevailing on 10 March, the point deemed as offering the ideal price for the commodity.[116] SBCo should demonstrate the alignment of this benchmark with the arm's length principle. If the taxpayer does not provide reliable evidence on the pricing date, tax authorities from Country A may consider the pricing date for the commodity transaction to be the date of shipment as evidenced by the bill of lading.[117]

Additionally, the CIF condition and the flexible and endorsable maritime transport contract should be considered when determining appropriate transfer pricing. The costs and risks associated with the transportation of goods should be evaluated in light of those that would be consistent with what unrelated parties would agree upon,

115 The goods might be physically delivered to the final destination.

116 The Sixth Method was selected as the most appropriate. For more information, see the UN TP Manual, section 4.7ff.

117 OECD, OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, para. 2.22.

such as the currency hedging costs incurred by SBCo. Risk allocation should be based on control and financial capacity.

4.4.5. Example 5: Transfer pricing of soybeans involving environmental risk

Facts

Assume Company A, resident in Country A, is engaged in farming activities and belongs to a multinational group that sold its crop to related parties abroad. Company A was using pesticides that polluted the soil. This was seen as a breach of local environmental standards, and a fine of CUR 500,000 was levied by the environmental authority in Country A. The fine was paid by the local Company A and booked as a business expense, which reduced Company A's taxable income. A local tax inspector is analysing whether it is appropriate for Company A to treat the fine as a deductible business expense.

Analysis

The basis for the arm's length analysis in the forementioned example is the accurately delineated transaction, including the functions performed, assets employed and risks assumed. These should be determined during the fact finding.[118]

In the example, the assumption of risks is of special importance. The risk should be allocated to the entity that controls the risks and has the financial capability to bear it. The UN TP Manual states that the "[…] information relating to the exercise of control over risk and the financial capacity to assume risk are particularly important."[119] The capabilities to make decisions on assuming, ceasing or declining a risk-bearing opportunity, and on whether and how to respond to risks associated with the opportunity, together with the actual performance of that decision-making function, should be considered.[120]

Against that background, a more detailed fact-finding should take place during a tax audit, considering, inter alia:

- Which entity decided on the use of pesticides (e.g., quantity, timing, etc.)?
- Was Company A able to reject the use of the pesticide or was the use based on a group directive?
- Did Company A select the pesticide and source it locally or was that done centrally?
- Does the MNE have a global policy on the use of pesticides?
- Which entity is responsible for environmental standards and monitors them?

118 See the UN TP Manual, section 3.3.1.1.

119 See the UN TP Manual, section 3.4.4.31.

120 See the UN TP Manual, section 3.4.4.33.

- Which entity is responsible for overall risk mitigation and quality assurance?
- Was any legal team involved to handle the claim? If yes, which entity managed the legal process?
- The general tax deductibility of the fine/penalty under domestic tax legislation has to be considered

Upon gathering background information on the facts and circumstances, the auditor can analyse which entity was making key decisions on using the pesticide and controlling the risks. Findings can then inform a decision on which entity should bear the risks and costs associated with the fine.

4.4.6. Example 6: Variety rights and contract development activities in the soybean industry

Facts

Variety rights are a key success factor for soybeans and many other crops. Multinationals develop and protect new varieties and subsequent seeds that are licensed or sold within the group or to farmers. An additional relevant intragroup transaction is the development of new varieties under contract development agreement steered by another entity.

This is the background for the following simplified example. A multinational group develops and registers new soybean varieties. The budget approvals for R&D and core decisions are taken by MNE headquarters. It is also registering the variety rights for several markets. Breeding and research activities are performed by a related party overseas under a contract development agreement. Remuneration is based on actual cost plus an arm's length mark-up of 8 per cent. The new varieties are licensed to related party farmers who in turn sell soybeans to external parties.

Analysis

In the case at hand, two related party transactions need to be analysed: the contract development activities and the licensing to related party farmers.

