Who cares about sustainability and why? Motivations to care about ethical labels on coffee from the perspectives of consumers, industry professionals and Honduran smallholder coffee growers

By

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I hereby declare that the work presented in this thesis is my own.

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Abstract

Certification schemes have become widely adopted across the coffee industry and are thought to act as a mechanism for reducing poverty, conservation of environmental assets and well-being of agricultural producers and workers. These sustainability credentials also allow retailers and manufacturers to use certifications to differentiate themselves in a crowded marketplace. My research focused on understanding the perceived value of voluntary certification standards in the coffee sector, with particular emphasis on the motivations of key stakeholders to care about social and environmental challenges within the coffee supply chain. By investigating the extent to which certification standards are capable of bridging the geographic and information gap between production and consumption of an agricultural commodity, this research investigates relating to moral motivations of caring-at-a-distance, and highlights limitations of voluntary certification standards to eradicate poverty and achieve large-scale conservation in smallholder-dominated coffee-production landscapes.

The standard conceptual model for certification schemes is based on two underlying assumptions. Firstly, consumers are expected to prioritise the sustainability credentials of a product over other attributes such as taste and price. Secondly, certified products attain a price premium which is expected to improve living standards for producers and workers and serve as financial incentives for smallholder communities to protect valuable ecosystems on and around agricultural farmlands. In this thesis, I aimed to test both assumptions through a combination of methodological approaches including questionnaire surveys, participant observation and interviews. The findings show that both assumptions are problematic. On the one hand, in order to be able to supply particular export markets, producers are expected to comply with an increasing number of certification standards. While compliance with these standards provide some improvement in price levels and access to higher-value markets, the cost of complying with certification standards is putting pressure on producers, especially on those who would benefit from certification the most. On the other hand, uptake of certifications is expected to be driven by consumer demand. However, my results suggest that consumer demand for certified products and their interest in the wellbeing of geographically distant people and places might be more limited than previously thought. The findings are consistent with the argument that the perceived sensory quality of a food product often plays a more influential role in consumer decision-making processes than any associated ethical or sustainability claims.

While the link between certification standards and product quality is understudied empirically, the industry experts interviewed felt that the quality of certified coffee is mediocre at best and this lack of connection between certification standards and coffee quality limits producers' ability to improve their livelihoods. My research also highlighted the problematic nature of simplistic conceptions of community-based conservation and development efforts, which fail to consider socio-economic inequalities and complex power relations in

resource-poor rural populations. The interviews with key stakeholders in the coffee industry revealed a shift in agenda, where formerly, attitudes to sustainable trading focused more on the social and ethical issues in production communities, to a broader ideal which brings together social responsibility and environmental sustainability into one conceptual framework. The social and environmental principles of certification schemes are increasingly being seen as an essential aspect of sustainable sourcing; however, their rigid market control mechanisms and considerable bureaucracy are gradually becoming seen as unsustainable. Although certification schemes are likely to remain as an important facet of the coffee industry, the emphasis is changing from mere standards compliance to long-term trading relationships based on transparency, traceability and communication between different stakeholders of the supply chain.

The findings of this study are consistent with arguments in the literature that currently popular certification schemes (in their present form) cannot cope with all cultural, economic and structural inefficiencies within commodity sectors. While certification schemes can and certainly will continue to develop and evolve, mere reliance on voluntary standards compliance is unlikely to be able to deliver long-term sustainability within the sector. Nonetheless, certifications can be part of a larger toolbox for delivering sustainability outcomes on the ground, provided that the costs and trade-offs of supporting sustainability efforts are consistent with the benefits distributed to all key stakeholder groups along the chain.

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Table of Contents

Abstract 3

Acknowledgments 5

List of Tables 15

Chapter 1: Introduction 17

1.1 Introduction 17

1.2 Research aims and focus 22

1.3 Objectives and Research questions 23

1.4 Summary of the thesis chapters 24

Chapter 2: Theory and analytical framework 27

2.0 Aims and objectives 27

2.1 Introduction 27

2.1.2 Approaches to addressing environment–development tensions 29

2.2 Ethical consumerism 32

2.2.1 Geographies of consumption and the rise of voluntary standard systems 32

2.2.2 Geographies of care and responsibility – caring-at-a-distance 33

2.3. Voluntary certification as a market based 'conservation-with-development' approach 39

2.3.1. Environmental (in)justice 40

2.3.2. Resource access and power inequality in rural communities 44

2.4. Summary 45

Chapter 3: Characteristics of the coffee industry and relevant sustainability initiatives 47

3.0 Aims and objectives 47

3.1. Introduction - Why coffee? 47

3.2 Modern history of coffee trade 49

3.3. Supply and demand 52

3.4. Coffee production in Honduras 54

3.5. Industry challenges 58

3.5.1. Volatility 59

3.5.2. Cost of production 61

3.5.3. Complex value chains 61

3.5.4. Environmental challenges 64

3.5.5. Climate change 66

3.5.6. Pests and diseases 68

3.5.7. Changes in global coffee management systems– traditional shade vs. full sun 69
3.5.8. Diversification and differentiation 72
3.6. The birth of voluntary certification schemes 73
3.6.1. Certifications, verifications and corporate guidelines 74
3.6.2. Key characteristics of major certification schemes – relevant for the coffee sector 76
3.6.3. Market shares of certified coffee 86
3.6.4. Speciality coffee 88
3.7 Summary 95

Chapter 4: Research Methods 97

4.0. Aims and objectives 97
4.1 Introduction 97
4.2 Connecting themes between different methodologies 97
4.3. Integration of academic, NGO and industry perspectives 98
4.3.1. Positionality 98
4.3.2. Participation and impact-oriented research 100
4.4. Fieldwork in the UK – a survey of coffee consumers 102
4.4.1. Research Design 102
4.4.2. Study Sites and Participants 103
4.4.3. Data Collection 104
4.4.4. Data Analysis 105
4.5. Fieldwork in Honduras 107
4.5.1 Research Design 107
4.5.2. Study Sites and Participants 108
4.5.3. Data collection 108
4.5.4 Data Analysis 109
4.6 Interviews with the industry and certification agencies 111
4.6.1. Research Design 111
4.6.2 Study Sites and Participants 112
4.6.3 Data Collection 112
4.6.4 Data Analysis 112
4.7. Limitations 113
4.7.1. Consumer research limitations 113
4.7.2. Producer research limitations 113
4.7.3. Industry research limitation 114
4.7.4. General limitations 114

4.7.5 Limitations of positionality 114

Chapter 5: Ethical considerations in consumer choices – motivations to care about 'distant others' 115

5.0 Aims and Objectives 115

5.1 Introduction 115

5.2 Results 116

5.2.1. Demographics of the sample 116

5.2.2 What do consumers care about the most when purchasing coffee? To what extent do ethical labels influence consumers' purchasing decisions? 118

5.2.3. What do UK consumers believe ethical labels actually mean? 130

5.2.4 How do consumers see their responsibility in ensuring sustainability along the coffee supply chain? Who should care about geographically distant people and places? 144

5.3 Discussion 149

5.3.1 Relative importance of ethical concerns in coffee purchasing decisions - What do consumers care about the most when purchasing coffee? 149

5.3.2. Who should care about geographically distant people and places? 151

5.4. Summary 152

Chapter 6: Smallholder barriers and opportunities in terms of care and responsibility for livelihood development and conservation in Cusuco National Park, Honduras 153

6.0 Aims and objectives 153

6.1. Introduction 153

6.2 Results 155

6.2.1 Study Site and Participants 155

6.2.2 Socioeconomic conditions of smallholder coffee producers in Buenos Aires and Bañaderos 157

6.2.3. Livelihood strategies in the study villages 160

6.2.4. Smallholder definition of 'quality' crop and production practice 168

6.2.5 Farm management 169

6.2.6 Smallholders relationship to the natural environment 176

6.3. Discussion 179

6.3.1 Creating a higher value product 179

6.3.2. Awareness of the full quality potential and access to higher value markets 179

6.3.3. Awareness of the concept and potential of voluntary certification systems 180

6.3.4. Financial literacy and farm management capacity 180

6.3.5. Understanding of the global coffee industry 181

6.3.6. Supply chain fragmentation and the issue of the 'middlemen' 181

6.3.7. The myth of the community 182
6.3.8. Missed opportunities? 183
6.4 Summary 184
Chapter 7: Sustainability and ethics through the eyes of the speciality coffee sector 187
7.1 Introduction 188
7.2 Results 190
7.2.1 The role of certification schemes in the speciality coffee sector: How important are certifications in speciality buyers' purchasing decisions? What does the speciality sector care about the most? 190
7.2.2 The role of ecosystem services in quality coffee production 208
7.2.3 Alternative to the alternative - Direct trade and the 'relationship model' vs. certification 211
7.2.4 Sustainability challenges and opportunities 215
7.3 Discussion 221
7.4 Summary 224
Chapter 8: Empirical test of the link between environmental quality and coffee quality 226
8.0 Aims and objectives 226
8.1 Introduction 226
8.2 Results 228
8.3 Discussion 230
8.4 Summary 231
Chapter 9: Conclusion 232
9.1 Introduction 232
9.2. Care and responsibility at the consumer level 234
9.2.1. Is it possible to 'care from a distance'? 234
9.3. Care and responsibility from the smallholder producer perspective 236
9.3.1. What responsibilities do smallholders have at the family and farm level and how could care for the community and the environment extend their livelihood opportunities? 236
9.4. Care and responsibility in the speciality coffee sector 238
9.4.1. Does the speciality sector care about sustainability as much as they care about coffee quality? 238
9.5. Responsibility of certifications, NGOs and civil society 241
9.6. Recommendation for future research 243
9.7. Closing remarks 244
REFERENCES 246
Appendix 1 308

Appendix 2 ..... **312**
Key dates in the evolution of certifications **312**
Appendix 3 ..... **313**
Field study in the UK - Consumer questionnaire **313**
Appendix 4 ..... **318**
Field study in Honduras **318**
Economic Interview Questions to smallholder coffee producers: 318
Farm Visit: Interview 320
Appendix 5 ..... **322**
Coffee Quality Assessment **322**

List of Figures

FIGURE 1: CONCEPTUAL DIAGRAM OF THE THEORETICAL FRAMEWORK.....21
FIGURE 2: THESIS STRUCTURE.....24
FIGURE 3: CONSERVATION AND LIVELIHOOD DEVELOPMENT OUTCOMES. ADAPTED FROM JEWITT ET AL. (2014).....43
FIGURE 4: MAP OF THE OVERLAP BETWEEN COFFEE REGIONS AND BIODIVERSITY HOTSPOTS. SOURCE: HARDNER AND RICE (2002). 49
FIGURE 5: ICO COMPOSITE INDICATOR PRICE (MONTHLY AVERAGES: 1965-2013). SOURCE: ICO, 2014, PP18.....51
FIGURE 6: WORLD COFFEE PRODUCTION BY REGION (1963/64-2008/09) SOURCE: ICO (2014).....52
FIGURE 7: WORLD COFFEE CONSUMPTION PER TYPE OF MARKET (1964-2012). SOURCE: ICO (2014).....53
FIGURE 8: WORLD COFFEE PRICES IN NOMINAL AND REAL TERMS IN RELATION TO 1990 (MONTHLY AVERAGES: 1965-2013) – SOURCE: ICO, 2014 60
FIGURE 9: GLOBAL SUPPLY CHAIN. SOURCE: AUTHOR'S OWN 63
FIGURE 10: DAMAGE CAUSED BY COFFEE LEAF RUST DISEASE IN CENTRAL AMERICA (2012/13) EXPRESSED IN A UNIT OF 60KG BAGS. SOURCE: ICO (2013) – ALTHOUGH THE TRADITIONAL COFFEE BAG SIZE HAS A SLIGHT REGIONAL VARIATION, WHEN BAGS ARE BEING REFERRED TO AS A UNIT OF MEASURE 69
FIGURE 11: SHADE COFFEE MANAGEMENT SYSTEMS. SOURCE: PERFECTO ET AL. (2005).....71
FIGURE 12: FAIRTRADE PRICING STRUCTURE. ADAPTED FROM FAIRTRADE INTERNATIONAL, 2014. 79
FIGURE 13: DEVELOPMENT PHASES OF THE SPECIALITY COFFEE INDUSTRY. SOURCE: ADAPTED FROM BORELLA ET AL. (2015) 89
FIGURE 14: SCAA COFFEE QUALITY ASSESSMENT CUPPING FORM. SCAA ONLINE RESOURCE.....91
FIGURE 15: SCAA COFFEE TASTER'S FLAVOR WHEEL SOURCE: SCAA ONLINE RESOURCE 93
FIGURE 16: SAMPLE DISTRIBUTION AMONGST SUPERMARKETS.....116
FIGURE 17: RELATIVE IMPORTANCE OF INDIVIDUAL CRITERIA IN COFFEE PURCHASING DECISIONS, MEASURED AS MEAN SCORES OF 5-POINT LIKERT SCALES. TOP PANEL: EXACT MEAN IS STATED WITHIN EACH BAR; ERROR BARS ARE 95 PERCENT CONFIDENCE INTERVALS. IN THE TOP PANEL THE CRITERIA ARE IN ORDER OF APPEARANCE IN THE QUESTIONNAIRE. IN THE BOTTOM PANEL THEY ARE RANKED IN ORDER OF IMPORTANCE, AS JUDGED BY THE RESPONSES, AND COLOUR CODED TO INDICATE THE ENVIRONMENTAL (GREEN) AND SOCIAL (YELLOW) ONES. 119
FIGURE 18: DISTRIBUTIONS OF RESPONSES FOR THE TASTE AND QUALITY CRITERIA IN COFFEE PURCHASING DECISIONS. EXACT PERCENTAGES ARE GIVEN INSIDE THE BARS. 120
FIGURE 19: DISTRIBUTIONS OF RESPONSES FOR THE UNIQUENESS AND PRICE CRITERIA IN COFFEE PURCHASING DECISIONS. EXACT PERCENTAGES ARE GIVEN INSIDE THE BARS. 120
FIGURE 20: NUMBER OF RESPONDENTS WHO STATED THAT THEY LOOK ON COFFEE PACKAGING FOR THE WORD OR EXPRESSION SHOWN (EXACT NUMBERS DISPLAYED ABOVE THE BARS). THE WORDS AND EXPRESSIONS ARE GROUPED INTO TYPES, DIVIDED BY DOTTED LINES: PERSONAL GRATIFICATION (BLUE BARS).....121
FIGURE 21: DISTRIBUTIONS OF RESPONSES FOR ENVIRONMENTAL CONCERN (FOREST AND WILDLIFE) AND SOCIAL CONCERN CRITERIA IN COFFEE PURCHASING DECISIONS. EXACT PERCENTAGES ARE GIVEN INSIDE THE BARS. 122
FIGURE 22: DIFFERENCE BETWEEN THE PROPORTIONS OF WORDS RELATING TO SOCIAL AND ENVIRONMENTAL CONCERNS CHOSEN BY EACH INTERVIEWEE. IF ALL THE WORDS CHOSEN BY AN INTERVIEWEE ARE SOCIAL CONCERNS THE DIFFERENCE BETWEEN PROPORTIONS IS -1; IF ALL ARE ENVIRONMENTAL CONCERNS IT IS +1. EQUAL NUMBERS OF

WORDS IN EACH OF THE TWO CATEGORIES (INCLUDING NONE CHOSEN IN EITHER CATEGORY) GIVES A DIFFERENCE OF 0; THE 0S ARE INCLUDED IN THE 0-0.25 BIN. THE TENDENCY WAS FOR INDIVIDUAL PEOPLE TO CHOOSE A HIGHER PROPORTION OF SOCIAL-CONCERN WORDS AND EXPRESSIONS THAN ENVIRONMENTAL-CONCERN ONES (EXCLUDING THE 0S FROM THE 0-0.25 BIN, THE BLUE BARS ARE SIGNIFICANTLY HIGHER; WILCOXON RANK SUM TEST, P<0.01). ..123
FIGURE 23: DIFFERENCES BETWEEN SUPERMARKETS IN THE IMPORTANCE OF 'NO CHEMICALS' IN COFFEE PURCHASING DECISIONS OF THEIR CUSTOMERS (KRUSKAL–WALLIS TEST STATISTIC=9.270, P=0.026, N=366) 124
FIGURE 24: RELATIVE IMPORTANCE OF THREE CRITERIA IN COFFEE PURCHASING DECISIONS ANALYSED BY GENDER, WITH WOMEN RATING ALL MORE HIGHLY THAN MEN. THE DIFFERENCE IS HIGHLY SIGNIFICANT FOR 'PRICE' (TOP PANEL; MANN-WHITNEY U TEST, Z=-3.701, P=0.000, N=360) AND MARGINALLY SIGNIFICANT FOR 'AVAILABILITY' (MIDDLE PANEL; Z=-2.514, P=0.012, N=360,) AND 'CONVENIENCE' (Z=-2.082, P=0.037, N=360). 125
FIGURE 25: BOXPLOTS SHOWING VARIATION IN THE IMPORTANCE OF DIFFERENT PURCHASING CRITERIA WITHIN FIVE AGE CATEGORIES. 127
FIGURE 26: EFFECTS OF HOUSEHOLD INCOME LEVELS ON 'PRICE', 'CONVENIENCE', 'AVAILABILITY', AND WILLINGNESS TO 'TRY SOMETHING NEW' 129
FIGURE 27: FREQUENCY OF CERTIFIED COFFEE PURCHASE CLAIMED BY THE RESPONDENTS 132
FIGURE 28: ENVIRONMENTAL AND SOCIAL INTEREST SCORES COMPARED BETWEEN EDUCATION CATEGORIES.THOSE WITH DEGREES SCORED MORE HIGHLY ON BOTH THE ENVIRONMENTAL SCORE (TOP PANEL; P=0.003 IN MANN–WHITNEY U-TEST) AND THE SOCIAL INTEREST SCORE (BOTTOM PANEL; P=0.006). 133
FIGURE 29: SUMMARY OF IMPACT OF DEMOGRAPHY ON CERTIFIED COFFEE PURCHASES.....133
FIGURE 30: MEANS OF CONSUMER RESPONSES TO EACH OF THE 10 QUESTIONS ASKED ABOUT EACH OF THE FAIRTRADE (TOP PANEL) AND RAINFOREST ALLIANCE (BOTTOM PANEL) SCHEMES. ERROR BARS: 95 PERCENT CONFIDENCE INTERVALS. NOTE THE DIFFERENT SCALES ON THE VERTICAL AXES. 136
FIGURE 31: DISTRIBUTIONS OF THE FAIRTRADE (TOP PANEL) AND RAINFOREST ALLIANCE (BOTTOM PANEL) COMPOSITE KNOWLEDGE SCORES(ONE SCORE PER PERSON, ON A CONTINUOUS SCALE WITH MINIMUM AND MAXIMUM POSSIBLE VALUES OF 1 AND 5, RESPECTIVELY, WITH HIGHER SCORES INDICATING BETTER KNOWLEDGE). 139
FIGURE 32: CORRELATION BETWEEN FT AND RA KNOWLEDGE SCORES.EACH DOT REPRESENTS ONE OR MORE RESPONDENT. THE BEST-FIT LINE HAS BEEN ADDED, AND ITS EQUATION IS SHOWN, ALONG WITH PEARSON'S R, WHICH INDICATES A RELATIVELY WEAK CORRELATION, THOUGH HIGHLY SIGNIFICANT (P<0.01, N=217). 140
FIGURE 33: SCATTERPLOTS OF THE FREQUENCY OF PURCHASE OF CERTIFIED PRODUCTS, IN RELATION TO THEIR FAIRTRADE AND RAINFOREST ALLIANCE KNOWLEDGE SCORES.EACH DOT REPRESENTS ONE OR MORE RESPONDENT. NEITHER CORRELATION IS STATISTICALLY SIGNIFICANT. 140
FIGURE 34: FAIRTRADE KNOWLEDGE SCORES ANALYSED BY SUPERMARKETS 141
FIGURE 35: RAINFOREST ALLIANCE KNOWLEDGE SCORES ANALYSED BY AGE GROUP 141
FIGURE 36: POPULARITY OF CONCEPTS IN ENCOURAGING MORE CERTIFIED COFFEE PURCHASE 143
FIGURE 37: GEOGRAPHIC LOCATION OF THE CUSUCO NATIONAL PARK IN HONDURAS. SOURCED FROM GIS CLOUD - BING MAPS © NAVTEC, © MICROSOFT CORPORATION, MAPS-FOR-FREE RELIEF. 155
FIGURE 38: MAP OF THE CUSUCO NATIONAL PARK AND THE LOCATION OF THE STUDY VILLAGES. 156
FIGURE 39: ECONOMIC STATUS OF RESIDENTS INTERVIEWED FOR THE STUDY IN BUENOS AIRES AND BAÑADEROS. CATEGORY 1 INDICATES THE LOWEST AND 5 INDICATES THE HIGHEST ECONOMIC STATUS 159

FIGURE 40: BOXPLOTS SHOWING VARIATION IN THE MEAN FARM SIZE (IN HECTARES) IN BUENOS AIRES AND BAÑADEROS, CUSUCO NATIONAL PARK.HONDURAN STANDARD UNIT OF MEASUREMENT FOR LAND IS MANZANAS. ALL DATA WERE COLLECTED IN MANZANAS AND CONVERTED TO HECTARES: 1 MANZANA = 0.7 HA. THERE IS SIGNIFICANT DIFFERENCE IN MEAN FARM SIZE AT 90 PERCENT BUT NOT AT THE 95 PERCENT LEVEL (MANN–WHITNEY U-TEST Z= -1.86, P= 0.0629, N=41) 161
FIGURE 41: BOXPLOTS SHOWING VARIATION IN THE YIELDS (LB PER HA) OF FARMERS IN THE STUDY VILLAGES OF BUENOS AIRES AND BAÑADEROS, CUSUCO NATIONAL PARK. THERE IS NO SIGNIFICANT DIFFERENCE IN MEAN YIELD BETWEEN THE STUDY VILLAGES (MANN–WHITNEY U-TEST Z= -0.6, P= 0.548, N=41) 164
FIGURE 42: BOXPLOTS SHOWING VARIATION IN PRODUCERS' ANNUAL GROSS INCOME FROM COFFEE FARMING (LEMPIRA/HECTARE) IN BUENOS AIRES AND BAÑADEROS, CUSUCO NATIONAL PARK. THERE IS SIGNIFICANT DIFFERENCE IN MEAN YIELD PER HA BETWEEN THE STUDY VILLAGES (MANN–WHITNEY U-TEST Z= -2.03, P= 0.041, N=41) 164
FIGURE 43: SCATTERPLOT OF FARM SIZE (HA) IN RELATION TO THE TOTAL GROSS INCOME (LEMPIRAS) EARNED FROM COFFEE FARMING IN THE STUDY VILLAGES. PEARSON'S R=0.943, P-VALUE=0.0000, N=41, SIGNIFICANT AT 99 PERCENT LEVEL. 165
FIGURE 44: BOXPLOTS SHOWING DIFFERENCES IN MAXIMUM PRICE ATTAINED PER POUND OF COFFEE BY PRODUCERS SELLING AT THE THREE SUPERMARKETS (KRUSKAL–WALLIS TEST STATISTIC=12.75, P=0.001, N=41).....167
FIGURE 45: SCATTERPLOT OF THE TOTAL COST OF AGROCHEMICALS (FERTILISERS AND PESTICIDES IN LEMPIRAS) IN RELATION TO THE OVERALL FARM QUALITY SCORE (1=POOR; 5=EXCELLENT) - CALCULATED FROM THE MEAN OF CANOPY SCORE, MULCHING SCORE AND COFFEE PLANT QUALITY SCORE. CORRELATION BETWEEN OVERALL FARM QUALITY AND TOTAL AMOUNT SPENT ON AGROCHEMICALS IS SIGNIFICANT AT 95 PERCENT LEVEL (SPEARMAN'S RANK CORRELATION R=0.358, P-VALUE=0.0375, N=34) 170
FIGURE 46: SCATTERPLOT OF TOTAL COST OF AGROCHEMICALS (LEMPIRAS) IN RELATION TO THE CANOPY AND MULCHING SCORE (1=POOR; 5=EXCELLENT). CORRELATION BETWEEN CANOPY AND MULCHING LEVELS AND TOTAL AMOUNT SPENT ON AGROCHEMICALS IS SIGNIFICANT AT 95 PERCENT LEVEL (SPEARMAN'S R= 0.362, P-VALUE=0.04, N=34) ..171
FIGURE 47: SCATTERPLOT OF AGE OF COFFEE PLANTS AND QUALITY APPEARANCE. THERE IS A SIGNIFICANT NEGATIVE CORRELATION BETWEEN QUALITY AND AGE OF COFFEE PLANTS AT 99 PERCENT LEVEL (SPEARMAN'S TEST R= -0.697, P-VALUE=0.0000, N=34) 172
FIGURE 48: SCATTERPLOT OF YIELD (LB/HA) AND AGE OF COFFEE PLANTS (YEARS). CORRELATION BETWEEN AGE OF COFFEE PLANTS AND YIELD IS NOT SIGNIFICANT AT 95 PERCENT LEVEL (PEARSON'S R=-0.286, P-VALUE=0.1011, N=34) 173
FIGURE 49: SCATTERPLOT OF YIELD (LB/HA) IN RELATION TO THE CANOPY SCORE (1=POOR; 5=EXCELLENT). CANOPY QUALITY SCORE WAS CALCULATED FROM THE MEAN OF SHADE DIVERSITY, HEIGHT AND DISTANCE USING A FIVE-POINT LIKERT-SCALE. THERE IS SIGNIFICANT CORRELATION BETWEEN OVERALL CANOPY QUALITY AND YIELD AT 95 PERCENT LEVEL (SPEARMAN'S RANK CORRELATION R=0.392, P-VALUE=0.0220, N=34) 174
FIGURE 50: SCATTERPLOT OF YIELD (LB/HA) IN RELATION TO THE OVERALL FARM QUALITY SCORE (1=POOR; 5=EXCELLENT). OVERALL FARM QUALITY SCORE WAS CALCULATED FROM THE MEAN OF CANOPY SCORE, MULCHING SCORE AND COFFEE PLANT QUALITY SCORE. CORRELATION BETWEEN OVERALL FARM QUALITY AND YIELD IS SIGNIFICANT AT 99 PERCENT LEVEL (SPEARMAN'S RANK CORRELATION R=0.478, P-VALUE=0.0042, N=34) 175

