A Global Value Chain approach to economic geography, with a case-study of the cocoa sector

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Value chains and economic geography

Understanding uneven development

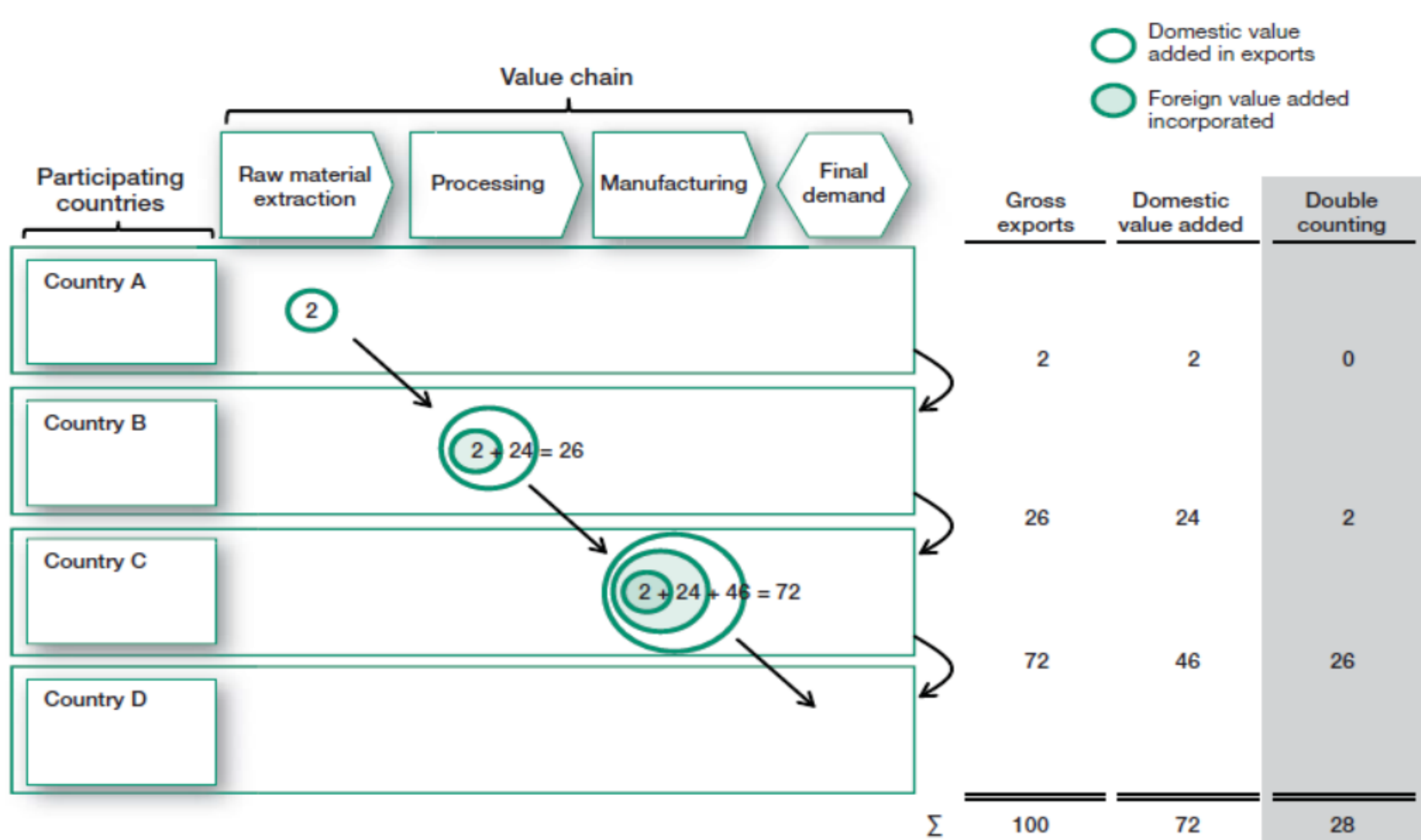
- Is it caused by natural resource endowments?
- Is it caused by cultural differences?
- Is it caused by the inherent tendencies of global capitalism?
- Is it caused by the spatial agglomeration of firms in industrial clusters?