Contract development activities: Assuming that the headquarters provides detailed instruction and guidance to the development entity, including for day-to-day decision-making, and bears the associated risks, a service remuneration is in line with the arm's length principle for contract development, even though this cannot be classified as a low value-adding service.[121] The development entity is classified as low risk. A typical remuneration for services is based on actual costs incurred plus a profit element.[122] The headquarters would be seen as the owner of the developed varieties and entitled to any profit in relation to the development activities.

121 See the UN TP Manual, section 5.5.2.5.

122 See the UN TP Manual, section 5.4.5.3.

Licensing to farmers: Licensing the variety rights to related farmers depends on the classification of the local farmer. Where the related party farming activity does not have any unique and valuable intangibles and does not assume any economically significant risks, the license payment should be structured to grant the local entity a profit in line with the functions carried out. This might result in a license payment below the rates seen between unrelated parties or even a negative license. In such situations, the CUP Method would be less appropriate. If, however, the local producer makes decisions on, inter alia, crops, production volume, customer selection and pricing, the entity might be accurately delineated as a risk taker and local entrepreneur. In that case, a license payment based on the application of the CUP Method would likely be the most appropriate option.

5. Appendices

Appendix 1: Global Production Values in the Agriculture Industry

The following tables show the top 10 agricultural products and the ranking for coffee for 2000 and 2021.[123]

Table A.1.1: Production value (2020)

Rank	Product	Thousands of United States dollars	Percentage
1	Meat (pig, cattle, chicken)	408,405,984	26.5
2	Rice	128,552,439	8.3
3	Milk of cattle	120,247,781	7.8
4	Corn	89,110,275	5.8
5	Wheat	89,067,741	5.8
6	Potatoes	38,405,635	2.5
7	Eggs	37,900,072	2.5
8	Grapes	34,154,911	2.2
9	Tomatoes	33,070,317	2.1
10	Soybeans	29,715,909	1.9
…			
43	Coffee, green	5,794,798	0.4
…			
Total	1,541,513,449	100.0	

Source: Based on data from the Food and Agriculture Organization of the United Nations (FAO), available at: https://www.fao.org/faostat/en/#data/QV.

123 For illustration, the meat of cattle, pigs and chickens was combined.

Table A.1.2: Production value (2021)

Rank	Product	Thousands of United States dollars	Percentage
1	Meat (pig, cattle, chicken)	768,623,143	18.6
2	Milk of cattle	307,886,655	7.5
3	Rice	310,472,597	7.5
4	Corn	242,932,801	5.9
5	Wheat	182,567,386	4.4
6	Soybeans	142,159,521	3.4
7	Eggs	107,456,392	2.6
8	Potatoes	94,131,198	2.3
9	Tomatoes	90,049,802	2.2
10	Sugarcane	83,457,848	2.0
…			
35	Coffee, green	20,723,831	0.5
…			
Total	4,125,746,541	100	

Source: Based on FAO data, available at: https://www.fao.org/faostat/en/#data/QV.

Appendix 2: Global Value Chain Participation Rates in the Agriculture Industry

The global value chain participation rate can be interpreted as the value added to the entire production process of a certain product. In other words, if a country's gross exports are 100 and its participation rate is 30 per cent, then 30/100 is the country's own value contribution. A 5 per cent rate would imply that the country added only 5 per cent value to its exported products.

Table A.2.1: Global value chain participation, percentage

Region	Participation rate, agriculture	Participation rate food and beverages
South Asia	27	28
Sub-Saharan Africa	34	33
Europe and Central Asia	40	37
Middle East and North Africa	28	28
Latin America and the Caribbean	32	29
East Asia and the Pacific	29	32
North America	29	31

Source: Calculations based on United Nations Comtrade data, available at: https://comtradeplus.un.org/.

Appendix 3: Transfer Pricing Questions

Appendix 3 provides potential questions for a tax administration to ask during a transfer pricing analysis of controlled transactions within a multinational group in the agricultural products industry. The questions may be used in a functions, assets and risks analysis of the controlled entity and its related-party transactions. The questions are designed to ascertain facts and circumstances pertinent to the controlled transactions, asking for information that has not already been provided by the taxpayer (e.g., through transfer pricing schedules or documentation). The focus is on the main steps of the value chain: R&D, processing, supply chain management, and sales and marketing.