FIGURE 51: PRODUCER AND CONSUMER % AGREE SCORES ABOUT HUMAN RELATION TO NATURE BASED ON FIVE SELECTED ITEMS FROM THE REVISED NEW ENVIRONMENTAL PARADIGM (NEP, DUNLAP ET AL., 2000 P427) SCALE. NEUTRAL RESPONSES WERE EXCLUDED FROM TOTAL ($\sum$) NUMBER OF RESPONSES FOR EACH QUESTION. THERE IS SIGNIFICANT DIFFERENCE BETWEEN THE RESPONSES GIVEN BY CONSUMERS AND PRODUCERS TO THE SAME FIVE QUESTIONS (Z TEST OF TWO-SAMPLE PROPORTIONS RESULTS FOR EACH QUESTIONS ARE PRESENTED IN TABLE 6.5 BELOW.).....177
FIGURE 52: SCATTERPLOT OF ALTITUDE AGAINST OVERALL COFFEE QUALITY SCORE. THE POSITIVE RELATIONSHIP SHOWN (PEARSON'S R = 0.592) IS STATISTICALLY SIGNIFICANT (P<0.001). 228

List of Tables

TABLE 1: FAIRTRADE MINIMUM PRICE AND PREMIUM LEVELS ACCORDING TO DIFFERENT PROCESSING TYPES FOR COFFEE. ADAPTED FROM FAIRTRADE INTERNATIONAL, 2014. 79
TABLE 2: CLAIMED BENEFITS OF CERTIFICATION SCHEMES – RELEVANT TO THE COFFEE SECTOR 85
TABLE 3: DEMOGRAPHICS OF THE SAMPLE – CONSUMER RESEARCH 117
TABLE 4: MEAN NUMBER OF SOCIAL AND ENVIRONMENTAL WORDS IN QUESTION 6 CHOSEN PER RESPONDENT, AND PROPORTION OF ALL WORDS CHOSEN IN EACH CATEGORY.'SE' IS THE STANDARD ERROR OF THE MEAN OR PROPORTION. 'DIFFERENCE' IS THE DIFFERENCE BETWEEN THE MEANS OR PROPORTIONS (SOCIAL MINUS ENVIRONMENTAL), AND 'T' IS STUDENT'S T, WHICH EXPRESSES EACH DIFFERENCE AS THE NUMBER OF STANDARD ERRORS OF THAT DIFFERENCE. IN BOTH CASES THE DIFFERENCE IS SIGNIFICANT (T-TEST: P<0.01) 123
TABLE 5: KRUSKAL–WALLIS TESTS OF DIFFERENCE ACROSS THE FIVE AGE CATEGORIES IN THE IMPORTANCE FOR COFFEE PURCHASING DECISIONS OF THE CRITERIA SHOWN (N= 365, DF=4).DIFFERENCES BETWEEN AT LEAST TWO AGE CATEGORIES ARE SIGNIFICANT WHERE THE NULL HYPOTHESIS IS REJECTED (SHADED ROWS); THESE ARE DISPLAYED IN FIGURE 5.10. 126
TABLE 6: MANN–WHITNEY U-TESTS OF DIFFERENCE BETWEEN CONSUMERS WITH AND WITHOUT A DEGREE IN HIGHER EDUCATION IN TERMS OF IMPORTANCE OF EACH CRITERIA IN COFFEE PURCHASING DECISIONS. DIFFERENCES ARE SIGNIFICANT WHERE THE NULL HYPOTHESIS IS REJECTED (SHADED ROWS) 128
TABLE 7: KRUSKAL–WALLIS TESTS OF DIFFERENCE ACROSS THE SIX INCOME CATEGORIES IN TERMS OF IMPORTANCE OF EACH CRITERIA IN COFFEE PURCHASING DECISIONS (N= 337, DF=5).DIFFERENCES BETWEEN AT LEAST TWO INCOME CATEGORIES ARE SIGNIFICANT WHERE THE NULL HYPOTHESIS IS REJECTED (SHADED ROWS); THESE ARE DISPLAYED IN FIGURE 5.11. 128
TABLE 8: CORRELATIONS BETWEEN THE IMPORTANCE THAT RESPONDENTS ATTACHED TO THE VARIOUS COFFEE ATTRIBUTES (Q5) AND THE CLAIMED FREQUENCY OF THEIR PURCHASE OF CERTIFIED COFFEES (Q8).SIGNIFICANT CORRELATIONS ARE SHADED (HEAVIER SHADING INDICATES MORE SIGNIFICANT CORRELATION) 130
TABLE 9: FAMILIARITY WITH COFFEE CERTIFICATION SCHEMES.PERCENTAGES OF RESPONDENTS WHO HAVE NOT HEARD OF THE SCHEMES LISTED, AND PERCENTAGES OF RESPONDENTS WHO SAID THEY HAVE BOTH HEARD OF THE SCHEME AND BOUGHT COFFEE WITH THAT CERTIFICATION, BOUGHT OTHER PRODUCTS WITH THE CERTIFICATION ('BOUGHT SCHEME OTHER'), AND NOT BOUGHT ANYTHING WITH THE CERTIFICATION 131
TABLE 10: EFFECTS OF DEMOGRAPHIC CHARACTERISTICS ON CONSUMERS' FAMILIARITY WITH COFFEE CERTIFICATION SCHEMES AND THE CLAIMED FREQUENCY OF THEIR CERTIFIED COFFEE PURCHASE ('Q7'). 134
TABLE 11: CONSUMER UNDERSTANDING OF SOCIAL IMPACT OF FAIRTRADE AND RAINFOREST ALLIANCE 137
TABLE 12: CONSUMER UNDERSTANDING ABOUT THE ENVIRONMENTAL IMPACT OF FAIRTRADE AND RAINFOREST ALLIANCE 138
TABLE 13: PERCEPTION ABOUT THE QUALITY OF FAIRTRADE COFFEE 142
TABLE 14: ATTITUDES ABOUT TROPICAL RAINFOREST CONSERVATION 145
TABLE 15: RESPONSES TO NEP SCALE ITEMS IN THE QUESTIONNAIRE 145

TABLE 16: CORRELATION BETWEEN CLAIMED FREQUENCY OF CERTIFIED COFFEE PURCHASE ('Q8') AND ALL LISTED VARIABLES 146
TABLE 17: SPEARMAN'S RANK CORRELATION ANALYSIS OF AGGREGATED ATTITUDE AND KNOWLEDGE SCORES 147
TABLE 18: CORRELATIONS BETWEEN THE IMPORTANCE OF INDIVIDUAL CRITERIA IN COFFEE PURCHASING HABITS AND ALL AGGREGATED SCORES (N=366) 147
TABLE 19: DESCRIPTION OF ECONOMIC STATUS CATEGORIES 158
TABLE 20: MEANS OF YIELD PER UNIT AREA (LB/HA) VS. ACCESS TO VEHICLE. THERE IS NO SIGNIFICANT STATISTICAL DIFFERENCE BETWEEN MEAN PRICE RECEIVED BY THOSE WITH/WITHOUT A CAR (MANN–WHITNEY U-TEST Z= -1.6, P= 0.1096, N=41) 168
TABLE 21: YIELD PER UNIT AREA (LB/HA) AND EDUCATION IN FARMING PRACTICES. THERE IS SIGNIFICANT DIFFERENCE IN MEAN YIELD BETWEEN PEOPLE WITH AND WITHOUT HIGHER EDUCATION (MANN–WHITNEY U-TEST Z= -2.14, P= 0.0324, N=41) 169
TABLE 22: NUMBER AND PERCENTAGE OF PRODUCERS AND CONSUMERS AGREED TO THE NEP STATEMENTS. TOTAL NUMBER OF CONSUMERS INTERVIEWED = 365; TOTAL NUMBER OF PRODUCERS INTERVIEWED = 39. NEUTRAL RESPONSES WERE EXCLUDED FROM TOTAL NUMBER OF RESPONSES FOR EACH QUESTION. 176
TABLE 23: Z-TEST OF PRODUCER AND CONSUMER % AGREE SCORES ABOUT HUMAN RELATIONSHIP TO NATURE. THE NULL HYPOTHESIS IS THAT THERE IS NO SIGNIFICANT DIFFERENCE BETWEEN THE RESPONSES OF CONSUMERS AND PRODUCERS TO EACH QUESTION. THE P-VALUES BELOW SUGGEST THAT WE CAN REJECT THE NULL HYPOTHESIS AT P<=0.05 LEVEL FOR ALL FIVE QUESTIONS. 177
TABLE 24: CORRELATION MATRIX OF COFFEE TASTE/QUALITY MEASURES AND CLIMATE-RELATED VARIABLES. VALUES OF PEARSON'S R ARE SHOWN; THESE ARE SIGNIFICANT AT P<0.05 WHERE |R|>0.36, AND ARE SIGNIFICANT AT P<0.01 WHERE |R|>0.46. SOME VARIABLE NAMES ARE ABBREVIATED IN COLUMN HEADINGS. 'TEMPERATURE' IS MEAN ANNUAL TEMPERATURE, 'TEMP RANGE' IS THE RANGE OF MONTHLY MEAN TEMPERATURES ACROSS THE YEAR, 'RAINFALL' IS MEAN ANNUAL PRECIPITATION AND 'COFFEE QUALITY' IS THE OVERALL SCORE. 229
TABLE 25: CORRELATION MATRIX OF OVERALL COFFEE QUALITY AND SELECTED FARM QUALITY VARIABLES.VALUES OF PEARSON'S R ARE SHOWN; THESE ARE SIGNIFICANT AT P<0.05 WHERE |R|>0.36, AND ARE SIGNIFICANT AT P<0.01 WHERE |R|>0.46. SOME VARIABLE NAMES ARE ABBREVIATED IN COLUMN HEADINGS. 229
TABLE 26: CORRELATION MATRIX OF OVERALL COFFEE QUALITY AND DUNG BEETLE BIODIVERSITY AND ABUNDANCE VARIABLES. VALUES OF PEARSON'S R ARE SHOWN; THESE ARE SIGNIFICANT AT P<0.05 WHERE |R|>0.36, AND ARE SIGNIFICANT AT P<0.01 WHERE |R|>0.46. SOME VARIABLE NAMES ARE ABBREVIATED IN COLUMN HEADINGS. 230
TABLE 27: CRITERIA COVERED BY INDIVIDUAL CERTIFICATION SCHEMES – ADAPTED FROM STANDARDSMAP.ORG 308

Chapter 1: Introduction

1.1 Introduction

The volume of globally traded goods have increased from less than a fifth, to more than half, of world GDP in the last fifty years (Ortiz-Ospina and Roser, 2016). Today, consumption of globally traded goods is far removed from the places of their production and this separation allows for the exploitation of people and their environments to remain hidden at the point of consumption. Thus, consumption of mass produced global commodities derived from geographically distant places can, often unintentionally, contribute to creating and exacerbating inherent social and environmental issues at the places of production. This spatial separation and the associated 'information gap' between production and consumption of global commodities (Kneafsey *et al*., 2008; Eden *et al*., 2008; Schneider, 2009; Naylor, 2014) have given rise to a plethora of voluntary certification and ethical labelling schemes aimed at strengthening the connection between producers and consumers of otherwise faceless commodities (Whatmore and Thorne 1997; Goodman and Herman, 2015). In pursuit of broader conservation and development agendas, the last few decades have also seen the development of various payment schemes that attach financial benefits to land owners for the provision of specific ecosystem services (Ferraro and Kiss, 2002; Engle *et al.*, 2008; Ghazoul *et al.*, 2009; Gómez-Baggethun *et al.*, 2010; Pagiola and Platais, 2016). Financial incentives provided for governments and local communities show great promise in being able to deliver positive conservation and livelihood development outcomes, however, success of these schemes are not consistent and are highly dependent on local circumstances (Mahanty et al., 2013).

The concept of differentiating products on the basis of their ethical or sustainability credentials dates back to the early 20th century. Since the world's first sustainability label (Germany's Blue Angel for environmentally friendly products) appeared on the market in 1978, the certification market became a much more noisy and complex world. Certification has been used in the coffee sector since the 1980s but up to the late 1980s, organic production standards were the only certification scheme on the market with considerable market share. The concept of 'fair trade' had been developing since the 1950s but the first 'fair trade' certified coffee only appeared in the Dutch market in late 1988 under the Max Havelaar label. Since then Fairtrade expanded into numerous other product categories such as fruit and vegetables, cotton, cocoa, tea and flowers. In the 1990s, substantial NGO campaigns on the importance of food safety, workers' rights, deforestation and producer livelihoods led to the development of a number of new certification initiatives on the market. The Rainforest Alliance certification started on large-scale banana plantations in 1993, followed by UTZ Kapeh (now UTZ Certified) system in 1998.

Voluntary certification schemes may take many forms but they are all based on two underlying assumptions. On one hand, it is assumed that that provision of information about the circumstances of production will motivate consumers to consciously look for products with sustainability credentials and be willing to pay more for these products than their material qualities would naturally achieve on the market. On the other hand, producers, as 'beneficiaries' of such certification schemes are expected to improve social and environmental standards on and around their farms for premium levels which may, or may not offset the costs of gaining and maintaining certified status. As the empirical chapters of this thesis will highlight, both of these assumptions are problematic.

Certifications have been successful in providing a credible reference point for collective action; access to expertise and networks, and an increased demand for certified goods. By demonstrating compliance with certifications' social and environmental criteria in their production process, producers can gain access to higher value markets, improve farm efficiency and increase their organisational capacity. Businesses use certifications as operational tools to help guide purchasing decisions, manage supplier relationships and communicate the sustainability credentials of their products to customers and consumers. Certified products are frequently declared as being 'sustainable'. The blurring of the line between the terminologies of certified and sustainable has allowed businesses who rely on agricultural commodities as their raw materials to treat certification as a 'license to operate' in otherwise poverty-stricken industries. By relying on the claims of ethical labels, consumers can feel assured that their everyday purchasing decisions are contributing to the creation of a socially equitable and environmentally sustainable food production.

Certification standards and their premium mechanisms are not perfect though and there is limited evidence of their net positive impact on the ground. Businesses as well as producers participating in the certified markets are coming up against increasing costs and diminishing returns to their investments in certifications. Entry into the certification market and maintenance of certification status is resource intensive and can incur significant costs at all levels of the chain. As certification programmes are often part-funded by private sector donors, certification costs are not always transparent and there is limited data available on certification costs for small-scale farmers (Jena et al., 2012; Chiputwa et al., 2015). Benefits of certification are a function of production volumes, access to technical assistance, buyer demand and access to higher value markets. Costs of certification depends on a number of factors including membership of producer organisations, access to donor funding from public-private partnerships, volumes produced, conditions of the farm etc. Although certifications provide some price premiums, adoption of certification standards don't always improve farm level productivity. The significant costs of certification often negate the impact of premiums hence the overall impact of certification on producer income may be neutral at best (Abdulsamad et al., 2015; Kraus, 2015). While it is frequently argued that sustainability certifications improve the livelihood of smallholder producers, empirical evidence shows that certification tends to create net positive financial benefits above a certain production volume (Kuit and Waarts,

2014). This means that those small-scale and low volume producers who could benefit from certification premiums the most, are likely to be unable to access the certification market.

Over the last few decades, certifications have flooded the market with a variety of labels, all claiming that the certified product was produced and traded in a sustainable and morally sound way. The concept of certification grew so fast and in such a variety of ways that no one knows with absolute certainty what sustainability outcomes certification standards are and aren't capable of achieving on the ground. With over 400 certifications and labels in the market place, certifications are no longer able to act as differentiator. In many industries, certifications have become the baseline, a 'hygiene factor' and worst cases a tick-box exercise without any deeper engagement with the actual needs of the producers and their communities. Due to the sheer number and variety of different certification labels on the market, all covering similar issues with slightly different focus, there is an apparent lack of clarity about the meaning and scope of individual certification systems at all stages of the supply chain. Despite their rapid growth across multiple industries, their standards have not been able to reach every farm, factory or warehouse in the world and even those which are certified to meet the minimum compliance criteria, are repeatedly found to show imperfections of the system.

Despite their early promises, certifications have so far failed to eradicate poverty along commodity supply chains at a global scale. By emphasising the long-term inter and intra-generational benefits of 'caring about nature,' these schemes tend to overlook the often short-term needs and desires of both consumers and producers of 'ethically marketed' products. Their success, however, depend on what the main stakeholder groups along the supply chain actually care about and how they choose to express this intention of care through their economic decisions. Given these significant market challenges, allied with increasing concerns over global environmental change and international development, it is pertinent to ask what role can we expect voluntary standards to play in fostering conservation and development within commodity supply chains? Are these schemes delivering their claimed sustainability outcomes? What do these different supply chain actors/stakeholders actually care about and how their different motivations to care might ultimately foster better sustainability outcomes in the long-term?

Reconstructions of the conventional relationship between society and nature has consequences for how the modern environmental crisis is viewed and responded to (Irwin, 2013). Since the exploitation of nature and humans are profoundly interconnected (Bookchin, 1989, Marx, 1867a; Wolf, 1982; in Burke, 2012), research on either conservation or societal development benefits from due consideration of the other. The meaning and representation of nature and the environment are always shaped by, and understood via, cultures which themselves vary through space and time (Daniels *et al*., 2012). The conceptual separation of nature and society has not only been branded as merely a 'habit of thought' but has also been challenged on both ethical and political grounds (Zimmerer, 2000; Kates *et al*., 2001; Palla *et al*., 2005; Smith, 2008; Fletcher, 2016). Through

the consumption of a commodity that is derived from a geographically distant place, that place becomes, indirectly, part of the environment of the consumer. The 'veil of the commodity fetish' can, however, obscure this indirect link between the places of production and consumption and open up questions about the motivations of care towards 'distant others' and their environments (Appadurai, 1994; Hudson and Hudson, 2003; Barnett *et al.*, 2005; Newholm et al., 2015; Davies et al., 2016; Shaw et al., 2016). Although the very concepts of both nature and environment are 'socially constructed' (Greider and Garkovich, 1994; Eder and Ritter, 1996; Castree and Braun, 1998; Castree, 2001; Mansfield and Doyle, 2017), the pressing social and environmental issues call for increasing research and political debate. Whether the concept of nature is timeless and eternal or merely a socially constructed phenomenon still leaves questions of 'who' cares about the environment (Murch, 1974; Van Liere and Dunlap, 1980; Willetts, 1996; Blake, 20016, Torres et al., 2016), 'why' and 'how', open for debate.

An important part of geographical enquiry has always been concerned with understanding the complex relationships between seemingly distant people, places, and the changes brought about in them by human actions (Matthews and Herbert, 2008). By exploring the reciprocal relationship between distant places and spaces, geography represents one of the few disciplines that attempts to provide a redefinition of both the ecological and cultural dimensions of the environment (Leff, 1998; Escobar, 1998; 1999). Regarding issues of global commodity production there is ample research on specific commodities and their supply chains (Cook, 2004; De Pelsmaker *et al.*, 2005; Coe, 2012; Barrientos, 2012; Boström et al., 2015), the way producers engage in community development projects (Corbridge and Kumar, 2002) as well as on consumer decision-making and behaviour in various ethical purchasing situations (Hibbert *et al*., 2007; Chatzidakis *et al.*, 2006; Solomon et al., 2012; Carrington et al., 2014). There is, however, less research investigating what motivates people to care about environmental and social issues that are geographically or culturally removed from their own everyday life (Feinberg and Willer, 2013; Shaw et al., 2016). This study, therefore, has been conducted from the perspective of critical human geography and builds on research in geographies of food literature, which encompasses, *inter alia*, commodity chains and production networks, commodity fetishism, global trade patterns, socio-economics and ethical consumption (Goodman and Watts, 1997; Whatmore and Thorne, 1997; Winter, 2003; Bryant and Goodman, 2004; Cook, 2006; Goodman et al., 2012; Gunderson, 2014).

Employing a human geographical perspective by connecting seemingly conflicting subjects under a cohesive conceptual framework, this research focuses on exploring the various ways in which people care about 'distant' people and environments in the context of the coffee commodity chain, examined through the lenses of critical theory and care ethics (Smith, 1988; Guba and Lincoln, 1994; Hoffmann and Hutter, 2012; Lawson; 2007; McEwan and Goodman, 2010; Lewis and Potter, 2011; Carrington et al., 2014, 2016; Shaw et al., 2016). The empirical research explores issues related to the conflict between environment–development agendas (Duraiappah, 1998; Pearce et al., 2013; Roberts and Newell, 2016) and is informed by ideas of political ecology

(Bryant, 1992, 1997; Martínez-Alier, 2002; Escobar, 2006; Dryzek, 2013; Neumann, 2014), access to resources (Chambers, 2014; Fabricius et al., 2013) and the relationships between poverty reduction and conservation (Adams *et al.* 2004; Fisher et al., 2012; Turner et al, 2012; Oldekop et al, 2016). The concept of traceability and 'following' a commodity along its supply chain (Cook, 2004) underpinned the development of a whole supply chain level research and helped contextualise many of the issues presented in the thesis. Given its broad geographical, cultural, environmental and socio-economic significance, the coffee industry provides an example of the conflict between short-term economic benefits and long-term sustainability goals. Although environmental and social issues are present in almost all global commodity supply chains, this investigation focuses solely on the global coffee value chain and examines how key stakeholders – producers, consumers and the trade - view the benefits of ethically marketed coffee and what each stakeholder group ultimately cares about when it comes to making decisions on how to allocate their limited resources.