Global Value Chains (GVCs) and Global Production Networks (GPNs) are recent models used by geographers to understand uneven development.

The New International Trade Order

- Trade is no longer dominated by products, but in tasks and components.
- According to UNCTAD, 60% of global trade is in intermediate goods and services.
- Share of foreign value-added in all global exports is 28%

Figure IV.1. Value added trade: how it works



Source: UNCTAD.

Manufacturing a Laptop Computer

Features of contemporary GVCs

1. Production is geographically fragmented at a global scale
2. Countries are often importing and exporting intermediate products
3. Production is often coordinated (governed) by a TNC (a lead firm), so their strategic practices become important shapers of development
4. Economic development is often accelerated by participating in GVCs

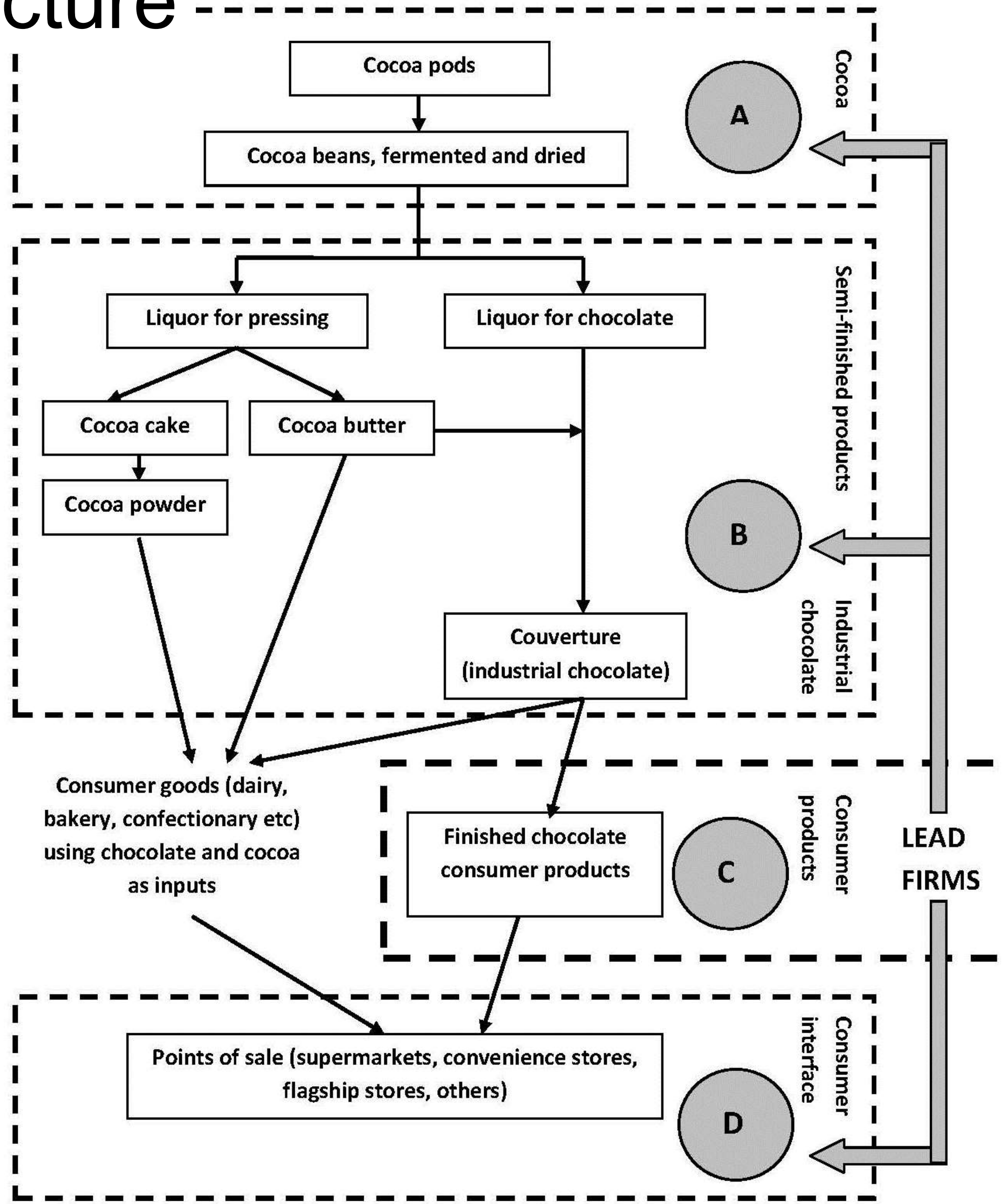
The “Gereffi Framework” for GVCs

Based on the work of Gary Gereffi and colleagues, each GVC contains:

1. Input-output structures
2. A certain territoriality (geography)
3. A governance structure
4. An institutional framework

GVC case study: Cocoa-chocolate

1. Input-Output Structure



Key Ingredients for Chocolates sold in Indonesia (net weight)

	Ingredient	%
1	Sugars	50.7
2	Cocoa products (liquor, paste, powder)	21.2
3	Milk products	13.0
4	Nuts and other commodities	5.4
5	Vegetable Oil	3.6
6	Other ingredients	6.1
	Total	100

Source: Calculated from Data provided by Euromonitor, 2015

2. Territoriality (geography)

Defined as the "geographic dispersion of production and marketing networks at the national, regional and global levels"

(Gereffi, 1995: p. 113).

Or, where the GVC touches-down (if only momentarily):

- Different chain nodes exist in space,
- Relationships between nodes connect (and construct) different spaces,
- Chains create value that is distributed across space.

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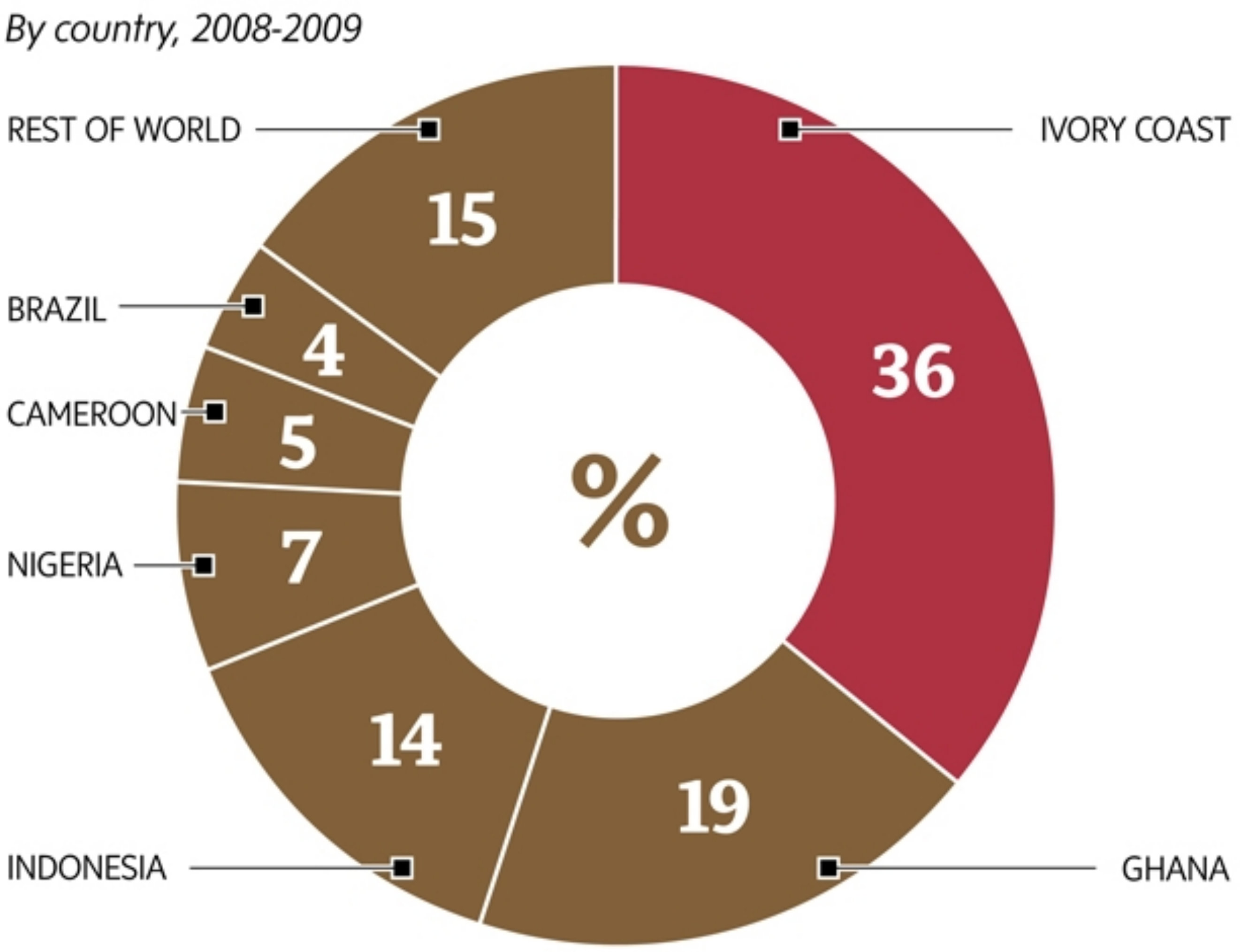
Territoriality of cocoa