Some questions are quite detailed, and should be tailored to specific transactions, taxpayers and tax audits. A number of questions may be more appropriately answered by a local subsidiary in the MNE group; others may only be answered by the parent firm, depending on which entity or entities are being analysed, and whether the tax administration has jurisdiction to obtain the information. The entity under review may not be able to provide information relating to other entities, either because it does not have it or is not authorized to provide it. In that case, other avenues (e.g., requests for an exchange of information under a treaty) may be available to collect the relevant information.

Assessing the relevance of, and responses to, each question listed below calls for considering which entity or entities in the MNE group under review are involved in a particular function/transaction/activity and in what capacity, and which entity bears the costs and assumes the risks. While the term "entity" is used, information from multiple entities in the MNE group may be relevant for the controlled entity under review. The questions should be directed to an entity under review when it performs a particular function. When questions are asked in a "how" or "what" format, they also seek information on whether the entity under review undertakes that function.

Not all questions are suitable for all entities, cases and situations. In particular, the questions cannot meet the needs and fit the specifics of each country (including, importantly, the particular requirements of domestic transfer pricing, income tax and administrative tax law and regulations). Instead, the purpose is to provide options and considerations (and perhaps inspiration) for tax administrations, especially in developing countries. They can then tailor their questions to their priorities, requirements and constraints.

More information on transfer pricing risk assessments and audits can be found in Transfer Pricing Compliance Assurance: An End-to-End Toolkit.[123]

124 United Nations (2025). Transfer Pricing Compliance—An End-to-End Toolkit. New York, NY: United Nations.

1. Research and development

1. Please outline how relevant seed/crop patent protection is within your industry.
2. Please describe the R&D process with regard to seed varieties within your group.
3. Please describe the budget process for R&D activities, including budget approvals.
4. Please provide a list of protected varieties developed and/or used by the group.
5. Which legal entity is responsible for the registration of seed varieties?
6. Which legal entity decides on the protection of varieties and claim management?
7. How are the results of R&D disseminated among members of the MNE?
8. How far do you work together with customers to develop formulas/products? Please explain.

2. Processing/production including sourcing

2.1 Processing

1. Please give an overview of the different processing steps end-to-end.
2. Do you differentiate between primary and secondary processing? Primary processing could be, for instance, crushing oilseeds, while the secondary phase involves the production of final products.
3. Please explain the growing and harvesting process, including involved legal entities.
4. Please explain the dry processing process, including involved legal entities.
5. Please explain the milling process, including cleaning, sorting and grading, and involved legal entities.
6. Please explain further process steps such as grinding and roasting, including involved legal entities.
7. Please describe the production of basic seed for further multiplication. This may include propagation and testing.
8. Please describe the production process of certified seeds, or the multiplication of basic seeds to arrive at marketable certified seeds.
9. Please explain the quality control and safety process, including involved legal entities.
10. Which entity makes decisions on investment in process equipment/machinery/plants?

2.2 Intangibles

11. Do you need processing certificates/licenses/plant variety rights or similar for the processing phase? How are they obtained, and which legal entities are involved in what capacity?
12. What further patents and/or know-how are involved in the processing process? Who develops them?
13. Which stages of production involve intangibles/know-how? Who develops or acquires them?
14. Do you use proprietary technologies/software within the production process? Who develops or acquires them?
15. Is specific plant software used? Is it tailor-made or off-the-shelf software?

2.3 Steering (see the overlap with questions on general supply chain management below)

16. Which legal entity decides on production volumes/production planning?
17. Which entity is responsible for production forecasting?
18. Which entity steers the overall production process, including the selection of processing sites?
19. Is global production supervision in place, and if so, at which entity?