The conceptual framework underpinning the research is depicted in the diagram below (Figure 1).

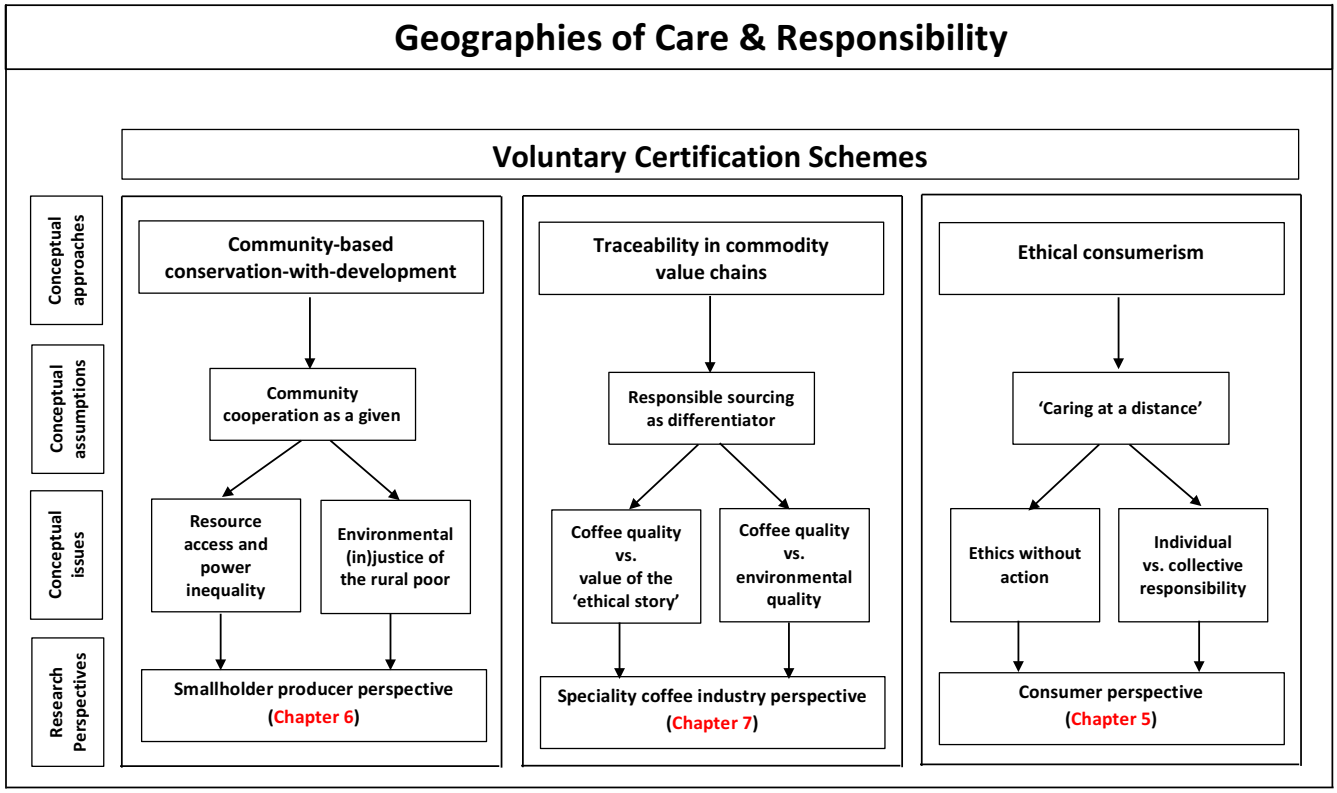


Figure 1: Conceptual diagram of the theoretical framework

1.2 Research aims and focus

The primary aim of the research was to investigate the motivations of different stakeholders to care about key sustainability issues in the coffee sector and the extent to which certification schemes and the standards that underpin them create value to key stakeholders along the supply chain: consumers, producers and businesses. Given that voluntary certifications have become almost synonymous with sustainability in the coffee sector over the last few decades, the research looked to explore the extent to which popular certification schemes and the standards that underpin them create value to key stakeholders along the supply chain. The broader objective of the research was to investigate whether current sustainability standard systems are scalable to reach a critical mass and to consider what other alternative mechanisms are available to those looking to strengthen the sustainability of the industry over the long-term. In order to answer this question, the research focused on examining the perspectives and experiences of different actors along the coffee value chain and their motivations to care about the claimed positive outcomes of third party certification schemes. This perspective of different 'motivations to care' helped examine the capacity and limitations of various sustainability initiatives (third party voluntary certification schemes and alternative trading agreements such as direct trade) to reduce or even reverse agriculture-related tropical deforestation and promote long-term development in socio-economic conditions of coffee growing communities.

Both the theoretical and practical investigation of this research focused on the coffee industry and related sustainable trading models. While third party certification schemes have largely been seen as *'the'* way to apply ethical and sustainability considerations in commodity supply chains, they are not necessarily the only answer to the challenges faced by stakeholders within commodity trading networks. The following chapters of this thesis will use the term 'sustainable trading models' as an umbrella term that includes third-party certifications, 'direct trade' and 'relationship approach' without the intention to imply that any one of them would be more superior than the other. Instead, the analysis presented in this thesis intends to highlight both the benefits and challenges of each approach and provide clarity over what situations each are able to deliver their maximum benefit.

In addition to highlighting tensions of temporality associated with short-term economic and personal benefits and long-term sustainability goals, the thesis also draws attention to the crucial role of perceived coffee quality plays in channelling resources that promote livelihood development and environmental conservation in coffee producing regions. By highlighting the relative importance material quality of coffee (i.e. taste) can play in purchasing decisions (both at the consumer as well as the industry levels) as opposed to the intangible symbolic attributes associated with 'sustainability-labelled' coffee, consecutive chapters will illustrate how efforts to help producers improve the quality and productivity of their farms can help promote improved livelihoods and environmental conservation in coffee-production landscapes without the need to rely solely on consumer goodwill for 'ethically-labelled' products.

1.3 Objectives and Research questions

At the heart of this thesis lie a series of objectives that investigate certification schemes from different stakeholder perspectives: consumer, producer and trade. Each objective is underpinned by research questions that explore stakeholders' understanding of coffee certification schemes; motivation to care about 'distant others and their environments' across various levels of the supply chain; and perceptions about their role in protecting the environment.

The objectives and underpinning research questions are:

1. To investigate the importance of ethical labels in consumers' coffee purchasing decisions and their motivations to care about the wellbeing of geographically distant producers and their natural environments – presented in Chapter 5.
    - What do consumers care about the most when purchasing coffee? To what extent do ethical labels influence consumers' purchasing decisions?
    - How do consumers see their responsibility in ensuring sustainability along the coffee supply chain? Who should care about geographically distant coffee producers and tropical environments around coffee farms?
2. To investigate the barriers and opportunities smallholder coffee growers face in remote coffee-growing villages in Honduras in terms of care and responsibility for livelihood development and conservation – discussed in Chapter 6
    - What responsibilities do smallholder producers have from family level to farming? How do these responsibilities compare with the requirements of voluntary certifications?
    - What barriers and opportunities do smallholder farmers have in terms of caring and responsibility for community development and environmental conservation?
3. To explore what value certification schemes bring to key stakeholders in the speciality coffee sector and the way ethics and care is expressed in the 'direct trade' approach – examined in Chapter 7
    - What matters most to the speciality coffee sector? How important are certifications in speciality buyers' purchasing decisions?
    - In what way does the speciality sector express care towards coffee farmers? Could the sector take more responsibility for wider conservation and community development in coffee growing areas?
4. To investigate if there are any direct linkages between coffee quality and the environmental quality of the farm – analysed in Chapter 8
        - Is there a significant relationship between coffee cup quality and individual farm quality measures?
        - Is there a significant relationship between coffee cup quality and farm biodiversity (indicated by local dung beetle abundance and diversity)?

1.4 Summary of the thesis chapters

The structure of the thesis and the connections between the individual chapters are depicted in the diagram below (Figure 2):

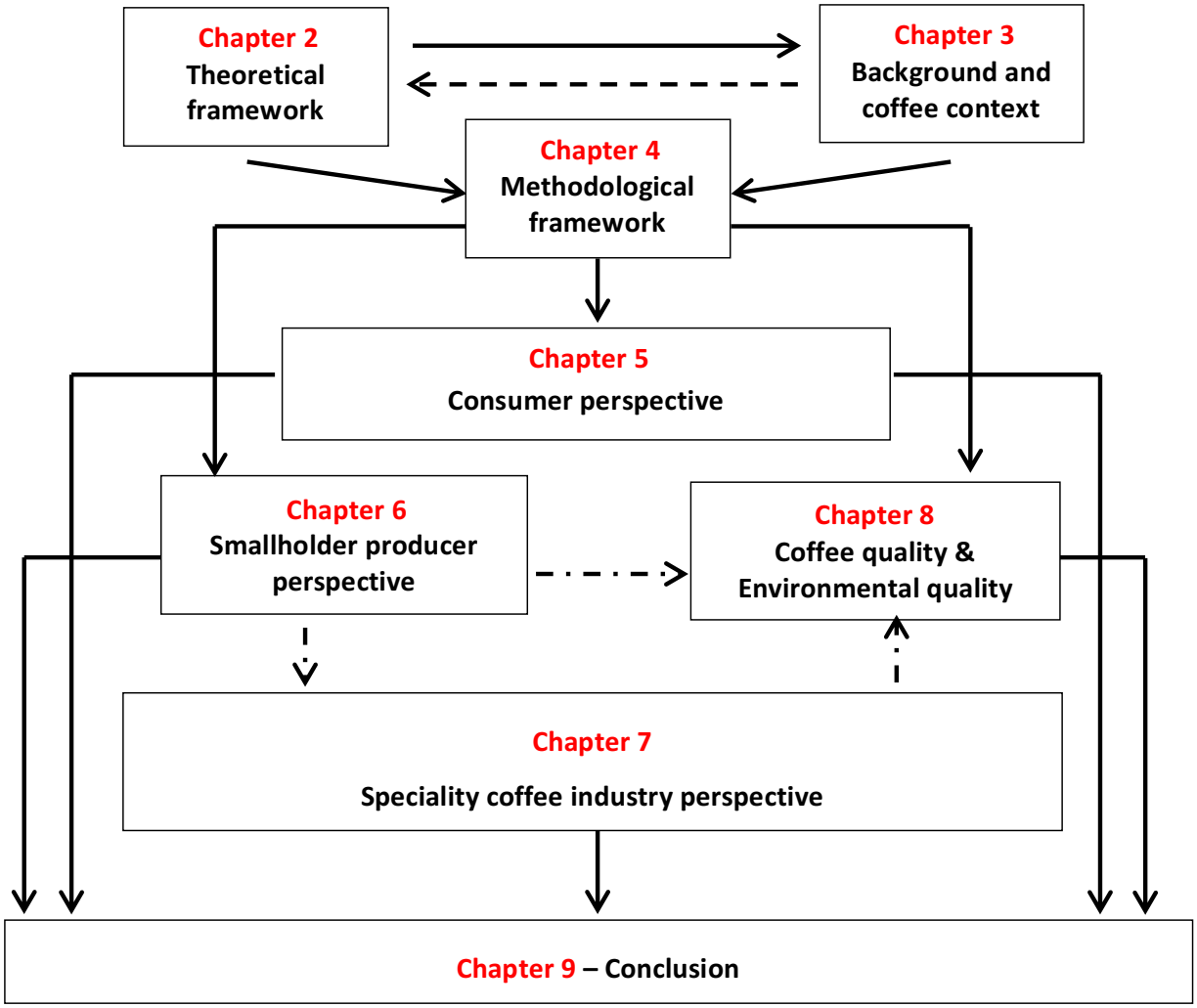


Figure 2: Thesis structure

Chapter 2 develops the theoretical framework that underpins the work presented in the rest of the thesis. Following a brief review of the literature on the development of environmentalist thinking and approaches to addressing environment–development tensions in section 2.2, the chapter goes on to examine the value and limitations of the ecosystem services approach in delivering conservation and development benefits in economically poor and environmentally sensitive areas. The chapter then explores the issues surrounding community-based conservation and the 'myth of the community'; followed by an analysis of different 'conservation-with-development' approaches. Finally, section 2.3 reviews the key issues surrounding 'ethical consumerism' and the problematic nature of 'caring-at-a-distance' including the issue of temporality that

hinders much of the success of current voluntary standard initiatives in delivering their promised benefits. Given the volume of empirical work in these areas, the list of specific literature cited and discussed in this section is representative rather than comprehensive.

Chapter 3 provides much of the background information that helps contextualise the content presented in the rest of the thesis including a historical background to the coffee market and the development and key characteristics of relevant certification systems. The first part of the chapter gives an introduction to the rationale of choosing coffee as a focus of the study and provides an overview of the main cornerstones in the modern history of global coffee trade and the unique characteristics of the Honduran coffee sector. The chapter then goes on to explore the main challenges faced by the industry including issues around market volatility, cost of production and the complexity of the value chain. The chapter then brings the various environmental factors that can affect coffee quality and producer income, including climate change, pests and diseases and different farm management practices. Finally, attention is brought onto the development of key sustainability initiatives in the coffee sector and emerging alternative trading methods which claim to complement the sustainability outcomes of earlier initiatives.

Chapter 4 explains the methodologies used for this study, investigating the perspectives of key stakeholder groups in the coffee value chain: consumers, producers and trade. Following an outline of the different methodologies used during the research, the chapter addresses key aspects of my positionality throughout the research. The chapter then provides an overview of the research design, study sites and participants, data collection and analysis for each of the empirical chapters presented in the thesis. Finally, the chapter considers the limitations of the research including limitations of positionality.

Chapter 5 presents the results of the field research carried out in the UK to investigate the importance of ethical labels in consumers' coffee purchasing decisions and their motivations to care about the wellbeing of geographically distant people and places within the coffee supply chain. The chapter evaluates the level of consumer awareness of the issues inherent in the coffee industry and the accuracy of consumers' knowledge of the claimed benefits of ethical labels. The chapter includes an assessment of the views and attitudes consumers hold about humans' relationship with nature as this is an important factor that influences consumers interest in ethical or sustainability claims of certification labels. The analysis explores the many faces of care and the barriers to caring through ethical consumption and challenges whether it is possible to be 'caring-at-a-distance' from an individual consumers' perspective.

Chapter 6 analyses the results of the field research on producer perspectives investigating the constraints smallholder coffee growers face in remote coffee-growing villages in Honduras and exploring the opportunities

producers could have for livelihood development by taking more responsibility for caring towards the wellbeing of others within their local community and the non-human environment that surrounds them. The chapter starts with an introduction to the study area and the socioeconomic conditions of the study communities. Following a description of the current livelihood strategies of smallholder coffee producers, an analysis is given on the current farm management practices and the way they impact the productivity of the farms. The chapter then goes on to explore the way smallholder coffee producers perceive their relationship with the natural environment and the implications this holds for local conservation projects. Finally, a discussion is provided to consider some key situational issues that currently pose limitations to economic development and community-based conservation efforts in the study communities and highlights what opportunities smallholders may have for improving their own livelihood development options by extending a sense of care towards the collective interest of the community and that of the surrounding natural environment.

Chapter 7 provides an overview of the perspectives of the speciality coffee sector on key sustainability issues and explores how understandings of sustainability and ethics have shifted in recent years within the industry. The interviews presented in the chapter explore the views of key stakeholders in the speciality sector on the role of certification schemes, the value of ecosystem services in quality coffee production and the added value alternative trading arrangements such as *direct trade* and *relationship approach* might bring to the sustainability agenda of the coffee sector. The chapter concludes with a discussion on the main challenges and latest trends that are likely to shape the sustainability of the industry in the long-term.

Chapter 8 presents the results of the second part of the field research in Honduras which aimed to advance understanding of the connections between the ecological services of a coffee farm and the quality of its crop. The chapter evaluates the actual and potential contributions selected coffee farms are making to forest and wildlife conservation by assessing the correlations between the environmental conditions, biodiversity and the quality of the coffee grown on each farm. This part of the research was carried out with the view to help find alternative ways to maximise the income of smallholder coffee producers who have the potential to grow high quality coffee in an environment that supports high levels of biodiversity.

Finally, **Chapter 9** summarises the findings of the previous chapters and presents some conclusions on how efforts to address livelihood development and conservation challenges in the coffee sector may evolve in the future to embrace a wider ethics of care towards geographically distant people and places along the value chain.

Chapter 2: Theory and analytical framework

2.0 Aims and objectives

This chapter introduces the theoretical framework that underpins the data presented in the rest of the thesis. Following a brief review of the literature on the development of environmentalist thinking and approaches to addressing conservation–development tensions (Section 2.1), the chapter goes on to examine the issues surrounding 'ethical consumerism' and the problematic nature of 'caring-at-a-distance' including the issue of temporality that hinders much of the success of current voluntary standard initiatives in delivering their promised benefits (Section 2.2). Finally, Section 2.3 reviews the issues of relying on certifications to deliver community level conservation and socio-economic development. Given the volume of empirical work in these areas, the list of specific literature cited and discussed in this section is representative rather than comprehensive.

2.1 Introduction

Our relationship with the natural environment has always been important for humanity but the way we consciously frame and talk about environmental concepts has been changing rapidly in recent decades. One of the most long-held assumptions of researchers, policy makers and the public is that we have to choose between economic development and environmental conservation and that the two conflict with each other (Karshenas, 1994; Hartmenn, 2010; Nath and Dobe, 2016). The 'environment–development' debate dates back to the 1960s when the global environmental movement drew attention to transboundary pollution and the wider environmental impacts of industrial development (Pepper 1996). The main focus of environmental programmes at the time were limited to dealing with industrialization related pollution issues while aiming to increase productivity in agricultural sectors for the primary purpose of poverty reduction and economic development (Roe, 2008). Ever since the industrial revolution, global population rise coupled with the increase in the number of people living in poverty have been seen as major threats to the survival of the global human society (Goldsmith and Allaby, 1972; Boulding, 1973; Hardin, 1974; Acemoglu and Robinson, 2013). Many of these issues were aired at the first United Nations Conference on the Human Environment, held in Stockholm in 1972, which helped initiate a more global recognition of the environmental impacts of development, as well of the complex linkages between environment and development of the poor more generally (Pepper, 1996). The conference stressed that although the poor often suffer more from environmental degradation (due to their high subsistence-related dependence on the environment), they may lack the power or resources to protect it and sometimes cannot afford not to degrade it (Reardon and Vosti, 1995). The need to break this vicious cycle received attention in the 1980s as the Brundtland report (World Commission on Environment and Development, 1987) which brought the concept of sustainable development to global prominence. The report recognised that "*threats to the sustainable use of resources come as much from inequalities in people's access to resources and from the ways in which they use them as from the sheer numbers of people*" (WCED, 1987, p. 95) and argued

that economic growth – albeit sustainable growth – is key in addressing these threats and achieving sustainable development. The recognition that this 'vicious cycle' between poverty and environmental degradation needed to be broken in order for environmental improvements or development to occur (Reardon and Vosti, 1995; Adams, 2007; Bremner et al., 2010; Agrawal and Lemos, 2015; Mittal and Gupta, 2015) was coupled with the hypothesis of the 'Environmental Kuznets Curve' (Stern et al., 1996). The hypothesis holds that although economic development necessarily has a negative impact on the environment in the short term, in time this development will allow investments in greener technologies (Stern, 2004). The promotion of economic growth gained priority over conservation agendas, and the argument, that environmental projects have to take a second place in importance to socio-economic development, has shaped much of the environment-development discourse ever since (Dasmann et al., 1973; Gasper, 2016).

By the end of the 1980s, evidence of the environmental and social failures of technocratic approaches to economic development expanded the environment-development debate to include the rhetoric of sustainable development, the concept of which formed the basis of the World Conservation Strategy document (Adams, 2001; Sanderson and Redford, 2004; Bass and Dalal-Clayton, 2012; Elliott, 2012). In ecology, sustainability describes how biological systems remain diverse and productive over time, a necessary precondition for the well-being of humans and other organisms (Brown *et al*., 1987; Constanza and Patten, 1995). In more general terms, sustainability is the capacity to "maintain", "support", or "endure" some form of struggle or hardship caused by suboptimal environmental conditions (Oxford, 1964). Sustainability, as defined by the United Nations, entails "*the long-term maintenance of responsibility, which has environmental, economic and social dimensions and encompasses the concept of stewardship and responsible management of resource use* (UN, 1987)." The most widely quoted definition of sustainability, published by the Brundtland Commission of the United Nations on March 20, 1987, defines sustainable development as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (Brundtland, 1987). In other words, sustainable development, as the organising principle of sustainability, entails the maintenance of a dynamic equilibrium between local and global efforts to meet basic human needs and the conservation of the capacity of the natural environment to regenerate itself (Daly, 1992; Kates *et al*., 2005).

These ideas were further developed at the Rio 'Earth Summit' (World Conference on Environment and Development) in 1992, although many delegates from the global South felt that the agenda was biased towards the global North's concern about forest decline, biodiversity loss and climate change and failed to address the global South's concern about human socio-economic development (UNCED, 1992). The World Summit on Sustainable Development in Johannesburg in 2002, further advanced the notion of sustainable development extending its reference to environmental justice, social equity and the eradication of poverty (Jabareen, 2008; Dempsey et al., 2011). Since the 1987 Brundtland Commission Report, there has been a global consensus that environmental, social and economic challenges must be addressed equally to achieve sustainable development.

Since then the integration of biodiversity and natural resource conservation into economic development strategies has become a widely acknowledged policy goal (Gadgil *et al.*, 1993; Angermeier and Karr, 1996; Agrawal and Gibson, 1999; Langlois et al., 2012; Norström et al., 2014). The 2005 World Summit on Social Development identified three main Sustainable Development Goals - economic development, social development and environmental protection (UN, 2005) – that have since become known as 'the three pillars of sustainability'. Even though these three pillars are believed to be mutually inclusive and reinforcing, the connection between economic development and environmental conservation has been seen as the most conflicting segment of the triangle.

Despite the widespread popularity of the term 'sustainable development', the scale of global environmental degradation, climate change, overconsumption, and societies' pursuit of indefinite economic growth in a closed system questions our current assumptions about the meaning of sustainability and sustainable development (State of the World 2013; Lorek and Fuchs, 2011). Although the dominant model in sustainability science conceptualises ecosystems as "*complex adaptive systems in which human societies are necessarily an integral part*" (Berkes, 2004), the rapidly increasing human population and the wasteful lifestyle within many 'developed' societies release pollution and use up natural resources faster than they are able to recover (Magee *et al*., 2013). Despite all the efforts to achieve sustainable development, an estimated 842 million people are still suffering from chronic hunger today, most of whom live in impoverished rural areas where the main livelihood option is agriculture (FAO, 2014). Global agricultural production faces the challenge of increasing output by 60 percent to meet the expected demand of a global population of 9 million by 2050, by which time 10-20 percent more people could be at risk of hunger due to climate impacts (WFP, 2009). Moving towards sustainability therefore is not only an environmental but also a social challenge that requires changes in various aspects of society including changes to ways of producing, trading and consuming products and services that helps resurrect the connection between human needs and the needs of the natural environment (IISD, 2009).

2.1.2 Approaches to addressing environment–development tensions

The rhetoric about conservation and development has shifted considerably in recent years from highlighting the negative impacts of economic development on the environment to emphasising the positive implications of conservation for society and its ultimate contribution to socio-economic development (Lele *et al*., 2013). Despite the overlaps in the outcomes of conservation and development, the contradictory nature of their approach often fails to serve both objectives at the same time (Redford and Sanderson, 2000). While efforts to combine development and conservation goals are often argued to be overambitious and underachieving (Wells and Brandon, 1992; Hulme and Murphree, 2001), singular focus on either end of the environment-development matrix is rarely (if ever) able to achieve long-term success in their respective domains (Adams *et al*., 2004).