- What is the territoriality of the global chocolate chain? Where does it touch down?
- Where is cocoa produced?
- What are the biophysical and social factors that might determine cocoa production?
- Where is sugar produced?
- Where does cocoa grinding take place?

Production of cocoa beans



TRISH McALASTER/THE GLOBE AND MAIL » SOURCE: INTERNATIONAL COCOA ORGANIZATION

Global centres for cocoa grinding

Where does cocoa grinding take place?

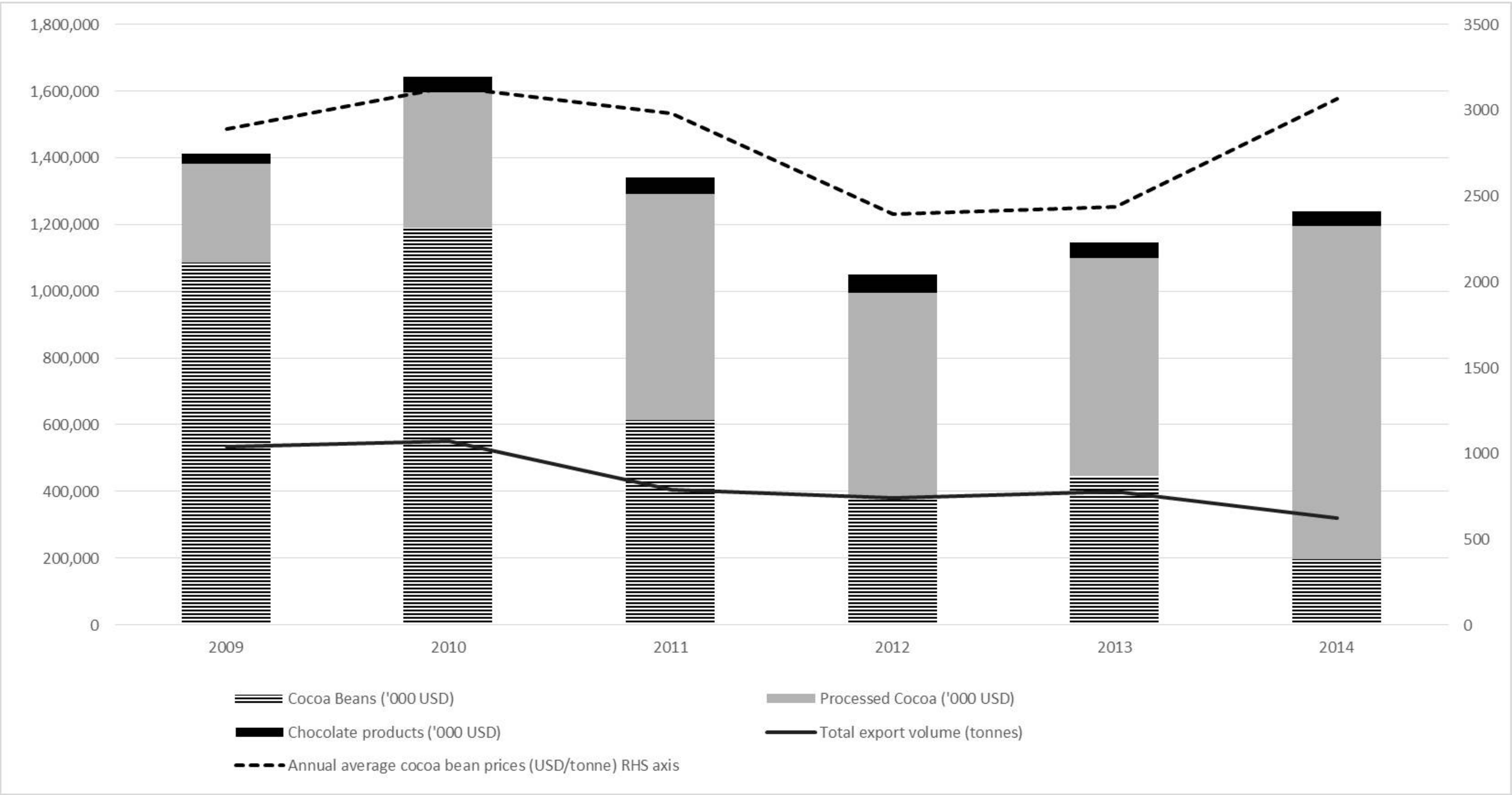
Grindings of cocoa beans
(thousand tonnes)