2.4 Sourcing

20. Please explain how complex and difficult the sourcing process is (merely administrative or strategic/critical)?
21. What raw products/intermediate products/supplies/inputs are important for processing?
22. How is the sourcing process structured, and which legal entities are involved, including in price negotiations, supplier selection and contracting?
23. Please explain available hedging procedures and outline which legal entity is involved in hedging and how.
24. What factors affect sourcing prices, such as time, volume, quality, port, etc.?
25. Is a trading strategy for sourcing available, and what is covered by it?

2.5 Risks

26. Which entity bears the cost of unsuccessful production or overproduction?

27. Are agreements in place that require/guarantee a certain production volume?
28. Which social/environmental standards need to be fulfilled and who manages them?
29. Is there insurance against those risks? Which entity covers the insurance cost? What other measures protect against risk and how is this done, including who decides on the measures?

3. Supply chain management

3.1 General

1. Please explain supply chain management within your group.
2. What are the critical factors within supply chain management?
3. Who brings together demand planning, production scheduling and inventory management/replenishment? Is software used?
4. Please explain the forecasting process.

3.2 Packaging and labelling

5. Please explain the packaging process. Who decides on quantity/bulk packaging?
6. Is labelling needed, and who ensures alignment with legal standards?

3.3 Warehousing

7. Are in-house or third-party warehouses used, and at what point in the supply chain? If they are third-party providers, who selects and contracts them?
8. Please explain inventory management and involved legal entities.
9. Is a separate warehouse for sourced products available? If so, who manages the warehouse?

3.4 Logistics

10. Who decides on transport, and selects and contracts logistics providers (shipping companies, transport companies)?
11. Who ensures and is liable for timely delivery?
12. Please explain the method of physical transport both within the group and on the sourcing and customer end.
13. How far are freight rates hedged, and who decides on that strategy?

3.5 Risks

14. Please explain the relevant supply chain/logistics/transport risks?
15. Who bears the risk of obsolescence/faulty products?

16. Is there insurance against those risks? Which entity covers the insurance cost? What other measures are taken to protect against risk and how are they carried out, including who decides on the measures?

4. Sales and marketing

4.1 Sales

1. Please explain the end-to-end sales and marketing process.
2. Which legal entity decides on the sales strategy, including regional presence?
3. Who decides on market segments and typical customers?
4. Which entity decides on distribution channels?
5. Which market factors (such as region and product quality) affect the price for third-party customers?
6. Please explain the demand planning/sales forecast process, and the link to production and the supply chain (see a similar question under supply chain and production).
7. Please explain the customer structure, considering local and global customers.
8. Please explain the relevance of global key account management.
9. Please explain the sales process, including alignment with customers to ensure tailor-made products.
10. Please explain the pricing process, including Incoterms, payment terms, and other financing conditions for third-party customers. Which legal entity has the final say on pricing/price lists?
11. Which legal entity negotiates and concludes contracts with customers?
12. Please explain the order of processing, including acceptance.
13. Please explain the invoicing process for third-party customers, including cash collection.
14. Please explain the overall trading strategy, including forecasts and data analytics.
15. What factors are critical for sales success, such as the speed/responsiveness of product delivery, responsiveness to customer needs/specifications, availability of trade/financing terms, salesperson/relationship?

4.2 Marketing

16. Please explain the relevance of branding within your group.
17. Please provide a list of protected trademarks/brands, including which entity is the owner.
18. Who makes decisions on branding, brand protection and respective funding?

19. What is the perception of final customers of your brand? Please quantify an expected brand premium.
20. What is the relevance of your brand in business-to-business transactions?

4.3 Risk

21. Which entity bears the cost of a customer not paying, i.e., who carries the credit default risk?
22. Which entity is affected by price volatility on both the buy and sell sides?
23. How is overall market risk managed?

5. General documents

The following non-exhaustive list of documents might be requested to further assess the functional and risk profile:

- Registered patents/trademarks
- Intercompany contracts
- Additional financial data
- Organizational chart
- Internal guidelines (e.g., production, quality, sales)
- Annual marketing and R&D spending
- Group risk policy/internal risk reporting
- Job descriptions
- Personnel key performance indicators
- (External) brand valuations
- Press releases

UN Tax Committee

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