As debates surrounding the connections between poverty and resource access have evolved, increasing attention has been placed on the extent to which economic development relies on adequate functioning of 'ecosystem services' (Watson and Zakri, 2005; Gómez-Baggethun et al., 2010; Costanza et al., 2016). Ecosystem services (ES) are defined as those natural processes which support life, regulate the environment, provide products or meet cultural or aesthetic needs (Haggar *et al.*, 2012). The idea that human society benefits from the natural environment in various ways, can be traced back several decades (Wilson and Matthews, 1970; Ehrlich and Mooney, 1983), but really gained momentum from 1997 onwards (Costanza *et al.* 1997; Daily 1997b; Fisher *et al.*, 2009; Gomez-Baggethun *et al.*, 2010; Costanza et al., 2016). Since then, the concept of ES has become almost *the approach* to thinking about the nature–society relationship (Lele *et al.*, 2013). The basis of the theory and practice of the ''ecosystem approach'' (CBD, 2000) is closely related to the problematic nature of measuring the value of the natural environment (Costanza et al., 2016; Tietenberg and Lewis, 2016). At the heart of the ES concept lies the assumption that *"ecosystems degrade because society knows neither the 'true extent' of these benefits (because some of them are indirect and thus ignored) nor their 'true value' (because some of them are not priced correctly)"* (Lele *et al.*, 2013, p. 345). This lack of recognition of the value of the biotic nature to human well-being arguably results in large-scale destruction of ecosystems, waste of natural resources and argued to be leading to a suboptimal outcome for human societies.

Approaches seeking to address overconsumption in the global north gained popularity in the 1970s (Meadows *et al.,* 1972; Goldsmith *et al.*, 1972) and have evolved, over time, into broader movements promoting various 'sustainability transitions' (Seyfang 2006; 2007) aiming to reduce externalities by attempting to 'cost' environmental damage and pollution (Griffin and Brompley, 1982; Lynam and Herdt, 1989; Pretty *et al.*, 2001; Freeman et al., 2014; Costanza et al., 2016). The estimates of the degradation of natural ecosystem services indicating an economic loss of $ 6.6tn per year (11% of world GDP) while the estimated cost of conserving natural ecosystem health and diversity is estimated at only $76bn per year (0.12% of world GDP) (Juniper, 2013). Most ES approaches recognise the importance of finding a way to express the value of ecosystem services in monetary terms (Gómez-Baggethun *et al.,* 2010; Sukhdev, 2008; Daily *et al.*, 2009). As a response to the ineffective accounting for economic value of ecological services, various payment schemes (PES – Payments for Ecosystem Services) have been developed that aim to give direct payments to 'service providers' as compensation for the revenue lost by conserving part of the ecosystem (Ferraro and Kiss, 2002; Engel *et al.*, 2008; van Noordwijk and Leimona, 2010; Pagiola and Platais, 2016) and increase the opportunity costs of deforestation in affected areas (Wunder *et al.*, 2008; Börner *et al.*, 2010). However, the theory and practice of expressing the impact of ES on human well-being in monetary terms has been a much debated topic (Carson, 1998; Bockstael *et al.,* 2000; Turner *et al.,* 2004; Gómez-Baggethun and Ruiz-Pérez, 2011) and have raised some fundamental ethical concerns. It has been argued that attempting to express the intrinsic value of anything that involves an ethical goal in monetary terms (conservation of natural assets, human lives, social justice, etc.) may not only be impossible but rather morally questionable (Potschin and Haines-Young, 2011).

Values, as with all ethical concerns, are merely social constructs (Peterson, 1999) and are predominantly concerned with the needs of human beings and societies (Hayward, 1998). Indeed, ecosystem processes gain value (positive or negative) only within specific human contexts and engagements (Lele *et al*., 2013). Although, the dialogue of ES and the terms 'services' arguably shifts the focus on the positive, nurturing aspect of the natural environment, it can also turn a blind eye to its often hostile elements. Besides pests and diseases (Dunn, 2010), wildlife can also become a dis-service to human populations via crop damage, predation on livestock and direct threat to human lives (Woodroffee *et al.*, 2005; Lele *et al.* 2013). Some aspects of biodiversity will never have a positive utilitarian value to human society (Gadgil, 1998) and sometimes may even invoke a negative value (i.e. in the case of pests and diseases). The kind of biodiversity ordinary people care about is often linked to charismatic taxa or places (Guha, 1997; 2009; 2013) and not the entire spectrum of natural capital (Mace *et al.*, 2012). It has been argued that this 'selective care' should not be treated as a sign of public ignorance but rather as one way in which society cares about the environment (Lele *et al*., 2013; Harper, 2015).

The geographic distance created by global commodity trade only exacerbates the issue of ignorance about the value of both environmental services as well as human lives and raises questions of who should take responsibility for the protection of 'distant' environments and people. It has been argued that the development of appropriate incentive mechanisms is crucial in allowing and encouraging producers to care for their environment while having a chance to improve their livelihoods (Jha *et al.*, 2014). The premiums attached to voluntary certification schemes attempt to provide a monetary incentive to producers to protect essential natural resources and internalise some of the social and environmental costs of intensive agricultural production. Whether voluntary certification systems are sufficient to improve livelihood options of the rural poor and invoke a notion of care via the promotion of 'ethically labelled products' are discussed in the following sections.

2.2 Ethical consumerism

2.2.1 Geographies of consumption and the rise of voluntary standard systems

Modern geographies of food are argued to distance consumers from producers and the environments where their food originates from (Lockie 2009; Lockie and Kitto, 2000; Goodman, 2002; Guthman, 2002; Newholm and Newholm, 2016). This distance makes the acquirement of information about the circumstances of production costlier, more time consuming and can create misinformation or lack of knowledge about the origins of production (Cook *et al.*, 1998; Paddock, 2016). Considering the wide range of products purchased and used on a regular basis, capitalist consumer societies tend to invoke a level of ignorance about the circumstances of production which exacerbates the issue of disconnection between production and consumption (Cook *et al.*, 1998, 2004, 2006; Goodman and DuPuis, 2002; Grunert, 2002; Davies et al, 2016). Another major weakness of global food networks is that the cost of using public goods and the associated negative social and environmental externalities of intensive agricultural production are usually not accounted for sufficiently when calculating market prices of food items (Donald 2004; Lehnert et al., 2016).

One way to address such market distortions is to find mechanisms (Pagiola *et al.*, 2002a, 2002b; Grieg-Gran *et al.*, 2005; Bishop and Pagiola, 2012; Wang et al., 2017) that provide a sustainable price premium for producers that offsets the costs of ensuring improved social and environmental conditions within their production systems (De Boear, 2003; Taylor, 2005; Muradian and Pelupessy, 2005; Consumers International, 2005; Stranieri et al, 2016; Pagell and Wu, 2017). Many such market-based mechanisms are linked to voluntary standard setting and certification systems that are meant to help build accountability and transparency into otherwise complex global commodity supply chains (Daviron and Ponte, 2005; Oxfam, 2005; Segerson and Miceli, 1998; Liu and Pazderka, 2004; Giovannucci and Ponte, 2005; Henson, 2008; Gilbert, 2008; Agrawal and Lee, 2016; Tayleur et al, 2016). In an effort to address the geographic disconnection between production and consumption of global food commodities, various types of assurance schemes have been developed. Originally these were created to address food safety issues to reassure the consumer that a certain set of quality standards was met during the production, processing and trade of the product (Wood *et al.*, 1998; Morris and Young, 2000; 2004; Eden *et al.*, 2008; Nilsson *et al.*, 2004). Initiated by Northern societies, voluntary ethical labelling schemes expanded to food safety theme to include social and environmental aspects of production methods.

There are two underlying assumptions underpinning ethical labelling schemes: one is the idea that the price premium (of certified coffee) is going to encourage producers "*to use and protect ecosystems in ways that lead to the joint provision of ecosystem services*" (Ferraro *et al.*, 2005, p420). The other assumption is that consumers, in the belief that these certification schemes have environmental and or social benefits (Donald, 2004), are willing to seek out and pay more for products that are produced in ways that are in alignment with their value systems (Auger *et al.*, 2003; De Pelsmacker *et al.*, 2005; Didier and Lucie, 2008; Pirscher et al., 2016).

As consequent chapters of this thesis will highlight, both assumptions can be problematic. The following section reviews literature on the phenomenon of this 'attitude–behaviour gap' and the associated challenges of motivating ethically conscious consumer behaviour and 'caring from a distance' (Carrigan and Attala, 2001; Vermeir and Verbeke, 2006; Nicholls and Lee, 2006; Bray *et al.*, 2011; Shaw et al., 2016; Caruana et al., 2016; Hassan et al., 2016; Kure and Laursen, 2016; Carrington et al., 2016).

2.2.2 Geographies of care and responsibility – caring-at-a-distance

For the last decade, human geographic enquiry has been increasingly engaged with theories of care and responsibility and ethical consumption as a site of moral behaviour (Popke, 2006). Theoretical and conceptual debates about the ethics of care and responsibility have emerged within geography's so-called 'moral turn' (McEwan and Goodman, 2010; Raghuram, 2016) exploring ethical concerns and politics of collective action in alternative commodity networks (Barnett et al., 2005; Barnett and Land, 2007). Geographies of care and responsibility have become of great importance regarding the consumption of items that have environmentally or socio-economically distant benefits (Lawson, 2007; Caruana and Crane, 2008; Eden *et al.*, 2008a; 2008b; 2008c; Shaw et al., 2016).

The complexities of caring and responsibility in commodity supply chains are most apparent when considering the consumption of food. Food choices are no longer (supposed to be) based only on dietary or taste preferences but rather become a site for moral and political enquiry. The idea behind ethically labelled food products is that consumers will actively seek out and prioritise products which possess some form of credibly claim about the ethical sources of its ingredients. Thereby individual consumption choices are argued to be connected to broader political movements aimed at promoting social justice in global supply chains (Barnett et al., 2005; Harrison et al., 2005; Littler, 2009). Ethically minded consumers are made to believe that their collective consumption choices are needed and able to change the actions of the 'big business', fight poverty, promote social justice and contribute to a cleaner and more sustainable global economy (Pitt *et al.,* 2002; Rezabakhsh *et al.,* 2006; McEwan and Goodman, 2010; Saito, 2016; Wright, 2016). But is this really the case? Can global inequalities be rectified through acts of 'ethical consumption'? Can ethical certification schemes be expected to solve all cultural, political and structural issues within poverty-ridden commodity supply chains?

The power of consumer choices has become a much debated topic in ethical consumer literature (Renting *et al.*, 2003; Watts, 2005; Lockie, 2009; Raynolds, 2017). The market for certified products is based on a specific segment of ethically conscious consumers who show deeper consideration for global social and environmental issues than the average consumer (TCC, 2009; Kollmuss and Agyeman, 2002). Consumers nowadays are expected to take responsibility for the social and environmental implications of their everyday actions. Green consumerism' involves situations where 'environmental', 'ethical' and 'sustainable' consumer choices express a

preference for products or services which do least damage to the environment and support some form of social justice (Young *et al.*, 2010; Pirscher et al., 2016). Care for the environment can be expressed through a variety of environmentally conscious everyday activities such as recycling (Berkin *et al.*, 2007; Mourad, 2016) or reducing food waste (Goodland, 1997; Vinnari, 2008; Schanes et al., 2016), water (Ridoutt and Pfister, 2010; Chenoweth et al., 2016) or energy (Zhou and Young, 2016; Aboagye-Nimo et al., 2016), as well as via the purchase of certified 'environmentally friendly' products (Magnusson *et al.*, 2003; Lockie *et al.*, 2002; Watkins et al., 2016). There is, however, a distinct difference between the two types of environmental 'care'. While the resource efficiency argument (Henningsson *et al.*, 2004; Connolly and Prothero, 2008) focuses on the reduction in quantity of a certain product or resource, certification labels typically ask consumers to consider the consequences of their purchasing decisions on geographically distant people and environments (Seyfang, 2006; Watkins et al., 2016).

The potential for everyday consumption to embody a notion of 'caring-at-a-distance' continues to be a much debated topic in human geography (Conradson, 2003; Popke, 2006; Caruana, 2007; Lawson, 2007; McEwan and Goodman, 2010; Shaw et al., 2016). Much of the debate on geographies of care and care ethics (Popke, 2006) has been concerned with distance where ethics arise out of a sense of responsibility toward unseen others. Debates about caring-at-a-distance in ethical consumption have been concerned with the possibilities of extending a notion of care towards those spatially removed from the places of consumption (Corbridge, 1993, 1994, 1998; Silk, 1998; Smith, 1998, 2000, 2002; Lee and Smith, 2004). Many have argued that consumption can and should be interpreted as an important site of moral behaviour (Sayer, 2003; Grauel, 2016) and that 'sustainable consumption' can be guided by notions of 'ecological citizenship' (Sassatelli, 2001; Goodman, 2002; Conradson, 2003; Barnett *et al.*, 2004; Popke, 2006; Seyfang, 2006; Lewis and Potter, 2011; Lewis, 2016). The myriad of market-based voluntary standard systems that emerged over the last decade, all aim and claim to bridge the gap between places of production and consumption (Winter, 2003; Watts *et al.*, 2005; Shaw et al., 2016), and challenge the understanding of care based on the global consequences of everyday purchasing decisions (Ehrenreich and Hochschild, 2003).

Ethics of care, however, is not without complications and contradictions (Cox, 2006; Goodman, 2010). Geographers have been concerned with the ways in which social relations produced through emotional connections towards distant others can also become expressions of power (Lawson, 2007). England (2006) puts forward the view that notions of care is always bound up with relations of power, thus care can become a problematic performance, particularly in situations where the care giver and the receiver is spatially as well as culturally separated – as is the case in sites of ethical consumption. Care towards distant others in global supply chains necessarily reveal inequities within global economies as well as between individuals. Ethical consumption agendas rely heavily on discourses of the 'haves' and 'have nots' and often portray 'smallholder' producers of the global South as helpless victims of global capitalism in desperate need of salvation by the benevolence of

first world consumers (McEwan and Goodman, 2010). Ethical initiatives such as the Fairtrade movement work up these old distinctions between affluent north and poor south by reminding norther consumers of their post-colonial ethical obligations (McEwan and Goodman, 2010). Definitions of what is 'fair' and 'ethical', however, rarely becomes a subject of enquiry (McEwan, 2009).

While the question whether ethics of care can be appropriately expressed via everyday consumption choices has been open for debate for decades (Blowfield, 1999; Barnett et al., 2010; Clarke, 2008; Johnston, 2008), some also argue that ethical consumer behaviour is not only a choice but rather a moral obligation (Varul, 2008). Since the notion of 'caring-at-a-distance' is socially constructed and economically defined (Popke, 2003, 2006, 2009), the moral obligation of becoming an 'ethical consumer' of ethically labelled products becomes problematic on many levels. Cause-related ethical labelling schemes depend upon the ability and willingness of Northern consumers to pay sufficient premiums for commodities that are allegedly better in some ways; either for the environment, or for producers and their community (Loureio and McCluskey, 2000; Moon *et al.*, 2002; De Pelsmacker *et al.*, 2005; Gallenti et al, 2016; Schäufele and Hamm, 2017). These labelled products tend to be more expensive hence care towards distant others becomes the privilege of the affluent (Dolan, 2005, p. 383; Guthman, 2003). As Howard and Willmott (2001, p. 3) points out, for some, an 'ethical' choice may be how best to feed a family on a limited budget (see also Whatmore, 1997 and Miller, 2001). Glorifying the act of 'ethical consumer behaviour' has the danger of ignoring other sites of ethical actions such (Guthman, 2007). It is, therefore, important not to portray ethical consumption as the only way where care towards distant others can be expressed.

2.2.2.1. Ethics without action

Although consumers are becoming more sophisticated and aware of various social and environmental issues surrounding production of food and other commodities, this heightened awareness does not necessarily translate into more ethically conscious purchasing decisions (Boulstridge and Carrigan, 2000; Carrigan and Attalla, 2001; Codron *et al.*, 2005; De Pelsmacker *et al.*, 2005; Vermeir and Verbeke, 2006; Shaw et al., 2016). This so-called attitude-behaviour gap is one of the most researched inherent flaws of ethical consumption (Shaw et al., 2016).

The notion of the attitude-behaviour gap implies that when consumers express interest in buying ethical products, only a minority 'walk their talk' (Kure and Laursen, 2016). Various studies have explored the phenomenon of 'ethics without action' (Carrigan and Attalla 2001; Chatzidakis et al. 2007; De Pelsmaker et al. 2005; Padel and Foster, 2005; Nicholls and Lee 2006; Young et al., 2010; Carrington et al. 2010; Bray et al. 2011) but no definitive answer has been given to explain the reasons for this 'attitude–behaviour gap' (Caruana et al., 2016; Hassan et al, 2016, Kure and Laursen, 2016). In the context of ethical consumption, previous models of

human decision-making assumed that more information about the production circumstances of a product is likely to trigger desirable behaviour change amongst the target audience (Strong, 1996; Follows and Jobber, 1999; Horowitz and McConnell, 2002; Auger *et al.*, 2003; Taylor, 2005; Loureiro and Lotade, 2005). This so called 'knowledge-fix' approach, however, has been found to be ineffective - consumer awareness seems to play only a limited role indecision making (Guthman, 2003; Barnett *et al*., 2005; Eden *et al.*, 2008a, 2008b; Kneafsey et al., 2016; Ewans and Miele, 2017). Consumers have been shown to rely on more than just cognitive information in determining behaviours involving ethical content (Vitell, 2003; Newholm and Shaw, 2007).

The hierarchical attitude–intention–behaviour model presented in Ajzen's (1985; 1987; 1991) Theory of Planned Behaviour (TPB) challenged the simplicity of previous notions of the 'attitude-behaviour gap' and revealed the complex, socially embedded and contextual nature of ethics in consumption (Hassan et al., 2016). The TPB model has served as a significant framework for later studies aiming to examine the complexities of ethical consumer decision-making processes (Follows and Jobber, 1999; Shaw *et al.*, 2001; Fukukawa, 2002; Chatzidakis *et al.*, 2006; Lehnert et al., 2016). Considerations over price, convenience, brand familiarity and taste of a product coupled with the power of emotions (Havlena and Holbrook, 1986; Sherman *et al.*, 1997; Laros and Steenkamp, 2005; Ettlinger, 2004; George and Dane, 2016), personal values and self-identity (Shaw and Shiu, 2002; 2003; Shaw *et al.*, 2005; Barnett *et al.*, 2005; Caruana, 2007; Crompton, 2010; Carrington et al. 2012), beliefs and habits (Verplanken and Wood, 2006) all form a complex network of motivations that influence the expression of care at the point of purchase. Additional factors influencing the purchasing process include conflicting inner and/or social values and consequent cognitive dissonances (Carrigan and Attalla, 2001; Steenhaut and Van Kenhove, 2006; Harrison *et al.*, 2005; Connors *et al.*, 2001; Pepper *et al.*, 2009) as well as rationalisation and neutralisation techniques related to feelings of guilt (Papaoikonomou *et al.*, 2011; Chatzidakis, 2015; Chatzidakis *et al.*, 2007, 2012; 2016). Furthermore, the complex relationships between social context, past incidences (Wynne, 2001), the credibility of the information provider (Hibbert *et al.*, 2007; Fenko et al., 2016) and a sense of responsibility have also been shown to make significant impact on consumers' purchasing behaviour (Cotte *et al.*, 2005; Kjærnes, 2007; Hosta and Žabkar, 2016; Savolainen, 2017). Theories concerned with understanding ethical content in consumer decision making assume that consumer values are stable and directive of behaviour which inevitably traps businesses into a defensive and reactive position (Kure and Laursen, 2016). However, care can be expressed in a variety of ways some of which may include refraining from consumption of items considered as lacking ethical value (Shaw et al., 2016). Instead of trying to 'motivate' consumers to express a sense of care and responsibility by buying more ethically labelled products, Kure and Laursen (2016) suggests, consumers and businesses concerned with corporate social responsibility could engage in an 'open flow of dialogue' where they mutually agree on what can be defined as 'good and ethical consumption'. By questioning the fundamental possibility of 'sustainable growth' Bradshaw and Zwick (2016) move the debate about intention-behaviour gap from the narrow context of ethical consumption into the broad context of business ethics. Ethics of sustainability and ethics of care should be compatible (de la Bellacasa, 2012)

however, some argue that the notion of care in ethical consumption is based on a fundamental flaw where ethical decisions rely on capitalist market mechanisms to correct the negative externalities created by capitalist consumerism itself (Bradshaw and Zwick, 2016). If capitalism is viewed as inherently ecologically and socially harmful then ethical consumerism does not defetishize the commodity, but acts as a "new layer of commodity fetishism that masks the harms of capitalism by convincing society that the harms of capitalism can be rehabilitated with the commodity form itself (Gunderson, 2014).

Besides the issues of caring about geographically distant people and places, the act of care for the environment also brings up the question of temporality. With the growing concern over the social adversities of commodity production systems, voluntary certification and labelling schemes expanded to nurture a wider 'ethics of care' towards 'distant others' and their environments (Popke, 2006, pp. 506). However, the 'success' and impact of such schemes are difficult to measure not only due to the significant geographical distances but also due to the relatively long timeframes over which their impacts may occur. From the consumers' point of view, the focus on personal and family gains can make the long-term inter- and intra-generational environmental impacts secondary in importance. On the producers' side, future positive gains may be discounted in favour of immediate short-term benefits (Davies, 1996), often as a result of a lack of alternative options and desperation for survival (Davies, 1996; Scherr, 2000; Gray and Moseley, 2005). Timeframes are also important at the industry level. Contrary to the perspectives of individual producers and consumers, businesses are often better placed to consider the medium- to long-term impacts of their decisions at which point 'moral or ethical decisions in the present will become the foundation for long-term sustainability of the business in the future.

'Caring-at-a-distance' also comes with certain spatial challenges as the end consumer has very few means to check if an ethical scheme has achieved it claimed benefits (Smith, 1998; Goss, 2004; Cook, 2004; Watts *et al.*, 2005; Popke, 2006; Lawson, 2007; Aprile et al., 2016). The idea that consumers should 'take responsibility' for distant others is just one of several abstract constructions of what counts as 'good' and 'ethical' consumption and living up to this idea is often justified with references to personal taste and practical circumstances (Grauel, 2016). But are personal taste and practical circumstances mere justifications? The benefits emphasised by ethical labelling schemes tend to impact people and places which are usually geographically removed from the consumer and make relatively few claims about the tangible benefits that can be detected at the point of consumption (Nunes and Rivanto, 2001; Poelmans and Rousseau, 2016). The intangible nature of ethical credentials of consumption choices makes caring-at-a-distance even more problematic. The invisibility of care behind the ethical credentials of a product makes it difficult to appreciate its value at the point of consumption. Tangible qualities such as taste makes expression of care easier through consumption. While ethical labelling schemes offer the reframing of non-material values and identities, the material values such as quality and taste of the certified product (something that would be tangible for the consumer) tend to be left behind (Tovar *et al.*, 2005; Poelmans and Rousseau, 2016; Mayes, 2016). The benefits of certified products, from the consumers'

point of view, are intangible, difficult to monitor and are often detached from the actual material quality of a product (Olshavsky and Miller, 1972; Anderson and Laband, 2005; Grunert, 2002; Larson, 2003). These so called 'credence attributes' mostly offer the feeling of 'having done something good' (Adams and Raisborough, 2010). The sustainability of this 'feel-good' factor is rather questionable as positive attitudes towards ethical labelling (or certification schemes) does not necessarily translate into positive purchasing behaviour on an ongoing basis (Davies et al, 2012; 2016). By looking at the motivation behind mainstream ethical consumption Davies et al (2016) explore why consumers absorb ethical habits into their daily consumption, despite having little interest or understanding of the ethics they are buying into. They conclude that ethical attitudes, values and rational information processing have limited reliability in mainstream ethical consumption. Rather, they suggest, the primary drivers for consumption lie in habits, self-gratification and peer influence. Therefore, ethical brands which focus explicitly on ethical messaging and ignore the material qualities of the product, limit their appeal to mainstream consumers. Taste is argued to dominate ethical considerations in the context of food products which are considered self-indulgent treats such as chocolate (Poelmans and Rousseau, 2016). It is less clear though whether the same is true for everyday food items which might not be considered as luxury items, such as coffee.