	2012/13		Estimates 2013/14		Forecasts 2014/15	
Europe	**1590**	**38.4%**	**1602**	**37.2%**	**1567**	**37.6%**
Germany	402		412		395	
Netherlands	545		530		518	
Others	643		660		654	
Africa	**799**	**19.3%**	**860**	**20.0%**	**843**	**20.2%**
Côte d'Ivoire	471		519		545	
Ghana	225		234		200	
Others	103		107		98	
America	**899**	**21.7%**	**935**	**21.7%**	**895**	**21.5%**
Brazil	241		240		230	
United States	429		446		420	
Others	228		250		245	
Asia & Oceania	**852**	**20.6%**	**904**	**21.0%**	**859**	**20.6%**
Indonesia	257		322		312	
Malaysia	293		259		223	
Others	303		323		324	
World total	**4140**	**100.0%**	**4301**	**100.0%**	**4164**	**100.0%**
Origin grindings	**1794**	**43.3%**	**1905**	**44.3%**	**1835**	**44.1%**

Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XLI, No. 2, Cocoa year 2014/15

Indonesia's Changing Position in the Cocoa GVC

Exports from Indonesia



Territoriality of cocoa

- Where are chocolates manufactured? And how is this changing? What might determine where grinding and manufacturing occur?
- How might the location of dairy industries have affected industrial location?

Exporters of chocolate products (2013)

	Country	Export Value (million USD)
1	Germany	4,947
2	Belgium	2,953
3	Netherlands	1,986
4	Italy	1,714
5	USA	1,647
6	France	1,617
7	Poland	1,405
8	Canada	1,198
9	United Kingdom	936
10	Switzerland	870

Data Source: www.Uncomtrade.com (HS Code 1806, includes coverture)

Each chain responds to market imperatives

Shifting Markets

- Conventional chocolate markets in western Europe and north America are now saturated
- Eight non-conventional markets drove 70% of the world's confectionery growth in 2014:
  - Brazil, China, Colombia, India, Russia, South Africa, Turkey Vietnam

(KPMG, 2014, citing Mondelez data).

Chocolate sales in China grew 58% from 2009-13, reaching US$2.43 billion in 2013 (Euromonitor). Mars accounted for 39.6% of China's chocolate sales in 2014, Ferrero - 11.5%, and Hershey with 11.1% (Euromonitor) – all with their own manufacturing plants in China.

3. Institutions in the global cocoa sector

- International Cocoa Organisation (ICCO) and International Cocoa Agreements (ICAs)
- State Marketing Boards in West Africa
- World Cocoa Foundation (WCF)
- International Cocoa Initiative
- NGOs
- Food and labelling Laws
- Tariffs and duties

4. Governance

› Global production systems are often ‘governed’ (coordinated) by Lead Firms (TNCs)

› According to Gereffi, governance is “the parameters that precondition the terms under which actors elsewhere in the chain must operate”

› Gereffi contended that every chain has it’s own governance structure, and it’s own set of ‘lead firms’

- Who governs the Global Value chain for cocoa?
- Where are these actors based?
- What firms lead the sector?