Building on Foucault's (1997) notion of 'ethics as care of the self,' Barnett *et al.* (2005b) helped to broaden the idea of ethics to all aspects of everyday consumption, suggesting that 'everyday' consumption practices already involve ethical considerations while ethical trade initiatives do no more than "work up these already existing caring motives" (Popke, 2006, pp. 509; see also Adams and Raisborough, 2010; Hiller et al., 2016). As Kjaernes (2007, p. 43) put it: "*what if people think they are (already) doing the right thing, that others should take responsibility, or that specific purchases are not an efficient form of action?*"

2.2.2.2. Collective vs. individual responsibility

The notion of the attitude-intention-behaviour gap implies that the responsibility for making ethical choices in the market rests with individual consumers (Carrington et al., 2016). Placing consumption at the centre stage of moral behaviour have proven to be problematic, mostly because ethical consumption agendas focus on the responsibilities of individuals rather than how individuals can become part of a collective action (Barnett et al., 2005; Barnett and Land, 2007). By focusing only on the responsibilities of the individual, it becomes difficult to answer questions like: "why people should care about distant people and places and what do we do with people who simply do not care" (Braidotti, 2006, p. 119). Barnett et al. (2005, p. 43) therefore propose a model of collective responsibility in which 'individualised ethical responsibility is transformed into a practice of collective, political responsibility'. Many argue that ethical consumption can and should be considered as a multi-level, rather than micro-individual phenomenon (Caruana and Chatzidakis 2014). As Young (2003) argues, consumers are not individually responsible for poor working conditions in global supply chains, but they are responsible as participants in the global economy. Ethical consumption therefore, becomes a collective political responsibility

rather than an individual obligation. In an increasingly unsettled and unequal world, ethics of care and responsibility both at the individual and the collective levels matter more than ever before. Ethics of care in the context of consumption asks individuals to step out of their private space and connect with the interests of the collective, not because it might save the world but rather as expressions of care might help to build the knowledge, and positive relationships that create the capacity for change in otherwise faceless commodity networks (Kneafsey et al., 2008; 2016).

It is not so much ethical labels that can connect consumers with producers in distant landscapes; rather a sense of care and responsibility towards unseen consequences of one's actions is what connect individuals to distant communities and places. Ethical consumption thus can provide an opportunity for re-thinking our responsibilities toward unseen others and cultivate a renewed sense of social interconnectedness (McEwan and Goodmann, 2010). This politics of connectivity (Massey, 2004) is based on the constitution of romanticised distant places, through which consumers can develop a sense of responsibility for people to whom they are not directly connected. Consumption has become not only a way to express notions of care but also a platform for romanticised ideas of distant rural communities and idyllic natural environments. As Dolan (2005) put it, by making ethical consumption choices, affluent consumers are able to 'immerse themselves in a foreign world of fantasy, where workers are content and the earth is clean' (Dolan, 2005, p. 369). This collective responsibility has been explored in most detail in research on the demand for ethically-sourced or fairly-traded products which also, in turn, focus attention on the power of the collective at the producer level (Cook et al., 2007; Goodman, 2008). The concept of relying on individuals to act in the collective interest of the community, however, can be problematic particularly in rural communities where access to resources and power to influence are rarely shared equitably between individuals.

As the essence of the 'fair trade' movement – as well as many other ethical trade initiatives - is based on a profound faith in the power of the collective, this discussion about ethical consumerism would not be complete without considering the implications of this notion of 'faith in the collective'. The following section therefore, will review how 'collective care' can be problematic in community-based conservation and development approaches and discusses the difficulties with relying on ethical certification and labelling initiatives to simultaneously deliver community level conservation and socio-economic development in resource-poor rural situations.

2.3. Voluntary certification as a market based 'conservation-with-development' approach

Given the rapidly decreasing area of undisturbed ecosystems, the long-term success of conservation efforts is argued to depend on acknowledging the positive potential of human-managed agricultural lands for delivering important benefits to biodiversity and natural ecosystems (Tscharntke *et al.*, 2005; Phalan et al., 2011; Andres and Bhullar, 2016). A diverse agricultural system has been shown to provide safe habitat for a wide range of life

forms and valuable services to a healthy agro-ecosystem, including pest control, pollination and decomposition processes (Daily 1997; Tilman *et al.*, 2002; Pretty 2008; Klein *et al.*, 2003; De Marco and Coelho, 2004; Ricketts *et al*., 2004; 2008; Olschewski *et al.*, 2006; Otieno *et al.*, 2011). Nonetheless, the potential of traditional agricultural practices in biodiversity protection has gained limited recognition in the past. Traditional conservation strategies, especially in tropical ecosystems, tend to focus mainly on undisturbed, pristine natural environments, such as mature rainforests, while other forms of land use have mostly been seen as harmful for biodiversity (Putz *et al.*, 2001).

Initiatives focusing primarily on the protection of areas with conservation value tend to compromise local livelihood development strategies and often implicate human rights issues (Ghimire and Pimbert, 1997; Brockington, 2002; Colchester, 2002; Brechin *et al.*, 2003; McShane et al., 2011; Zarsky, 2012). Indeed, empirical evidence of 'fortress conservation' (Hulme and Murphree, 1999; Brockington, 2002; Kepe *et al.,* 2004; Siurua, 2006; Naidu, 2016;) has shown that protected areas on their own are able to provide only limited success for conservation (Sanderson and Redford, 2003; Heatherington, 2012; Kelly and Ybarra, 2016). The realisation that protected areas are unlikely to sustain conservation success in the long-term and almost unable to achieve poverty reduction in a reasonable timeframe (Naughton-Treves *et al.,* 2005; Wiens and Hobbs, 2015), have given rise to the development of alternative approaches to the conservation-development challenge. These alternative approaches recognise the value the human-managed landscapes can provide for the conservation of biodiversity and ecosystem services (Gavin et al., 2015; Reed et al., 2016). Examples of conservation programmes outside protected areas include local management of common pool resources (Ostrom *et al.,* 1994; Agrawal, 2001; Adams *et al.*, 2003; Libecap, 2016), community-based natural resource and forest management (Brosius *et al.*, 1998; Agrawal and Gibson, 1999; Nygren, 2005; Blaikie, 2006; Berkes and Palmer, 2015). The combination of social and environmental standards of voluntary certification schemes and the premiums attached to the provision of certain conservation oriented farm management practices, also address this conservation-with-development challenge.

2.3.1. Environmental (in)justice

In recent years the popularity of community-based conservation has gained such momentum that it is hard to find a "*conservation project that does not define itself as community-based*" (Hackel, 1999, p. 730). Community-based conservation emerged on the back of a series of conceptual shifts in ecology from reductionism to systems thinking, and highlighted a move from expert-based approaches to participatory forms of conservation and management (Levin 1999; Bradshaw and Bekoff 2001; Ludwig 2001; Bixler et al, 2015). In part, community-focused approaches to conservation developed in response to the failures of exclusionary conservation (Ghimire and Pimbert 1997) where the old notion of 'fortress conservation' was replaced by a more people-centred community-based conservation approach (Murphree 2002, p. 2). In community-based conservation approaches, human populations are no longer seen in separation from their natural environment but rather as part of a

larger ecological system (Berkes, 2004). Creating a stake for the local community in conserving a particular resource (Brown, 2002), has become the focus of most conservation-development projects over the last few decades.

Within 'conservation-with-development' approaches, a range of community-based initiatives have been promoted, particularly since the late 1980s (Li, 2002; Adams *et al.*, 2004; Luttrell *et al.*, 2014), aiming to reduce the adverse livelihood impacts of 'fortress' conservation-schemes (Murphree 2002; Sjurua, 2006; Kelly and Ybarra, 2016; Naidu, 2016). Such approaches have also been highlighted as important means to addressing the risk of environmental injustice associated with conservation-oriented initiatives that don't consider livelihood implications of the rural poor (Bullard, 2005; Pellow, 2004; Pellow and Brulle, 2005; Walker and Bulkeley, 2006, Watson and Bulkeley, 2005, Walker, 2012).

Combining both conservation and development goals within individual projects has had mixed success (Kellert *et al.*, 2000; Redford and Sanderson 2000; Barrett *et al.*, 2001; Murphree, 2002; Adams *et al.*, 2004). Community-based conservation programmes are based on the assumption that certain market-based incentives benefiting a certain community (or part of it), are going to lead to a consistent and positive conservation outcome at a level that is larger than that of the community. While incentives are undoubtedly important, there is often a mismatch between what is considered as adequate incentive from an outside management point of view and from a community or individual perspective (Songorwa, 1999; Brown, 2002). Purely economic benefits have been found to be too narrow and potentially counterproductive in the long-term (Berkes, 2004).

In conventional economic approaches, in order to estimate the economic welfare of individuals or groups, it is enough to take the sum of all costs and benefits regardless of the difference in wealth of each individual or group. However, the value of an extra dollar is quite different for a wealthy person than it is for a poor person (Frankfurt, 1987; Carroll, 1998; Gandelman and Porzecanski, 2013). The same problem arises in the context of ecosystem services with negotiations over trade-offs between services which are essentially trade-offs between the benefits of different stakeholder groups the economic status of whom might be considerably different (Balmford and Whitten, 2003; Magome and Fabricius, 2004). Conservation is often viewed as a concern of elite groups who are insensitive to the needs and interests of resource poor rural populations (Brosius and Russell, 2003; Berkes, 2004; Chambers, 2014). Since environmental goods carry the problem of common-pool goods (or merit goods), conventional cost–benefit analysis is an unsuitable tool for decision making. Instead, the valuation of an ecosystem service should be examined on its socio-technical context; that is, the benefits accrued by one group or individual must be benchmarked against the opportunity costs borne by another relevant group or individual (Li, 2002, p. 271; Jewitt et al, 2014):

''[...] rural people [...] are expected to conserve trees and soil rather than exploit them for profit because they are poor and marginal, and can therefore be asked to bear a burden from which more powerful players are exempt.''

In their typology, Adams *et al.* (2004) identified four main approaches to aligning conservation efforts with development objectives. In the first, conservation and poverty are essentially treated as 'separate policy realms' that are pursued independently, as in the setting up of protected areas (Ferraro, 2002) to conserve endangered species – which might have incidental environmental benefits for local people (Daily, 1997; Balmford *et al.*, 2002; Campbell et al., 2010). In the second approach, poverty is seen as a 'critical constraint on conservation' which must be addressed if conservation goals are to succeed in the long-term (Adams *et al.*, 2004; Blom et al, 2010). This approach seeks to provide local communities access to alternative resources to compensate for those which they have lost access to as a result of strictly conservation focused initiatives (Barrett and Arcese, 1995; Hulme and Murphree, 2001). The third approach takes the view that efforts to promote poverty reduction must not be compromised by the scheme's conservation elements and emphasises the payment of the full local opportunity costs lost as a result of the establishment of protected areas (Balmford and Whitten, 2003). Ideas of social justice are crucial to the fourth approach, which prioritises livelihood goals, claiming that the livelihood of people living in poverty, especially in marginalised rural areas, is particularly dependent on natural resources and living ecosystem services (Jansen, 1998; Adams, 2001; 2004). This conflict in ecological distribution (Martínez Alier, 2002; Guha and Martínez-Alier, 1997) in turn influences access to higher value markets and stakeholders' ability to manage land and their livelihoods in a 'sustainable' way (Turner and Robbins, 2008; Zimmerer, 2006). It is argued, therefore, that conservation goals should be based on the development of marginal rural areas and an understanding of the various political ecologies surrounding communities' access to different natural resources (Adams *et. al.,* 2004; Blom et al, 2010; Redpath et al., 2013).

Where conservation and livelihood development goals are pursued together within one policy agenda, there will likely be trade-offs. Building on Adams *et al.*'s (2004) conservation-with-development typology with reference to conservation–livelihood tensions in Indonesia's tropical peat swamp forests, Jewitt *et al*. (2014) devised a quadrant with four potential outcomes ranging from 'win–win' (conservation and livelihood goals are met) to 'lose–lose' (neither goals are met), with two outcomes that prioritise one goal over the other ('win–lose' or 'lose–win'). The livelihood-development outcomes are depicted on the vertical axis and conservation outcomes on the horizontal axis, creating four livelihood and conservation combinations (Figure 3). Within this model each quadrant represents the dynamic balance of the trade-offs between conservation and livelihood development goals.

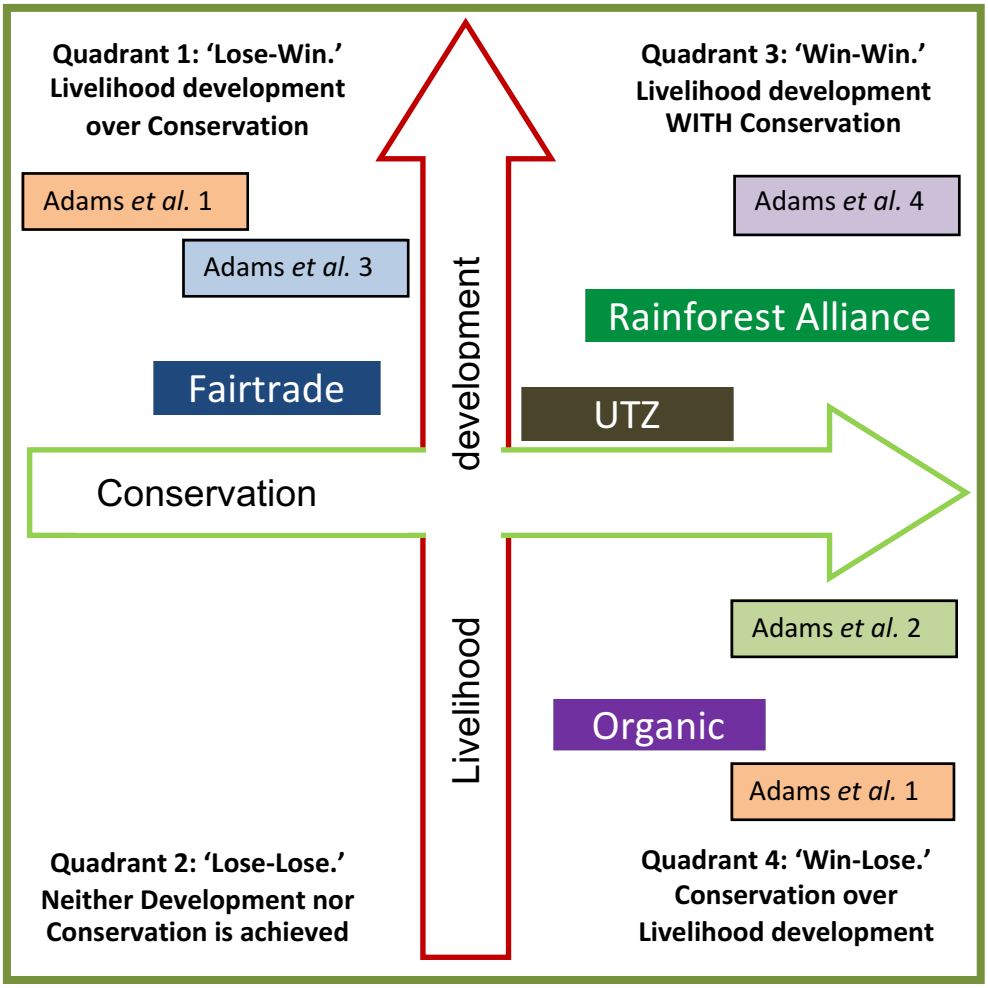


Figure 3: Conservation and livelihood development outcomes. Adapted from Jewitt et al. (2014)

Voluntary certification schemes relevant to the coffee sector can also be placed in the appropriate quadrant of this conservation-development matrix. Given the primary focus of the Fairtrade system for empowerment of vulnerable smallholder producer groups, it is fair to say that Fairtrade is best placed in Quadrant 1, where livelihood development is prioritised over conservation goals. While Organic standards do have invaluably positive impacts on environmental resources on and around farmlands, the productivity of organic farms tends to be significantly lower than non-organic equivalents. Given that there is still debate regarding the ability of organic premiums to offset for the reduction in productivity, the Organic certification systems could be best placed in Quadrant 4 where conservation issues are prioritised over livelihood development. Given the breadth and depth of both social and environmental standards, Rainforest Alliance certification could be placed at the furthest top right hand corner of Quadrant 3, attempting to create a win-win solution to the conservation-development challenge. As the standards of UTZ certification also attempt to give equal weighting to both social and environmental issues, although arguably to a lesser extent than those of the Rainforest Alliance system, their standards should also be placed in Quadrant 3.

As highlighted by Jewitt *et al.* (2014), the outcomes of any conservation-development programme have to be analysed in their appropriate temporal and spatial context as the balance of the benefits accrued on either side can change over space and time. Assessing whether a programme has provided true win-win solutions, therefore, is rather problematic. It could be argued that over the long-term, both win-lose and lose-win scenarios will eventually turn out to bring lose-lose outcomes as one aspect of a matrix cannot eternally increase without collapsing by its own weight. It is important to note that due to the dynamic nature of societal and ecological systems, any given moment of equilibrium can only ever be temporary. Therefore, it could be argued that neither of the four situations (win-win, lose-lose, win-lose and lose-win) exist in their absolute sense. Instead, their ultimate success in the long-term depends on a constant movement and a dynamic equilibrium between all four quadrants (Jewitt et al., 2014).

2.3.2. Resource access and power inequality in rural communities

The patterns of environmental destruction occurring at the interface of the nature–society conflict (Stonich, 1993; Escobar, 2006) are shown to signify the "*potential conflict between ecologically sustainable agricultural practices and the survival strategies of the poor*" (Stonich, 1993, p.1). Community-based environmental projects often advocate continued and sometimes even increased commodity production, on the promise of higher value retention within the community (McCarthy, 2005b, 2006). Voluntary certification systems all address the community at some level and rely on the functioning of intra-community institutions (such as democratically organised cooperatives) to deliver their social or environmental outcomes. The idea of the 'community' itself can be problematic, as geographic 'locality' or 'neighbourhood' does not necessarily make a true community (Hogett, 1997). Romanticised notions of static, harmonious and undivided local communities capable of devising and maintaining sustainable systems of natural resource management often jeopardise the success of community-based conservation efforts by failing to consider the complex and dynamic nature of intra-community relations (Brosius *et al*., 1998; Kumar, 2002; Berkes, 2004; Shoneveld, 2014; Ray et al, 2016; Shah, 2016). Indeed, a group of people living in close geographical proximity doesn't necessarily make a cohesive social group; rather "*it is more useful to think of communities as multidimensional, cross-scale, social-political units or networks changing through time*" (Carlsson 2000 cited in Berkes, 2004, p. 623).

Simplistic conceptions of 'unified communities', however, fail to consider the socio-economic inequalities and complex power relations within rural agricultural communities (Ettlinger, 2004; Fabinyi et al., 2014). Prominent debates about community-based conservation-development programmes highlight issues around social exclusion, gaps in governance (Herbert, 2005; McCarthy, 2005b, 2006; Nightingale, 2005), power imbalances, corruption and 'elite capture' (Balint and Mashinya, 2006) to just name a few. Attempts to achieve positive environmental outcomes from community-based projects often ignore the targeted 'community's willingness and ability to cooperate and work together for an outcome that would be equally beneficial for all participants (Kavanaugh *et al.*, 2005). The equitable distribution of economic benefits is particularly problematic in

communities historically characterised by unequal access to resources, gender issues and corruption (Keller *et al.*, 2000; Shah, 2016; Ray et al., 2016). In communities where the dominant social model has developed from a culture of competition, corruption and inequality, initiatives assuming collaboration and democratic decision making often face considerable challenges in meeting their development or conservation goals (Agrawal and Gibson, 1999; Robbins, 2000; Nygren, 2005; Park, 2003; Lund and Saito-Jensen, 2013).

Local socio-cultural circumstances can hinder the success of many well-intended 'community-development' projects which tend to ignore the influence of unequal power relations when distributiong of benefits arising from cooperative-based projects – including those of voluntary certification schemes (Corbridge and Kumar, 2002; DeFilipps, 2001; Mosse, 2004; Ledwith, 2011). Communities are undoubtedly an essential part of conservation as well as socio-economic development; however, it has been argued that long-term success within conservation-development projects can only be expected when intra-community equity and empowerment issues are duly addressed (Brown, 2002; Berkes, 2004; Lund and Saito-Jensen, 2013). As highlighted by Menzies (2009), community-based forest management cannot be expected to resolve intra-community tensions and power conflicts; however, it can potentially play an important role in sustainable natural resource management strategies. The issues around the romanticised idea of 'smallholder coffee communities' are discussed in more detail in Chapters 6 of the thesis.

2.4. Summary

The tensions over the balance between conservation and development goals have been an important theme in environmental and development thinking over the past decades. The relationship between conservation and livelihood development are complex, dynamically changing and largely local context specific (Sanderson and Redford, 2004; Kepe *et al*., 2004; Adams *et al.,* 2004). Although, biodiversity and resource conservation have been argued to form the basis of sustainable livelihood strategies, particularly for the rural poor (Roe and Elliott, 2004; Miller et al., 2011; Hussein and Nelson, 2016), win-win solutions are not always easy to find and their success is often elusive (Hulme and Murphree, 2001; Roe and Elliott, 2006; McShane et al., 2011; Bremer et al., 2014). The diversity and complexity of relations between conservation and poverty reduction, however, does not mean that efforts to find solutions for win-win outcomes should be halted (Adams *et al.,* 2004). Even though numerous incompatibilities exist between their goals, conservation and human livelihood development strategies both share an ambition to reconcile a harmonious and thriving co-existence of human societies within their natural environment. Despite the challenges, there is growing empirical evidence for their success (Terborgh, 1999; Oates, 1999; Adams, 2001; Sanderson and Redford, 2003; Hirsch et al., 2011) and it is widely argued that environmental resource conservation and poverty alleviation are not only possible to align (IUCN, 2002), but one is also essential to the long-term success of the other (Adams, 2001; 2004). The conceptual typology of the relationships between poverty reduction and conservation (Adams *et al.* 2004) provides the

framework for much of the research presented in this thesis. The findings depicted in later chapters (Chapter 6, 7 and 9) echo Adam et. al.'s fourth approach to the environmental dimensions of development, arguing that poverty reduction is a function of ''living resource conservation'' where conservation of biodiversity and natural resources is ''a tool for achieving poverty reduction'' (Adams *et al.* 2004, p 1148). Further chapters of this thesis will draw on related concepts of 'environmental (in)justice' (Li, 2002; Pellow, 2004; Bullard, 2005; Pellow and Brulle, 2005; Watson and Bulkeley, 2005) and will explore how key stakeholders in a smallholder coffee growing community have different access to environmental resources (Blaikie and Brookfield, 1987; Turner, 2004).

Understandings of the complexity of both social and ecological systems have helped shape the development of different market based mechanisms that aim to address poverty alleviation and conservation efforts simultaneously. Voluntary certification systems have been one of the most popular attempts to develop market based initiatives that follow a 'conservation-with-development' approach. Their success, however, greatly depends on the willingness and ability of resource poor rural populations to work together for a common goal and the willingness of consumers to seek out and consciously choose ethically labelled products over other product attributes such as taste and convenience. While the 'attitude-behaviour' gap is a well-documented phenomenon in ethical consumption literature, there is limited research looking at what motivates different stakeholders along a supply chain to care about the wider social and environmental impacts of their actions. This study, therefore, has focused on investigating what motivates consumers, producers and businesses to care about the sustainability of their industry and what role voluntary certifications can be expected to play in delivering sustainability outcomes on a global scale. By building on these complexities in geographies of care and responsibility, this thesis considers the diverse ways in which different stakeholders choose to express their sense of care towards human and non-human others (i.e. flora and fauna of the natural environment) along the global value chain of coffee.

Chapter 3: Characteristics of the coffee industry and relevant sustainability initiatives

3.0 Aims and objectives

This chapter provides much of the background information that helps contextualise the content presented in the rest of the thesis including a historical background to the coffee market and the development and key characteristics of relevant certification systems. The first part of the chapter gives an introduction to the rationale of choosing coffee as a focus of the study and provides an overview of the main cornerstones in the modern history of global coffee trade and the unique characteristics of the Honduran coffee sector. The chapter then goes on to explore the main challenges faced by the industry including issues around market volatility, cost of production and the complexity of the value chain. The chapter then brings the various environmental factors that can affect coffee quality and producer income, including climate change, pests and diseases and different farm management practices. Finally, attention is brought onto the development of key sustainability initiatives in the coffee sector and emerging alternative trading methods which claim to complement the sustainability outcomes of earlier initiatives.

3.1. Introduction - Why coffee?

Coffee is a labor-intensive commodity upon which millions of people depend for their livelihood. Growing input costs, price volatility, climate change and the rapidly changing global consumption patterns pose significant challenges to the sustainability of the sector. Although supply and demand imbalances have shaped much of the history of the modern coffee trade (ICO, 2014), understanding the nature of these cyclical patterns is important in identifying solutions to the most pressing socio-economic and environmental challenges within the industry.

Coffee has been a globally traded beverage for centuries and has played an important role in shaping modern human society and culture. Coffee is amongst the five most important agricultural commodities (Taylor *et al.*, 2005) in the world and ranks second in importance only to oil both by its produced and traded volume and value (Pendegrast, 1999; Donald, 2004; FAO, 2014). The total economic value of the coffee industry was estimated at around US$225.2 billion in 2015 (SCAA, 2014), however, much of this value lies outside producer countries. In 2010, an estimated 600 billion cups of coffee were consumed which generated export earnings of around US$16.5 billion for producing countries (ICO, 2011). Coffee is almost exclusively grown in developing countries in the global South, providing livelihoods for millions at different parts of the value chain (Donald, 2004). Conversely, coffee consumption is primarily concentrated in the wealthiest societies in the global North where ethical considerations have become an important factor in everyday consumption decisions. Worldwide, coffee cultivation covers over 11 million hectares (about the same size as Cuba) but have significant influence on livelihoods and biodiversity disproportional to its area (Donald 2004, p18, see also Gooding 2003).

Coffee is a key export commodity for many developing countries providing employment, cash income and foreign exchange for over 60 producing countries, 14 of which depend on its production for 10 percent or more of their export earnings (Grieg-Gran, 2005). According to the World Bank ranking of nations by wealth based on GDP and Purchasing Power Parity, 21 out of the 30 poorest countries are coffee growing countries (IMF, 2011). An estimated 80 percent of the worlds' coffee is produced by smallholder households, providing incomes on the margin of the poverty-line (Fairtrade, 2012b). The livelihood of more than 25 million smallholder families depend directly on coffee production and an additional 100 million people are involved in its processing, trading and retailing industry (Giovanucci, *et al.,* 2008a). Although the definition of a smallholder differs from country to country and between agro-ecological zones, they tend to cultivate between one and ten hectares of land (FAO, 2004b; ITC, 2013). A proportion of smallholder land is often kept for subsistence farming and livelihoods may include diverse sources of income. Their regions often lack infrastructure, access to finance, education and healthcare which make them vulnerable to economic and climatic shocks (FAO, 2004b).

Coffee can only be grown in frost-free, non-arid tropical climates at altitudes up to 2000 meters above sea level; and it is only able to flower when the temperature rises above 15°C (Lin, 2008). Coffee has a relatively undemanding agronomy and its basic production doesn't require special skills. However, the production of consistently high quality crop requires sophisticated processing, grading and post-harvest handling - all of which has a major impact on the final quality potential of the crop.

Most smallholder producers live in poverty and manage agro-ecosystems in regions that are culturally and biologically among the most diverse in the world (Taylor, 2004; Kitti *et al.*, 2009). Due to its climatic preferences, coffee cultivation coincides with major biodiversity hotspots (Hardner and Rice, 2002) and countries which have a comparative advantage in its production are often amongst the Least Developed Countries (ICO, 2014). Biodiversity hotspots contain exceptional concentrations of endemic species that are undergoing rapid loss of habitat (Meyers *et al.*, 2000). Approximately 44% of all species of vascular plants as well as 35% of all terrestrial vertebrate species are confined to 25 biodiversity hotspots covering only 1.4% of the land surface of the Earth (Meyers *et al.*, 2000). Coffee is grown in 16 of the 25 biodiversity hotspots around the world, therefore, conserving the capacity of these growing areas to provide suitable habitat for biodiversity is of paramount importance (Figure 3.1).

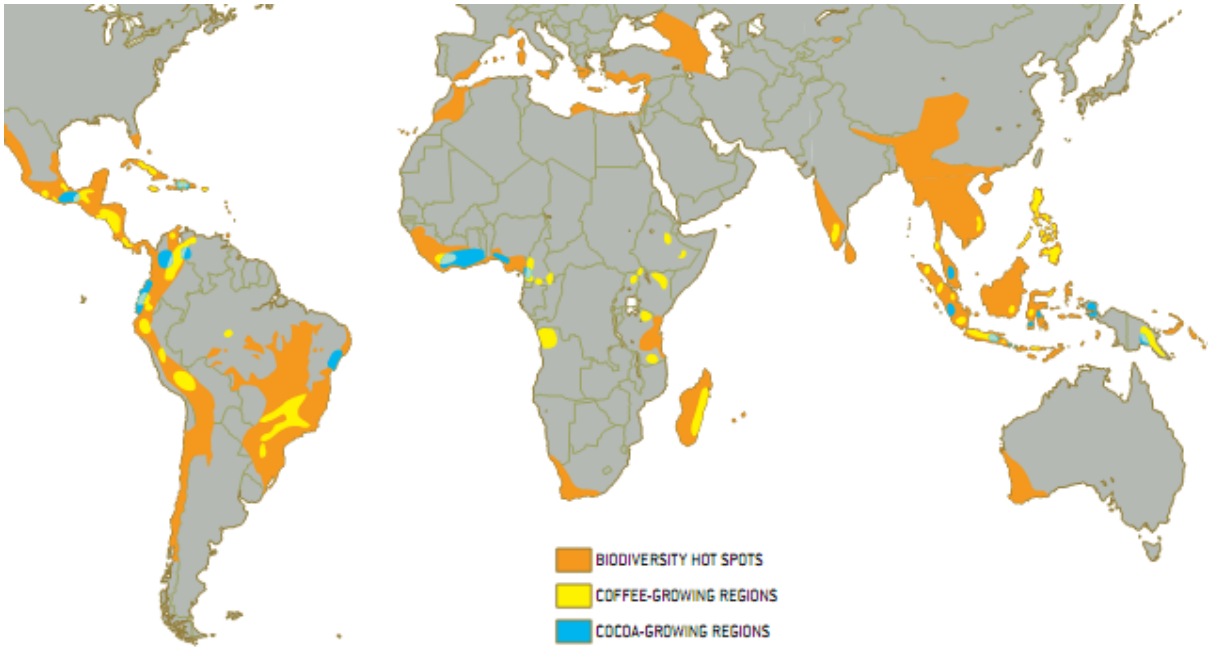


Figure 4: Map of the overlap between coffee regions and biodiversity hotspots. Source: Hardner and Rice (2002).

The geographic overlap between coffee production and ecologically sensitive habitats places coffee at the heart of conservation-livelihood debates. The nature of global coffee production is symptomatic of tensions between agro-food production and ecosystem conservation. Surprisingly, 62% of the biodiversity hotspots fall outside the protection of national park or reserve status. It is within these areas that biodiversity hotspots and coffee plantations coexist. Thus the economic, social and environmental implications of the way coffee is currently produced, traded and consumed make it an important example of, and an appropriate test-field for, the viability and effectiveness of new sustainability approaches and initiatives within agro-food production systems.

3.2 Modern history of coffee trade

The modern history of the coffee market can be divided into two major periods: a regulated period between 1962-1989 and and unregulated since 1989. Up until 1989, the International Coffee Organization (ICO) - a consortium of major coffee producer and consumer country representatives, established by the United Nations in 1963 - regulated the global coffee market using a quota system to control supplies and sustain prices (Talbot, 2004). The quota system was administered by the International Coffee Agreements (ICAs), an international commodity agreement between coffee producing countries and consuming countries. During the second World War the United States expressed feared that Latin American countries could potentially lean towards Nazi or Communists parties therefore in 1940 the US agreed to restrict its imports to 15.9 million bags (Fridell, 2007). As more Latin American countries followed suit, from 1945 the global coffee price rose consistently until in 1957 (Fridell, 2007). It was the producer countries desire to maintain these high prices that led to the first ICA in 1962

which has since then been followed by six subsequent agreements, ratified in 1968, 1976, 1983, 1994, 2001 and 2007 (Meerhaeghe, 1998). Once a target price was set, the export quotas – allocated individually to each producer country – followed the movement of the indicator price set by the ICO (Daviron and Ponte, 2005). When the indicator price fell below the target price, export quotas were decreased (and global supply restricted); and when the market price rose above the target, quotas were increased thereby maintaining a dynamic equilibrium between global supply and demand. Despite its imperfections, the quota system was successful in keeping the price stable and reasonably high (Ponte, 2001). The quotas served to help match annual production and consumption levels, and allowed producing countries to define their own market systems based on global demand levels. During the late 1970s, early '80s, consumption and production patterns started to show significant changes. Consumers, mainly in the US, showed growing interest towards milder tastes and higher quality coffee while on the producer side, Brazil – the world's biggest and most influential coffee producer – refused to reduce its quotas in the fear of losing market share. No longer worried about the prospect of poor coffee producers turning towards the Soviet Union, the US withdrew its support from the International Coffee Agreement in 1989 (ICO, 2016). Failing to get the biggest consumer country to sign a new agreement, the Coffee Council (ICO's highest regulatory body) was forced to suspend all export quotas on 4th July 1989.

Although the ICO itself survived, the dramatic impact of the unregulated market was felt by both producing and consuming countries. The liberalisation of the market led to a dramatic increase in world coffee supply and the following decades saw two subsequent periods of markedly low price levels: 1989 to 1993 and 1999 to 2004. The new environment of relatively high prices and the lack of export quotas invited the entry of new low-cost producers into the market, such as Vietnam in the late 1980s. Without sufficient control of prices and production volume, there was nothing that could stop new countries (such as Vietnam) and new plantations (particularly in Brazil) entering the market on the producers' side (ICO, 2014) which pushed the market into an unprecedented global oversupply. The large-scale, highly mechanised and input-intensive farms of Brazil and the low quality and low production cost output of Vietnam flooded the market with cheap coffee leading to a unprecedented global oversupply (Lewin, *et al.*, 2004). Without the export regulating measures of the ICA, traditional producing countries lost most of their influence on the international market and its price movements. Since the free market forces took control in 1990, the ICO composite indicator price for all coffee categories dropped by nearly 75 percent in the subsequent five years, from US$1.34 per pound in 1989 to an average of $0.77 per pound in 1995 (ICO, 2014). Over the next four years, coffee prices fell by 70% in nominal terms, many times below the costs of production (FAO, 2004; Donald, 2004). The consequent period, between 1999 and 2004, became known as 'the coffee crisis' years, referring to the longest period of low prices ever recorded. This had devastating consequences for the livelihoods of producers and disrupted the delicate export-dependent trade balance of producing countries. As a response to declining prices and increased competition, coffee producers increased their output, which pushed the world price further down.

The consequences of the early 2000s' coffee crisis varied, depending on the country. While in the late 1980s export earnings from coffee in producing countries was around 10 to 12 billion dollars, by mid-2003 their income shrank to a mere 5-6 billion dollars (ICO, 2011). Economic losses for small coffee farmers have been estimated at US$4.5 billion per year which had further knock-on effects on children's education and healthcare, forced coffee producers out of business and in many cases led to migration (Gresser and Tickell, 2002). In countries with low production costs and well developed technologies, like Brazil, farmers could still make a living despite the declining prices; nevertheless, they felt the effects of the reduced incomes which resulted in rising unemployment and decreasing farmer spending. In many African, Asian and Central American countries where coffee represents a cash crop element on a subsistence farm, there was substantially less money available for medicine, communications and education (ICO, 2004). In other countries where farmers are largely dependent on coffee revenues, producers found themselves even more in debt and in many cases had been forced to abandon their lands or switch to alternative crops which could include cultivation of illegal drugs like coca and khat (ICO, 2011). After 2003, prices improved but still remained relatively low and unpredictable. The fluctuation of the monthly average ICO composite indicator price before and after the collapse of the quota system is depicted in Figure 3.2 below.



Figure 5: ICO composite indicator price (Monthly averages: 1965-2013). Source: ICO, 2014, pp18

Alongside the numerous challenges the deregulation of the coffee market created, it also opened up significant opportunities for differentiation and laid the foundation for the development of alternative trading models. As international coffee prices plummeted to a 30-year low, the specialty market gained increasing market share, leading to the proliferation of a range of differentiated coffee products, such as single origin and certified coffees (Neilson, 2007). Following a long recovery from the crisis years, in 2011 the monthly ICO indicator reached a 34-year-high of $3.12 per lb of green coffee (ICO, 2013). Following this record, however, prices

continued to fluctuate while costs of production inputs, particularly fertilisers and labour, continued to rise (ICO, 2014). Coffee prices are now determined on the futures markets in New York (for arabica) and in London (for robusta), bringing new forms of financial speculation, price uncertainty and volatility in the market (Gooding, 2003).

3.3. Supply and demand

Despite its considerable instability, global coffee production has shown continuous increase during the last 50 years, with an average annual growth rate of 2 percent (ICO, 2014). Although coffee is indigenous to Ethiopia and is widely grown throughout the tropics, the bulk of the world's coffee is produced in Latin America, particularly in Brazil, which has dominated world production since 1840. Vietnam has risen to be the second biggest coffee producer in less than two decades, moving Colombia into third place and Indonesia into fourth (ICO, 2012). The incentive for investment in farm maintenance provided by historically high prices in 2011 resulted in two consecutive years of record crops in 2012/13 and 2013/14. The 2012/13 crop year recorded the largest ever production volume of 145.1 million 60-kg bags (ICO, 2014) and the consequent oversupply of 2013, in turn, saw world coffee prices falling to their lowest levels in six and a half years (ICO, 2014). Despite the drop in Brazil's production in early 2014, the 2014/15 global coffee output reached 149.6 million 60-kg bags, compared to a world consumption level of 147.1 million 60-kg bags (Thompson, 2014). In recent years, global coffee production has had to deliver record harvests in order to satisfy increasing consumption. Whilst the 2014/15 arabica harvest has been strongly compromised both in terms of quality and quantity, the world robusta market continues to be boosted by record yields in Vietnam (Thompson, 2014).

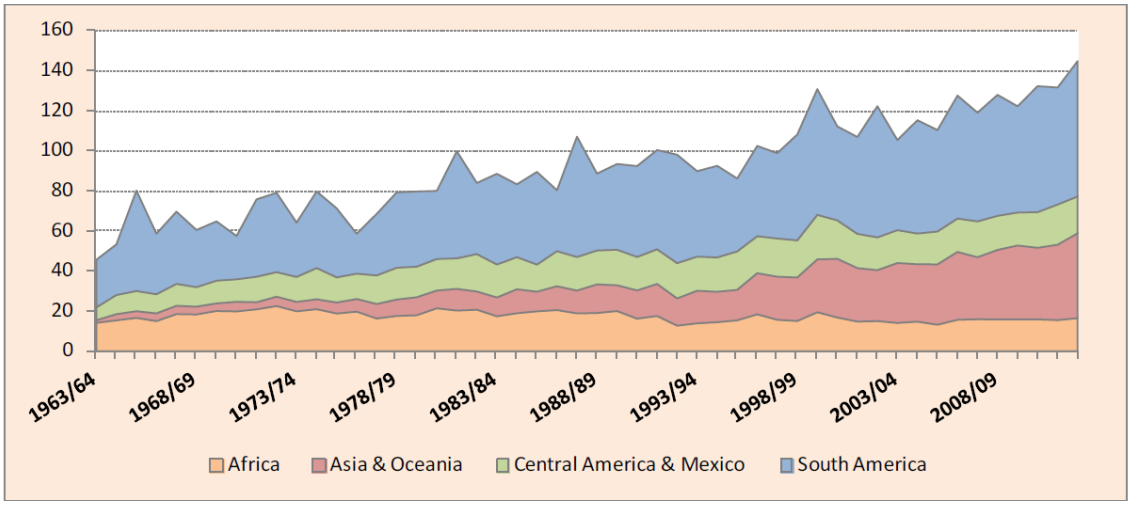


Figure 6: World coffee production by region (1963/64-2008/09) Source: ICO (2014)

Thus, the growth in global coffee production is largely due to increases in the production of the robusta variety, showing an increase of more than 100 percent from 18.8 million bags per year under the regulated market (1963-1989) to 39.3 million bags per year under the free market (1990-2013). By comparison, arabica production averaged 57.5 million bags per year in the regulated period (1963-1989), compared to 73.4 million

bags per year in the unregulated period (1990-2013), representing a continuous decrease in the share of arabica production from 72.5 percent in 1990 to 61.3 in 2013 and 59.38 percent in 2014 (ICO, 2015). This decreasing share of world arabica production has led to a decrease in quality of mainstream coffee blends. As robusta varieties are better suited to withstand high temperatures and tend to be grown in full sun production systems, the increase in both demand and supply of robusta varieties is likely to exacerbated further environmental degradation surrounding coffee plantations. Since the start of the free market period in 1990, price differentials between arabica and robusta coffees have grown. The average commodity differential between "Other Milds" (a quality description for arabica coffees) and robustas was 14.86 cents per pound during the regulated period, with an annual high of 47.53 cents per pound in 1986 resulting from a brief shortage of arabica supply following a drought in Brazil in the previous year. Since 1990 the annual average differential between the two varietals has been around 52.25 cents per pound, with the difference reaching its highest level (more than 161.86 cents per pound) in 2011 (ICO, 2014).

In exporting countries and emerging markets, consumption is predominantly based at home; whereas in traditional importing countries, out-from-home consumption accounts for the majority of the value generated in the market (ICO, 2014). The average annual growth rate of world coffee consumption increased by 1.9 percent over the last 50 years, from 57.9 million bags in 1964 to 142 million bags in 2012 (ICO, 2014). Consumption in emerging Asian markets has increased even more rapidly, from 10.2 million bags in 1990 to 27.9 million in 2012, representing an average annual growth rate of 4.7 percent (ICO, 2014), driven largely by increasing living standards and expanding middle class in newly industrialized economies. As depicted by the graph below, the growth of traditional importing markets (Japan, the European Union and the USA) is slowing down, while demand in coffee-producing countries and emerging markets is expanding.

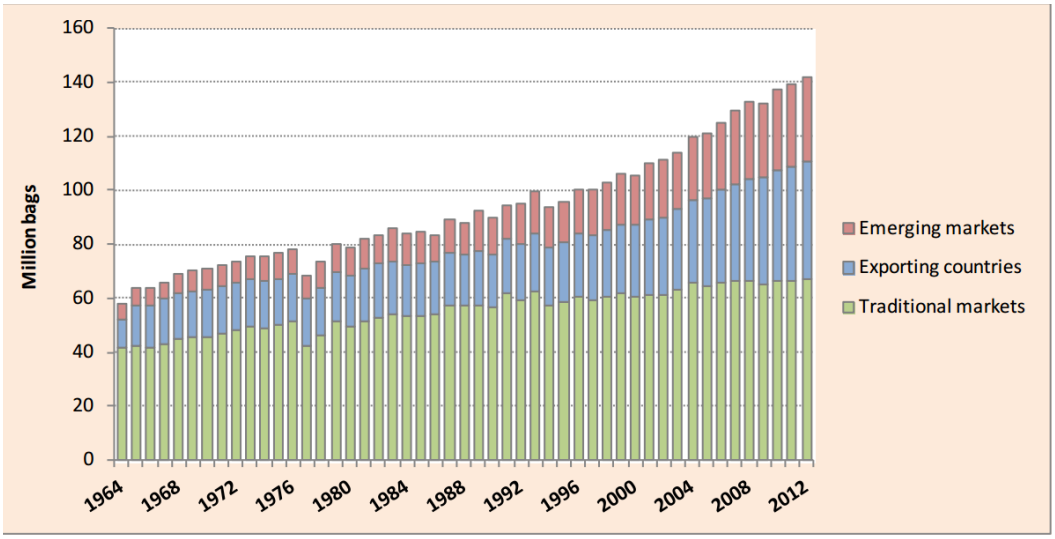


Figure 7: World coffee consumption per type of market (1964-2012). Source: ICO (2014).

With coffee moving into an era of tighter supplies and higher volatility, much of the demand growth will continue to come from price sensitive developing markets, making sustainability a key differentiator among premium coffees in traditional markets.

3.4. Coffee production in Honduras

Honduras is one of the least developed countries in Central America with approximately 70 percent if its population classified as poor (Coady *et al.,* 2003). More than 49 percent of the country's total population lives in rural areas where poverty tends to be substantially higher (World Bank, 2001; Morris et al, 2002 cited in Coady *et al.*, 2003). Coffee is of crucial importance to the Honduran economy, providing employment to 30 percent of the Honduran population (Hearne *et al.,* 2002) and bringing much needed export earnings to the country (McCarty and Sun, 2003; Partners, 2002; Varangis, 2003). Coffee is the largest contributor to foreign exchange reserves in Honduras, representing about 40 percent of total agricultural export value (GAIN, 2015).

Over the past decade, Honduras has grown to be the largest producer in Central America, the world's second largest producer of washed arabica coffee, and is the sixth largest producer in terms of global coffee output. Domestic coffee consumption, although growing, is estimated to be approximately 10 percent of total domestic production (GAIN, 2014). Despite the devastation of the coffee rust epidemic of 2012/13 (a rapid and dramatic spread of a coffee fungus across Central America) – which reduced the harvest by 1.3 million 60-kg bags and affected over 80,000 hectares of Honduran coffee lands (ICO, 2013) – the country's production has been increasing with an unprecedented rate. Due to widespread investments in farm practice improvements in recent years means that the average yield has risen from 15 quintals (1 Central American quintal = 46 kg) per hectare in 2009/10 to 30 quintals in 2011/12 (Molinos de Honduras, pers. comm.). Recent years have seen the Honduran output to rise from from 3.34 million bags in 2008/9, to 4.9 million bags in 2011/12, and 5.4 million 60-kg bags in 2014/2015 reaching 6 million bags in the latest harvest season. This steady rise in production volumes can partly be associated to increasing investments at farm levels – allowing for renovation of coffee trees, increased application of fertiliser, better soil conservation - as well as to an expansion in the area dedicated to coffee cultivation. In contrast to its neighbouring countries, there is still a large amount of uncultivated land available in Honduras that would be suitable for coffee cultivation and many people anticipate coffee production to continue increasing. In 2014 only 20 percent of suitable land has been planted with coffee (approx. 350,000 ha) but this figure is expected to rise in coming years (Volcafe, 2014).