Global Chocolate Manufacturing

	Company	Net Confectionary Sales* 2014 (US$ million)	2014 Cocoa requirements (thousand tonnes)	Chocolate confectionary sales 2014 (US$ million)
1	Mars Inc (USA)	18,480	390	10,718
2	Mondelēz International (USA)	14,350	450	9,383
3	Ferrero Group (Luxembourg / Italy)	10,911	120	
4	Nestlé SA (Switzerland)	10,466	430**	7,165
5	Hershey Foods Corp (USA)	7,485	200	
6	Lindt & Sprüngli AG (Switzerland)	4,022	100	

** Includes chocolate-flavoured beverages

Sources: Cocoabarometer 2015 and Candy Industry (2015, cited by www.ICCO.org)

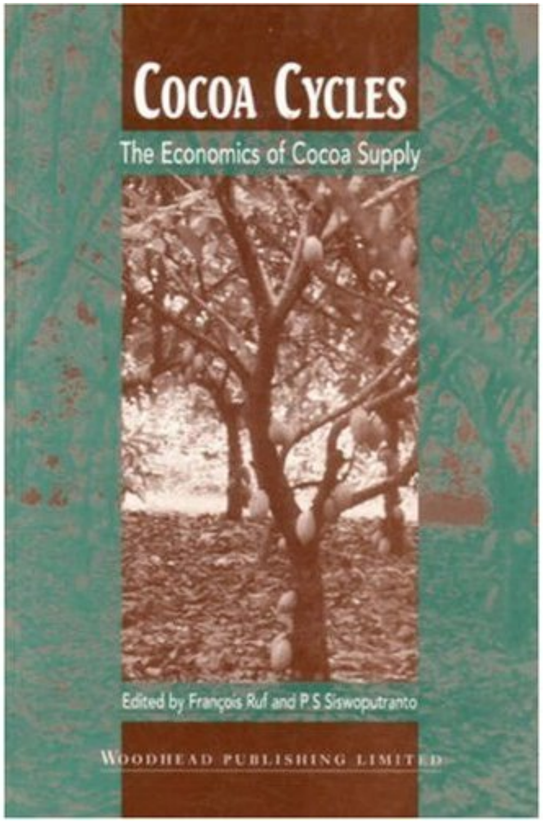
Supply Risk 1: The social conditions of cocoa producers

News › World › Americas

Nestle is being sued for allegedly using child slaves on cocoa farms

Nestle has been accused of active involvement with the massive business of child labour in the Ivory Coast

http://www.independent.co.uk/news/world/americas/nestle-is-being-sued-for-allegedly-using-child-slaves-on-cocoa-farms-a6806646.html



Supply Risk 2. Cocoa production occurs in forest frontiers

Supply Risk 3. Pests and Disease

Kanker

Helopeltis

Cocoa Pod Borer

Vascular Streak Dieback / Phytophthera

Sustainability Standards and Cocoa

- Voluntary, third party-assessed standards relating to environmental, social, ethical and food safety issues. What 3rd party standards are you aware of?
- "Certified cocoa" is now quite common and many lead firms are committed to 100% sustainable cocoa by 2020
- Firms are also establishing their own internal sustainability programs

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How do Value Chains help geographers understand regional development?

- Industrial organisation (and economic opportunities for participation) is increasingly shaped by the practices and strategies of globally coordinated lead firms,
- GVC theory provides a clear analytical framework that describes the organizational processes through which **upgrading** takes place. Gereffi (1999: 39) explains:
  - "Participation in global commodity chains is a necessary step for industrial upgrading because it puts firms and economies on potentially dynamic learning curves."
  - AND, "There is a positive correlation between participation in GVCs and growth rates of GDP per capita. GVCs have a direct economic impact on value added, jobs and income." (*UNCTAD 2013 World Investment Report on Global Value Chains*)
  - BUT, GVCs also have a 'dark side" when it is exploitative or risk-exposing to participants.