Coffee was first introduced to Honduras by traders in the late 18th century and was grown by small scale farmers throughout the 19th century. Despite governmental promotion of coffee, bananas remained the main Honduran cash crop until coffee cultivation started to expand during the second half of the 20th century. While the banana industry was dominated by large plantations, coffee growing remained to be the concern of small scale producers. Compared to other coffee growing countries in the region, Honduras stands out by the dominance of

its smallholder population. In 2014 there were over 110,000 farmers involved in the production of coffee, over 95 percent of whom are classed as smallholder producers (Coady *et al.,* 2003) with farm sizes lower than 10 manzanas (1 Honduran manzana equals 6,972.25 square meters or approximately 0.7 hectares – United Nations, 1966). While large producers rely mainly on hired labour, smallholders tend to use their own family labour and often dedicate part of their land for subsistence crops. Although smallholder produced coffee has a reputation for poor quality, some of the characteristics of small-scale production (dominated by hand picking, potentially higher attention to detail, ability to separate smaller lots etc.) can be advantageous for quality production (provided there is sufficient funding available for investments in the farm maintenance). In addition to the smallholder population, the coffee sector in Honduras relies on an additional 500,000 seasonal workforce every year (GAIN, 2014) whose labour is essential not only during the harvest but also for other activities such as fertiliser application, shade control, cleaning, drying, commercialisation and transport, which provide further employment for the landless rural population. An estimated US$71 million is distributed every year to over a million people nationwide who participate in the coffee harvest over a period of four months between late November and early March (GAIN, 2014).

Coffee is grown in 15 of the 18 provinces and in 210 of the 298 municipalities of Honduras (GAIN, 2015) making coffee production relevant to the whole of the country and not only to a particular region. The country's coffee-production landscape is organised into six well-defined coffee growing regions based on differences in microclimate and soil composition. These coffee regions are: Copán and Opalca in the north-west, Marcala-Montecillos in the south-west, El Paraíso in the south-east, Comayagua in the centre and Agalta Tropical in the north and east. Of all the coffee produced in Honduras, 61 percent is grown in the mountains between 3,900 and 5,200 feet (1,200 – 1,600m) asl, 23 percent in areas from 2,900 to 3,900 feet (900 – 1,200m) asl and 16 percent above 5,200 feet (1,600m) asl (GAIN, 2015). In terms of quality differentiation, the best Honduran coffees are grown between 1,500-2,000m above sea level; these are classed as Strictly High Grown (SHG), 65-98 percent of which is shade grown (i.e. grown under a canopy of native or planted trees which offer protection to the coffee plants from extreme heat and sunshine). The latitude and elevation of Honduras' terrain provide ideal conditions for growing arabica coffee which, due to its milder flavour, is considered to be of generally higher quality than robusta varieties. The vast majority of coffee grown in Honduras is arabica with several different varietals typical of the specific geographic regions that best suit their cultivation. The main varietals grown in Honduras are Caturra, Catuai (red and yellow), Typica, Maragogype, and Bourbon, which are favoured by the speciality market for their milder, more complex flavours. However, the majority of these varietals are not leaf rust resistant which forces producers who wish to supply the speciality market to take a higher risk than those growing for the mainstream commodity market.

Despite the favourable growing conditions, Honduras has historically suffered from a bad reputation for quality and much of its export production still ends up as filler for inexpensive blends. This poor reputation can be

blamed partly on the lack of finance for farm improvements and partly on its disorganised trade infrastructure incentivising producers to grow for quantity rather than quality. The national coffee activity is controlled through two important regulatory bodies: the Consejo Nacional Del Cafe (CONACAFE) and the Honduran Coffee Institute (Instituto Hondureno de Cafe - IHCAFE). The IHCAFE -established in 1970 to support the development of the Honduran coffee sector - has been playing an important role in changing the country's reputation for quality. Since its privatisation in 2000, IHCAFE has been actively promoting the different quality attributes of each of the 15 coffee producing provinces and is helping to develop the country's quality management system by focusing on promoting quality analysis and the importance of cupping skills among producers and exporters. After decades of bearing a reputation for poor quality, Honduras is beginning to be recognised as competitor to its Central American neighbours and has been receiving increasing attention throughout the speciality coffee industry for the past few years. Exports of speciality quality lots have been growing due to consumer markets seeking specific flavour profiles and credence attributes in their coffee (GAIN, 2015). Another sign of this improvement process is that Honduras has been participating in the "Cup of Excellence" competition since 2004 which provides small-scale coffee producers an opportunity to showcase their harvest to North American and European roasters who tend to bid generously for their favourite lots in an electronic auction system. This programme encourages quality production, environmentally sound practices and helps find a niche market for the country's highest quality producers. In addition, Honduras was named as the "Portrait Country' for the annual SCAA (Specialty Coffee Association of America) exhibition in 2012 – this was part of the strategy to strengthen and promote the Honduran coffee sector (GAIN, 2014). Goverment investments have so far focused more on the western provinces of Honduras where a number of larger and more established cooperatives have been able to meet certification requirements and gain a premiun from certified status. The north-eastern regions (where this research was focused), have a limited number of cooperatives and still need considerable investment before they would be able to join in the bloodstream of certified or speciality coffee trade.

Despite the investments of the last few years, many farmers still tend to accumulate debts, struggle to pay their seasonal workers during the harvest season and often don't qualify for credit at the banks. Due to the severe indebtedness of many smallholders, the government created a law in 2003 that facilitated the establishment of the Coffee Trust Fund a year later which is funded by the producers' contribution. Of the US$13.25 that is charged on every quintal (100 pounds) of coffee bought from the producer, US$9 is used to grant new loans, US$1 is used to repay loans required after Hurricane Mitch hit the country in 1998. The remaining US$3.25 is divided between IHCAFE and the National Coffee Fund whose resources are used for improving infrastructure in coffee growing areas and funding new equipment for producers (GAIN, 2015). The trust fund is also used to help producers buy fertilisers and provides assistance for maintenance and renewal of coffee farms for the 87,000 coffee producers who participate in this program (GAIN, 2014). Ironically, the numerous quality improvement initiatives are not only benefitting the Honduran economy but also its neighbouring countries. As a legacy of the historically poor quality reputation, Honduran coffee is often sold at a price discount compared to other

countries in the Central American region (Teuber, 2010). As a result, an estimated 260,000 60-kg bags (GAIN, 2014) of Honduran coffee is being smuggled over to neighbouring countries each year to be sold as Guatemalan, El Salvadorean and Nicaraguan coffee, all of which fetches higher prices on the market.

Recent years have also seen huge investments in post-harvest management technologies across the country including pulping machines, driers, patios and warehouses. According to producers and traders, improper drying affects between 5-8 percent of a season's crop and has a significant impact on coffee quality (Coradi *et al.*, 2007). Coffee has traditionally been delivered to Honduran mills in a variety of forms – cherry, wet (humedo/mojado) or dry parchment (pergamino) form. Due to a lack of finance, most Honduran smallholders tend to sell their washed arabica crop as wet parchment at the farm level (only partially dried, containing 55 percent moisture as opposed to the 12 percent moisture of fully dried parchments). Coffee with high moisture level is prone to rapid deterioration (overfermentation and rotting) and has a high risk of developing a dangerous fungus, Ochratoxin A (OTA) - a form of mycotoxin produced as metabolic product of fungi, mainly Aspergillus and Penicillium, and is highly toxic to the human body. Coffee sold in wet parchment form, therefore, fetches lower prices than sold as fully dried. In 2012, only around 20 percent of Honduran producers were able to process their coffee to dry parchment before selling it on (Molinos de Honduras, pers. comm.). Although high altitude is generally favourable for cherry development, the majority of the Honduran growing regions suffer from high rainfall which makes the drying process problematic for producers who don't have access to drying polytunnels (simple structure of raised mesh beds covered with an arched polypropylene tunnel). Cooperative membership although increasing, is still generally low across the country, with most smallholder farmers processing their coffee independently using small, basic wet mills on their farms and selling cherries, as wet or dry parchment to exporters or middlemen. Intermediaries or middlemen play a large role in the Honduran coffee economy with roughly 77 percent of producers selling to intermediaries, 16 percent selling directly to exporters while the remaining 7 percent is exported directly (Volcafe, 2014).

The past decade has seen significant changes in the dynamics of the Honduran coffee industry. Larger and more speciality focused exporters are increasingly moving towards developing direct relationships with cooperatives and are investing in training programs for smallholder farmers. Attitudes towards quality and traceability are also showing signs of change with exporters selling increasing proportions of their volume as traceable lots from specific farms or regions; this permits specific cup profiles to be associated with distinct Honduran coffee regions. The production of certified coffee is rising, although it still represents a small percentage of overall production. During the 2010/11 season, more than 586,000 60-kg bags were exported as speciality or certified (GAIN, 2014), 43 percent of which was Fairtrade Organic 33 percent UTZ Certified, 11 percent Fairtrade, 11 percent Rainforest Alliance and 2 percent was verified by private certifications such as Starbuck's CAFÉ Practices (Volcafe, 2012). By the end of the 2012/13 crop year about 1.1 million 60-kg bags of certified coffee were produced representing an increase of 28 percent over the previous year and accounting for 25 per cent of the

total agricultural exports (GAIN, 2014). It is clear that the Honduran cooperatives are begining to shift the bias of production towards a mix that includes a greater share of certified coffee. This increasing trend in certified coffee sales is tempered by a pragmatism that not all coffee can be sold as certified and so combinations of some or all of FT, RA, UTZ and Starbucks' CAFE Practices are the norm among most Honduran cooperatives.

3.5. Industry challenges

A number of economic, social and environmental issues are associated with the way coffee is produced today. These issues can be varied, depending on the geographic location, cultural, political and economic background of producing and consuming countries and the connection between them is often complex. With the rise of consumerism in emerging societies, the demand for coffee is also rapidly increasing. In order to meet this growing demand, producers will be required to triple their production by 2050 and increase global output by an estimated additional 4-14 million tons each year. Land already under production are being put under increasing pressure to meet this growing demand which is likely to cause significant expansion into new areas. At current productivity levels, an area four time the size of Costa Rica would be needed for to produce this additional volume. Given the geographic proximity of primary coffee growing regions to biodiversity hotspots, there is an increasing risk of coffee moving into high conservation value forests bringing deforestation and loss of biodiversity with it. Improving productivity and efficiency of existing farms, therefore, are critical to achieving sustainable supply of quality coffee in the medium to long-term.

Another factor exacerbating the issues of uncertainty of supply is climate change. Climate change is perceived as probably the single biggest threats to the long-term sustainability of the industry as well as to the livelihood of people affected by it. The speciality sector relies almost entirely on supplies of arabica varieties. Arabica coffees are generally perceived as having milder taste profiles, higher sugar content and more flavour compounds than the robusta varieties. Arabica tends to grow at high altitudes along the equator, in areas where climate change is bringing increasingly extreme whether events. The actual area that is available in these high altitude tropical zones for growing arabica coffees is shrinking rapidly. Radical changes in rainfall patterns, droughts and rising temperature have already started to affect coffee growing regions. Due to the density of plantations and the shrinking forest patches between then, pest and disease outbreaks are increasingly likely to spread quickly and affect large areas (such as the recent outbreak of the coffee leaf rust in Latin America in 2012/13). By 2050 the temperature of most coffee growing regions are expected to rise 2.5 degrees higher than today and the higher quality arabica species are likely to suffer the most (Davis et al, 2012). In order to compensate for increased temperatures, coffee growing areas are expected to move towards higher altitudes, further compromising efforts to conserve primary forest cover.

Along these severe environmental challenges, the industry faces a multitude of socio-economic and structural issues impacting the lives of millions of people who contribute to the production and supply of coffee along the

chain. Many of these issues are rooted deeply within the history of the coffee trade and are often strongly linked to various economic, political and structural issues within producing countries. Poor labour conditions, human rights violations, gender inequality, alcoholism and household violence are just some of the issues many smallholder households are affected by in the coffee sector. Despite the best efforts of sustainability conscious businesses and NGOs to raise the bar on social standards, labour conditions on coffee farms (large or small) can resemble situations that can only be described as modern slavery. Incidences of forced or bonded labour, trafficking and many other forms of human rights violations are not always easy to spot and can remain hidden even despite rigorous ethical audits.

3.5.1. Volatility

The global coffee market is highly competitive and typically cyclical with recurring patterns of oversupply that make prices volatile and producer incomes very insecure (Giovanucci, *et al.* 2008a). Livelihood insecurity particularly hurts small-scale farmers and cooperatives that struggle to manage financial risk due to their lack of access to and/or knowledge of financial insurance mechanisms and futures markets. Price instability makes long-term financial planning and investments into technical or social developments extremely challenging and can lead to food shortages for up to two to three months for smallholder households (Jaffee 2007, Morris *et al.,* 2013).

The constant imbalance between supply and demand present a number of challenges to the industry. The price volatility inherent in the coffee industry is more than just a short-term inelasticity of supply but rather it is related to major restructuring of the coffee commodity chain in the early 2000s (Gresser and Tickell, 2002; Lewin *et al.*, 2004). Historically, weather-related production declines in Brazil (in 1975 and 1985 then 1994, 1999 and 2014) caused the most dramatic price increases on the market. However, since 1990 price responses to exogenous factors such as climate shocks have been based considerably more on speculation. As depicted in the graphs below (Figure 3.3), price levels during the regulated market period (1965 to 1989) remained relatively high due to the price correction of export quotas. Since the crisis years of the early 2000s, however, the real value of the ICO composite indicator price has been below its nominal value.

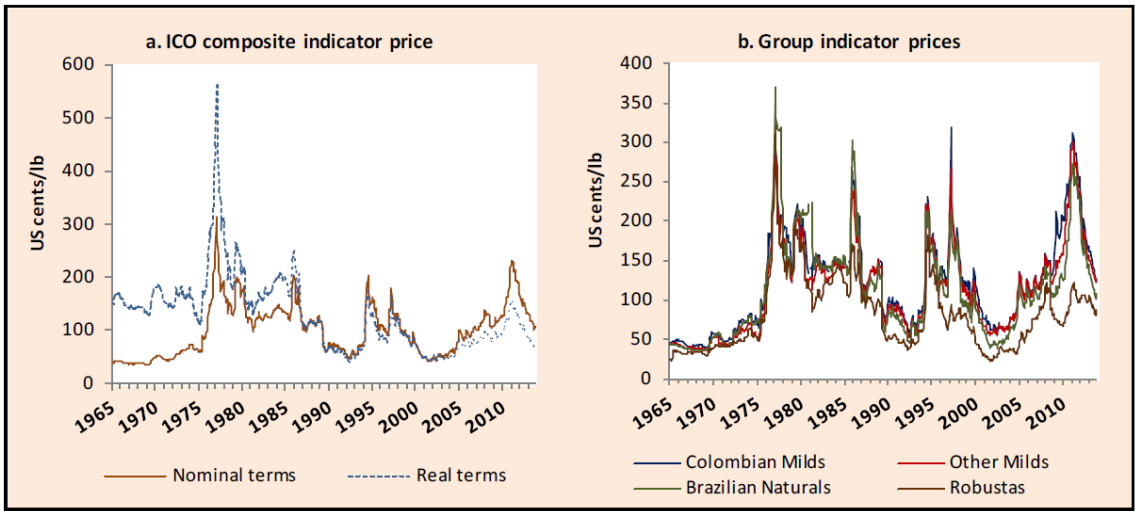


Figure 8: World coffee prices in nominal and real terms in relation to 1990 (Monthly averages: 1965-2013) – Source: ICO, 2014

Price volatility is a major source of uncertainty and vulnerability for coffee producers and the supply chain as a whole. Price fluctuations have a tendency to exacerbate rural poverty because of the difficulties of planning effective allocation of limited resources. While low prices are understandably devastating for coffee producers, price volatility has detrimental consequences for all actors along the supply chain. At the other end of the supply chain, extreme volatility of prices makes it also difficult for roasters to calculate raw material costs which in turn can result in reduced resources for investment in producer development projects. Volatility therefore is a source of uncertainty, the mitigation of which requires just as much, if not more, attention as the absolute price levels.

A common attribute of low income countries is the specialization in agricultural commodity exports characterised by declining terms of trade (Sarris and Hallam, 2006). Combined with highly volatile commodity prices, such diminishing terms of trade lead to a range of adverse consequences for the socio-economic stability and environmental sustainability of such export dependent countries. The collapse of prices during the crises of the early 2000s was driven by a combination of factors such as the absence of previous commodity agreements and supply restricting quotas, the fast expansion of production in Vietnam and the increasing supplies of cheap robusta from the large-scale and highly mechanised Brazilian plantations. Since the deregulation of the coffee market in 1989, the share of returns for exporting countries has fallen from 20 percent to 10-12 percent (Grieg-Gran, 2005; Daviron and Ponte, 2005, while simultaneously the share of importing countries has increased (ICO, 2014). Today, the value retained by producing countries is usually less than a quarter of the final price. Although the elimination of the power of marketing boards in producing countries intended to provide the producers with larger market shares (by 'cutting out' the marketing agents in producing countries), instead, it strengthened the position of the already more powerful importing countries. Besides the decrease in incomes for producing countries, a potentially more significant negative consequence was the destruction of the support services that helped to maintain coffee quality and encouraged producer education (Gibbon, 2001; Gibbon *et al.,* 2008).

3.5.2. Cost of production

Besides price volatility, changes in the production costs have significant impact on producers' economic stability. In general, production costs can be split into two categories: establishment and maintenance costs. Due to the relatively long maturation period of coffee trees (3-5 years), establishment costs of a coffee farm can be relatively high and production costs can vary depending on the variety and the post-harvest processing method (e.g. the wet or washed method is generally more labour and capital intensive than the unwashed or natural method). Coffee is a particularly labour-intensive crop, therefore labour costs make up a substantial proportion of the overall production cost, especially in higher altitude regions where mechanisation options are limited or not possible. For many smallholder producers, the availability of unpaid family labour gives the impression of lower cost of production throughout the year, however, during harvest, most producers have to rely on expensive seasonal labour. Although large plantations rely on paid management, higher input and labour costs, the better economies of scale counterbalance the otherwise higher costs of production. Lacking the advantage of economies of scale, it is much harder for smallholder farmers to break even at low market prices (i.e. to cover their inherently higher costs of production per unit). Another core production cost is fertilisers and pesticides. Since 2000, prices of nitrogen, potassium and phosphate fertilisers have increased by 301 percent, 275 percent and 325 percent respectively (ICO, 2014). In general, production costs tend to increase over time while coffee prices fluctuate. Varying yield, scale and efficiency, however, all have a major influence on the final cost of production and agreeing to cover the claimed costs of production in some cases can end up subsidising internal farm inefficiencies. During the crises years of the early 2000s, international prices fell well below the cost of sustainable production in most coffee producing countries and its recovery lasted for over a decade. When prices fail to cover basic costs of production for an extended period, it has a knock-on effect on yield and quality due to reduced resources available to invest in farm maintenance. In extreme cases, producers have little option but to move out of coffee altogether – often resorting to illegal activities such as growing drugs or taking part in illegal logging (Bacon, 2005). Increasing urban wages, combined with the uncertainties of the coffee market, tend to encourage the migration of the younger generation to urban centres which leads to the aging of coffee growing populations and further threatens the future of smallholder coffee growing economies (ICO, 2014).

3.5.3. Complex value chains

The journey coffee takes from farm to cup is a long and complex process, involving a variety of processing stages and actors whose activity add incremental value and cost to the final product. The complex system of coffee processing and supply chain can be summarized in six main stages: growing, primary processing (depulping, washing, drying), secondary processing (hulling, milling), export/import, roasting, wholesale and retail (Grieg-Gran, 2005).

Coffee plants are perennial shrubs producing annual fruits referred to as cherries. Each cherry contains two seeds (with the exception of peaberries which only contain one seed), known as coffee beans. Once harvested, coffee can be processed in a variety of ways including, natural, pulped natural, honey processed and washed. The most traditional and least expensive processing method is the natural process where harvested cherries (which contain the coffee bean) are dried in the sun. The cherries may go through a sorting stage where unripe, ripe and overripe cherries are separated prior to drying. The raisin-like dried coffee cherries are then sold to a mill where the dried cherry skin and the parchment (dry paper-like internal coating between the cherry skin and the green coffee bean) are removed. The coffee then goes through further sorting and grading (by density and colour) and gets exported in this raw green bean form. At the other end of the processing scale is the fully washed process which has the highest input (water, electricity, labour), machinery and skills requirement. After harvesting, the cherry skin and the majority of the fruit flesh is removed by a depulping machine, leaving the parchment and a sticky layer of mucilage on the beans. As this mucilage contains high sugar and moisture levels, in order to avoid rapid deterioration of the beans, the mucilage has to be either dried immediately (pulped natural) or removed (washed process). Mucilage is insoluble in water and is hard to remove by simple washing. Mucilage can be removed either chemically by fermentation or mechanically by machines. During fermentation the sugars are broken down by enzymes (pectinases and pectase) naturally occurring in coffee cherries. Fermentation can take anywhere between 6 to 72 hours depending on temperature, amount of mucilage and concentration of peptic enzymes, making its control quite challenging for producers. This processing stage can easily lead to over fermentation which produces undesirable flavours in the bean; fermentation therefore, is a critical quality control stage in coffee processing. Once fermentation is finished, the beans (still inside their protective parchment layer) are washed, channelled and dried either in the sun (on patios or raised beds) or in mechanical driers. In mountainous areas with high humidity and limited drying space, drying polytunnels (raised drying racks under a polypropylene tunnel) can be used. Larger plantations normally produce enough coffee – and normally have more resources – to run their own washing station (primary processing), thus the processing can start on the farm without having to transfer the raw cherries to another mill. Small farmers, however, often lack these resources and therefore end up selling their crop, once harvested, in cherry or in partially processed 'wet parchment' form – this commands a lower price compared to the more processed bean products. Exporters complete the drying process by sorting, grading and millING the dry parchment coffee (removing the husk from the green bean) prior to export.

Once leaving the port of the exporting country, coffee can exchange hands a number of times before reaching the final roaster. Historically, this part of the trade has been a complicated processes involving a number of 'middlemen' (national trading boards, brokers, traders etc.) whose function fills in the geographic, infrastructural and information gaps between individual producers and their markets. Typically, the more 'middlemen' are involved in the trade, the less profit is retained by the producer. As further chapters will

highlight, the business model of both the certified and the speciality industry are based on the idea of shortening the supply chain and reducing the number of 'middlemen' involved.

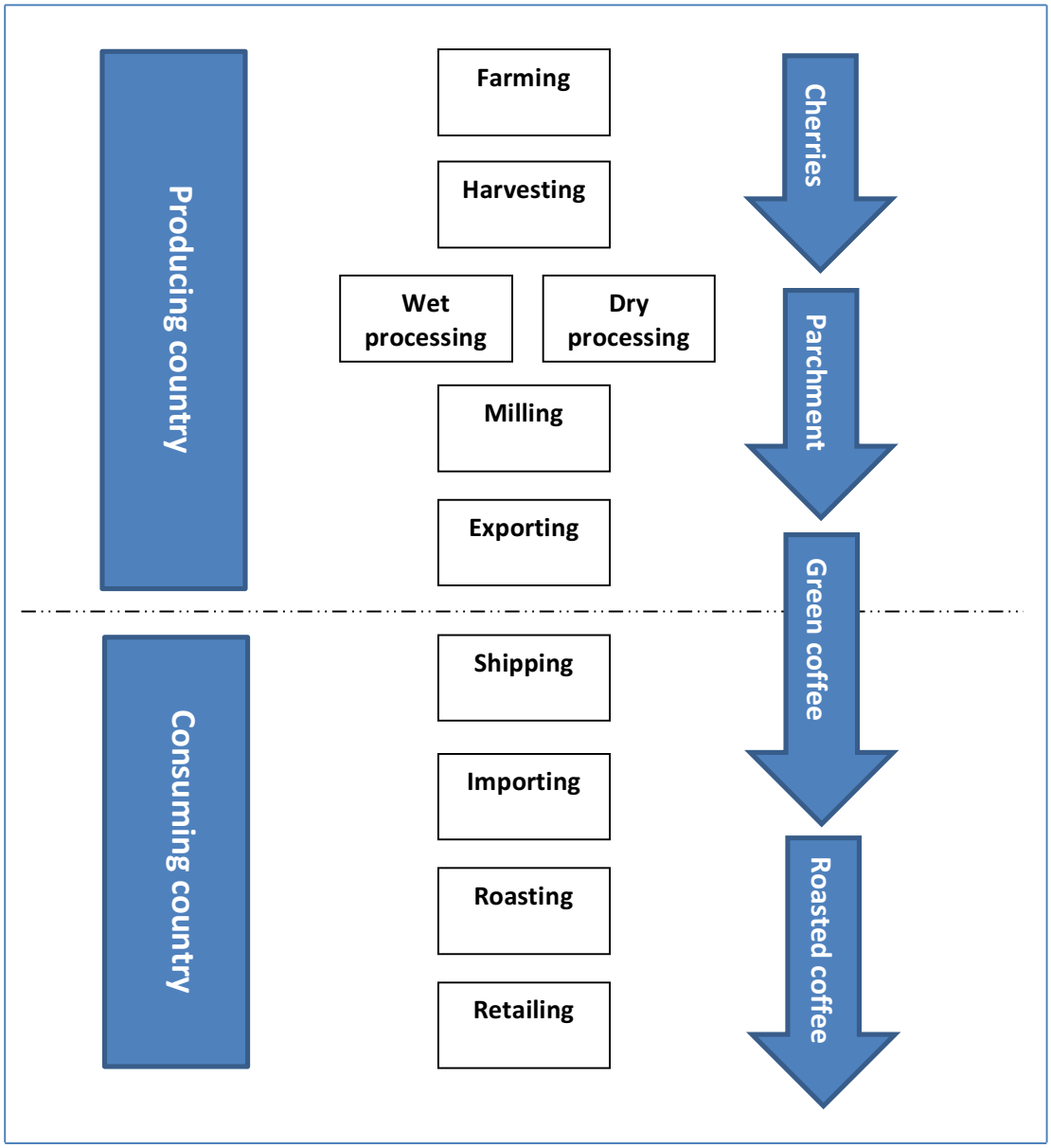


Figure 9: Global supply chain. Source: Author's own

A value chain encompasses all value-generating activities carried out along the supply chain of a product, from production through trade and consumption to final disposal (Kaplinsky and Morris, 2001). As is the case with many agricultural commodities, the coffee value chain has historically been characterised by power asymmetries between production and consumption (Fitter, 2001) with consuming countries controlling the majority of value created along the chain. Producing countries generally export the majority of their production as primary raw material (green bean), while the higher value-adding activities of roasting, marketing and end consumer service tend to be based in consuming countries. Product development and innovations in the way in which coffee is traded have also been driven largely by roasters and retailers in consuming countries - further

increasing power imbalances along the supply chain. While the market share of the of the top 10 producing countries remained unchanged at about 67 percent between 1970-1999, their share in roasted coffee production declined from 10 to 2 percent during the same period (FAO, 2003b).

3.5.4. Environmental challenges

Areas of significant biodiversity value are in a state of flux worldwide. Despite the noble intentions of the Millennium Development Goals, global poverty levels continue to rise, particularly in rural areas of the Global South (FAO, 2004a). Even though the environmental impacts of coffee production can be relatively low compared with alternative agricultural activities in similar climates, certain challenges remain and need due consideration. These challenges include – though are not limited to – the reduction of forest areas, soil degradation and water pollution, erratic and changing weather patterns and unequal access to resources.

Like all agricultural activity, coffee production has an impact on the natural environment. The cultivation of coffee beans can have both positive and negative effects on the environment, the scale and nature of which depend on the production systems adopted (sun or shade cultivation) and the way the beans are grown and processed. Extensive coffee production has historically been established at the expense of primary forest areas, contributing to large-scale deforestation (UNCTAD, 1993). All agricultural crops take nitrogen, potassium and calcium from the soil in order to maintain their life functions. Coffee grown in full sun conditions, tends to deplete the soil of these nutrients far more than coffee grown in lightly shaded environment (Van der Vossen, 2001). Although the soil under coffee plants can be covered, non-shaded coffee cultivation provides very little soil protection and the organic content of soils could diminish over time. Fertilisers can reintroduce some of the lost nutrients but their run off can pollute water sources and negatively impact human health in the surrounding areas. Another main source of water pollution is related to wet coffee processing. Wet processing of the green coffee beans has a considerable environmental impact on fresh water resources, as the fermentation of the residual pulp surrounding the cherry generates wastewater with high concentration of biochemical oxygen demand, which, if reintroduced into local waterways untreated, reduces the available oxygen for aquatic plants and wildlife (von Enden and Calvert, 2002). During the 1990s lack of wastewater treatment in Central American coffee cultivation areas was considered the region's most polluting agro-industry (Grieg-Gran, 2005). Since the 1990's, several pollution prevention measures have taken place on a number of Latin American farms, from reducing waste water use through composting coffee cherry pulp mixed with farm animal manure and used as organic fertiliser on crops, to the use of bio-digesters that produce methane gas from organic waste that can be used for powering processing plants and providing electricity in rural households (Hughes *et al.*, 2014). Compared to other annual crops, coffee has the potential to cause less environmental damage, although much depends on how it is grown (Perfecto *et al.,* 1996). Provided it is grown in an environmentally sound way (using indigenous shade trees and integrated pest management), coffee can also be a positive tool for biodiversity conservation. Due to its perennial nature, coffee also provides significant soil cover and in the case of shade

systems, there is minimal disturbance in the soil cover over the long lifespan (20 plus years) of the coffee plants (Grieg-Gran, 2005).

Coffee belongs to the family Rubiaceae of which there are approximately 500 genera and 6000 species. Although more than 125 species of the *Coffea* genus grow in the wild, only two are cultivated on a commercially significant scale, *Coffea arabica* (arabica) and *Coffea canephora* (robusta). *Coffea liberica* and *Coffea excelsa* are predominantly grown for local consumption and are declining in importance due to their inferior taste and high susceptibility to pests and diseases (Cambrony, 1992; Coste, 1992; DaMatta, 2004). Due to their different origins, arabica and robusta have different ecological preferences. Arabica coffee is native to East Africa (Ethiopia and Yemen) and grows in the wild at altitudes ranging from 1,500 to 2,800m, between the latitudes of 4°N and 9°N (Coste, 1992; Teketay, 1999; Wintgens, 2004, 2009, 2014). Arabica, is an upland species, most productive when grown under shade at higher altitudes (800 – 2000 m) with a rainfall of 1500 – 2000mm, but has relatively low yields between 1500 to 3000 kg/ha (Allen, 1985). Conditions are ideal for arabica when mean annual temperatures are between 18C and 23C and rainfall (1,600 to more than 2,000 mm) is well distributed through the year, with a dry season lasting three to four months coinciding with the coolest period (Wrigley, 1988; Coste, 1992). In its native tropical forest environment, arabica evolved as an under-storey shrub (Coste, 1992); therefore, it grows best in well-managed shaded environments. Robusta coffee is native to the lowland forests of the Congo basin and grows well in full sun equatorial forests at low altitudes (<800 m). Here annual mean temperature ranges from 23°C to 26°C with annual rainfall of over 2000mm. The higher caffeine level in robusta varieties make the plants more resistant to pests and diseases which results in higher yield per tree (2300-4000 kg/ha), however, due to its harsher taste (partly caused by its bitter caffeine content) robusta is generally perceived to be of lower quality thus fetches lower prices on the market.

Neither variety is able to withstand cold winds and frosts although arabica tends to cope better with moderate variations in seasonal temperatures (DaMatta, 2004). Robusta is much less adaptable to lower temperatures than arabica and temperatures below 6°C or long periods around 15°C cause severe damage to the robusta plant. Due to its sensitivity to temperature changes, robusta can only grow at lower altitudes up to 800m whereas arabica thrives at higher altitudes mostly in the hilly areas up to 2000m (below frost) (DaMatta, 2004). Arabica is predominantly grown in Central and Latin America and East Africa and to lesser extent in India and Indonesia while robusta is mainly grown in the lowlands of East and West Africa, Indonesia, India and Brazil and is almost non-existent in the higher mountainous areas of Central America (Cannell, 1985; DaMatta, 2004). Arabica has higher sugar content, and contains more of the compounds that translate into more complex and superior taste with a wide variety of flavour combinations including caramely, chocolaty, nutty, fruity and flowery notes depending on the origin and processing method. On the other hand, robusta contains a variety of chemical compounds reminiscent of rubber, smoke, ash and pepper which tend to be perceived as less desirable

flavours. Due to its milder, sweeter taste and lower caffeine content, arabica is more popular in the traditional and higher value markets while robusta coffee has found greater usage in the soluble industry (Allen, 1985).

3.5.5. Climate change

Climate change and the rise in global temperatures in particular, are of tremendous concern for the coffee industry. The popularity of coffee has been growing steadily in recent decades; however, climate change is affecting all major coffee growing regions threatening the future supply of high quality arabica varieties (Carrington, 2014). Since the mid-1970s, temperatures rose by 1°C every 40 years in Central and South America and according to the most extreme scenario, could rise by another 5.8°C by 2100 (IPCC, 2014). According to the IPCC's modest climate change scenario, temperature is expected to rise by 1.4-3.8°C by 2100, which would result in a 27.6 percent reduction in the area currently dedicated to coffee production by 2070 (Rubinstein, 2014). Coffee ecosystems are vulnerable systems that are dependent on a relatively narrow climatic range. Coffee requires a stable, reliable climate and does not tolerate major changes in temperature or rainfall patterns (Camargo, 2009, 2010). Rising temperatures, flooding, droughts and changing precipitation patterns are all climatic conditions which have a destabilising effect on coffee plants and affect both yield and quality. Extreme fluctuation in temperatures can increase incidences of pests and diseases and a reduction in the overall photosynthetic capacity of the plant (Cannell, 185; Wrigley, 1988); while extended periods of drought ultimately contribute to erosion of surface soil and loss of soil fertility (Camargo, 2009, 2010).

The shift in the geographic distribution of coffee-production areas worldwide are likely to unfold in three ways: 1. some existing coffee areas might not be suitable for coffee production; 2. other areas where coffee is currently produced will need to implement measures to adapt to altering climatic conditions; 3. some new zones (where coffee is not produced currently) might become suitable for coffee production (Haggar and Schepp, 2011). As climate models forecast temperature increases by at least 3°C for most coffee-growing regions before the end of this century, cultivation of premium coffees are likely to have to shift to higher elevations, impacting on the livelihoods of those producers who have historically been able to grow the world's finest arabica coffees for centuries (Pinto and Assad, 2006). The magnitude of the altitudinal shift required is likely to be 300-400m (Laderach *et al.*, 2013) and the lower altitude limit for growing high quality arabica coffee will rise by roughly 46 m per decade (Baker and Haggar, 2007). The upward shift of suitable growing areas is likely to increase pressure on both currently protected and unprotected primary forests and the environmental benefits they provide to downstream communities (Jha *et al.*, 2014). Land use changes at higher altitudes are often restricted by a number of socio-economic factors, such as competition from other crops, inadequate soil, inappropriate rainfall patterns (ICO, 2009) and can have a number of adverse implications for high altitude ecosystems (Warren *et al.,* 2006; Haggar *et al.,* 2011). While the increasing temperatures are likely to make some states further south suitable for coffee production, this slight increase in southern production is unlikely to compensate for the losses generated further north (Zullo *et al.,* 2006). Coffee farmers in traditional arabica

growing regions (Central America, East Africa) may be forced to replant their arabica crops with more temperature and disease resistant varieties of generally lower quality; some may be forced to change to the cultivation of other crops (Pinto *et al.*, 2006).

The changes in global agro-climatic coffee zoning has invited the development of cultivars suitable for high temperatures (Camargo, 2010). Research and development in genetic breeding has so far focused mostly on improvement of yields, resilience to pests and diseases, and increasing the longevity of both arabica and robusta plants (Caramori *et al.*, 2003; Haggar and Schepp, 2011). However, less attention has been given to improving the taste profiles of more resistant varieties. For instance, the cultivar Obatã, developed by the ICA in Brazil, has a higher resistance to coffee leaf rust, is suitable for planting at high densities and gives sufficiently high yield and quality (Haggar and Schepp, 2011). The real genetic variety of coffee, however, has not yet been exploited. In the case of arabica, accounting for over 60 percent of global production, every plant derives from only a handful of varieties which flourished in the Ethiopian rainforest 2,000 years ago (Davis *et al.,* 2012). In addition, the lower caffeine levels (the natural defence mechanism of the plant) make the milder, higher quality arabica varieties more susceptible to pests and diseases, and more sensitive to environmental stresses than any robusta varieties (Davis *et al.,* 2012).

The gradual geographical shift in coffee growing areas could intensify the already high fluctuations in global production and further increase the volatility off international coffee prices (ICO, 2009). The 2014/15 harvest season in Brazil started with unusually high temperatures and the drought conditions triggered an early harvest. Coffee harvest in Brazil usually takes place between April and October but in 2014/15 the harvest started 15-25 days early. Since Brazil is by far the biggest exporter of coffee, any events that happen in its major coffee regions affect the global supply and price of coffee. The drought in Brazil in early 2014 was declared the worst drought in a decade resulting in the rally of international coffee prices by 50 percent. The market's dramatic response was a clear indicator of the intimate link between coffee prices and climate change, and leaves no doubt about the vulnerability of the whole industry to climatic factors. As Dr Tim Schilling, executive director of the World Coffee Research programme at Texas A&M University highlighted: "*The rise in global temperature is of great concern for us in the coffee industry because it will – and has already started – putting the supply of quality coffee at great risk. It is also obvious that increasing temperatures – as well as extreme weather events – have a very negative effect on production. Over the long-term, you will definitely see coffee prices going up as a result of climate change.*" (World Coffee Research, 2014)

Due to the growing amount of climate change research in the coffee sector, both the diversity and scope of practical implementation for climate change adaptation measures are increasing (C&C, 2014). Examples include interventions that aim to strengthen the overall resilience of coffee-ecosystems by promoting diversification in producer livelihoods (Camargo, 2010; Lin, 2011), increasing soil vegetation (Caramori *et al.*, 2003), implementing

accurate irrigation, soil protection and integrated agrochemical use, improving the uptake of shade management systems (Fazuoli *et al.*, 2007). Adaptation strategies, in extreme cases, could include change of crops or a complete move away from agricultural production (Smith *et al.*, 2008).

3.5.6. Pests and diseases

Rising temperatures and changing rainfall patterns are not the only concerns for producers. Unfavourable conditions for coffee trees can create the optimal conditions for certain pests and diseases that spread across already stressed coffee plants more easily. With rising global temperatures, the incidences of pest infestations and diseases are likely to increase both in frequency as well as severity. The most prevalent threats are caused by the coffee berry borer beetle and the leaf rust fungus both of which thrive in warm and humid climates (Le Pelley, 1968; Waller *et al.*, 2007). The coffee berry borer (*Hypothenemus hampei*) is considered to be the most damaging pest affecting coffee production (ICO, 2009). The berry borer is endemic to Central Africa, however, rising temperatures have made farms at higher elevations more vulnerable to the beetle. The damage caused by this insect reaches $500m per year (Jaramillo *et al.*, 2009). The coffee rust ('la roya' in Spanish) is a fungal disease which first appears as yellow spots on the leaves and leads to the drying of all affected leaves (Soto-Pinto *et al.*, 2002) leaving the coffee plants defoliated, unable to produce sufficient amount (or often any) fruit. Coffee production in Central America was severely affected by the recent outbreak of the coffee leaf rust in 2012-2013 - the worst ever recorded in the region since it first appeared on the continent in 1976 (ICO, 2013) affecting 600,000 ha (55 percent) of the total coffee growing area in Central America (IPCC, 2014a). The total damage was estimated at 2.7 million bags of coffee, representing a loss of about $550 million in smallholder income and 500,000 lost jobs for seasonal workers in the region (ICO, 2013). El Salvador had the highest incidence rate of 74 percent, followed by Guatemala at 70 percent, Costa Rica at 64 percent, Nicaragua at 37 percent and Honduras at 25 percent (ICO, 2014 – see Figure 11).

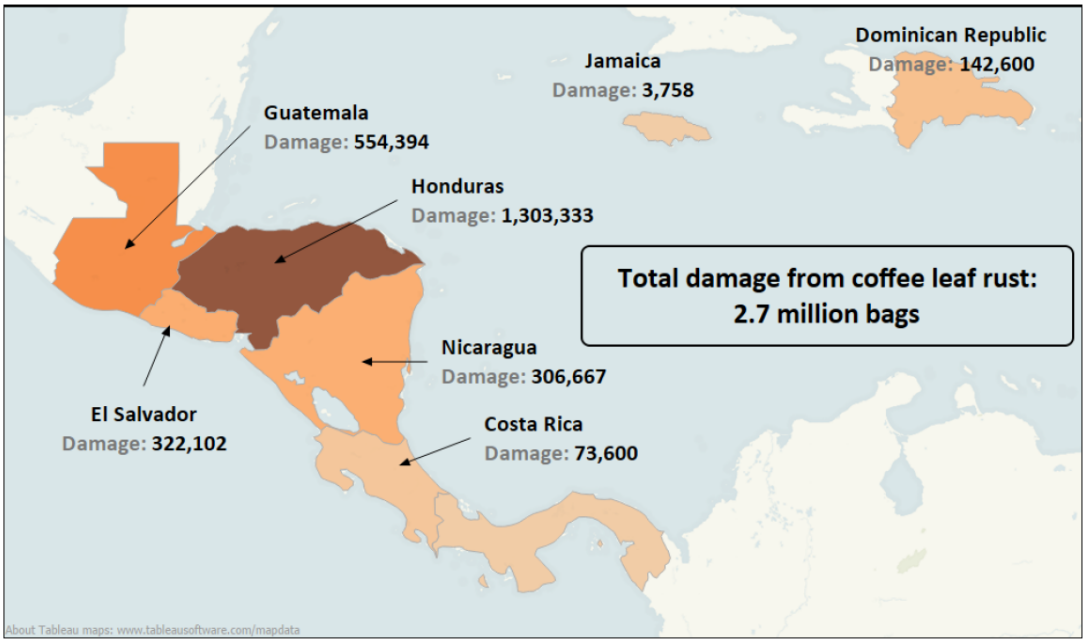


Figure 10: Damage caused by coffee leaf rust disease in Central America (2012/13) expressed in a unit of 60kg bags. Source: ICO (2013) – Although the traditional coffee bag size has a slight regional variation, when bags are being referred to as a unit of measure

Although the direct causes of the rust epidemic are complex and still not fully understood either by the industry or the scientific community, changing climatic conditions combined with poorly prepared farms (aging coffee plantations, lack of resources or culture for prevention etc.) have allowed the disease to spread with an unprecedented speed and to areas where it has never bee*n seen before* (ICO, 2014). High temperatures combined with high humidity create the perfect conditions for the coffee leaf rust (*Hemmelia vastatrix*) to thrive (Silva *et al.*, 2006). Coffee rust favours similar climatic conditions to the arabica coffee plant and can spread between a narrow range of 17°C to 25°C (Nutman and Roberts, 1970). Since the 2012 outbreak, the use of more rust resistant arabica varieties have increased both in Central and South America. Rust resistant varieties, however, tend to have less favourable taste profiles than the finer, higher quality varieties that tend to be more susceptible to the disease.

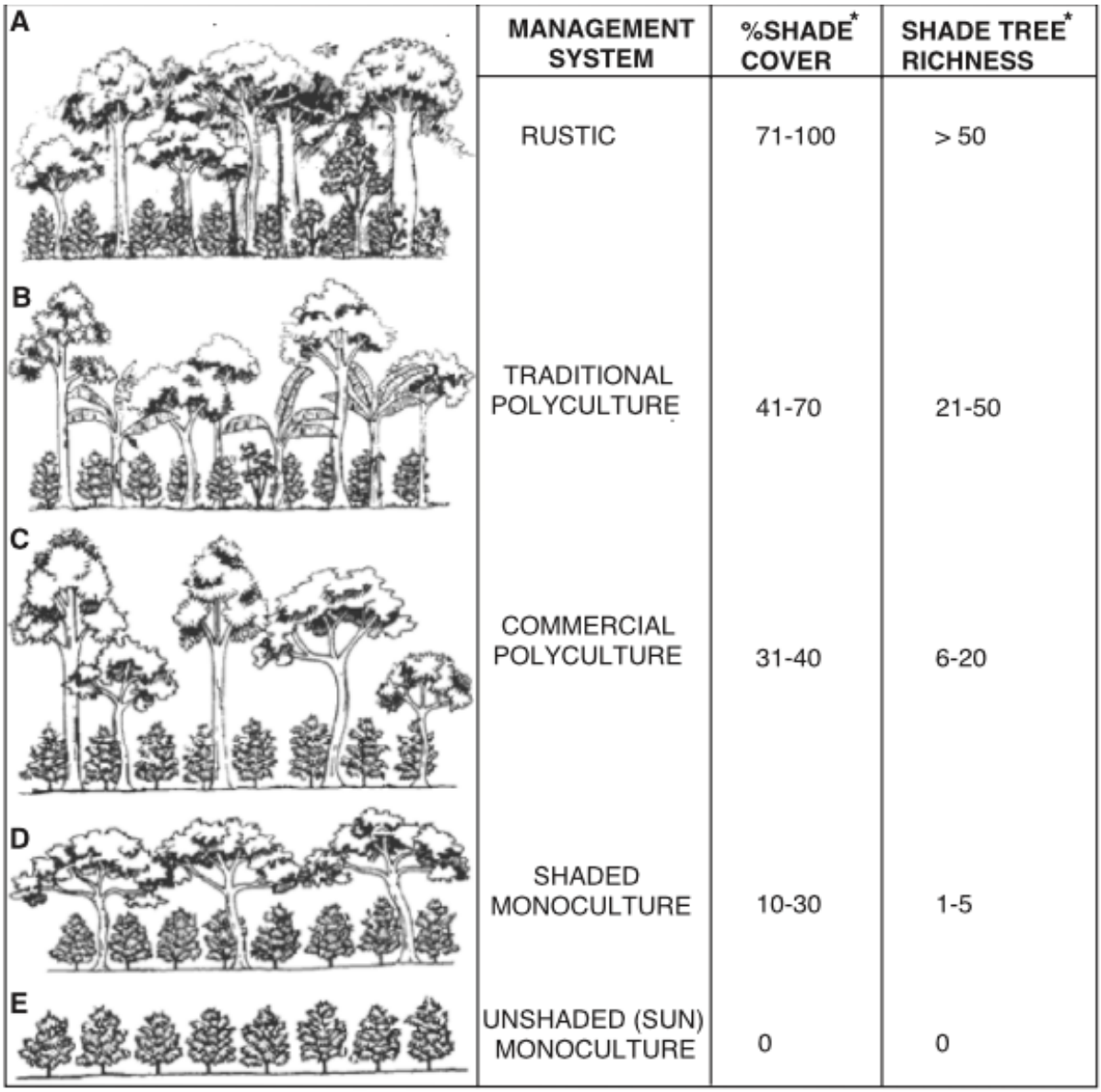
3.5.7. Changes in global coffee management systems– traditional shade vs. full sun

Since its first emergence as a cultivated crop in the 1400s, coffee has traditionally been grown under the shade of diverse canopy of tropical forests, mostly on small family run farms, in areas of high species diversity (Jose, 2009). Despite the ample evidence on the importance of shade cover in the conservation of tropical forest ecosystems (Borrero, 1986; Rice & Greenberg 2000, Perfecto & Armbrecht 2003; Schroth et al. 2004; Donald, 2004; Tscharntke et al. 2005; Garcia et al 2009), local management practices of coffee plantations have undergone significant changes in the last three decades. Intensification of agricultural production methods, market liberalisation and the emergence of new, more efficient technologies have shifted the traditional

cultivation approaches toward a more mechanized, input-intensive production method, called sun-cultivation. Removal of shade trees has reached a level where the global percentage of traditional shade systems has shrunken below 24% (Jha *et al.*, 2014). This shift from traditional diverse shade coffee systems to shaded mono-cultures and unshaded full sun systems has a range of implications on the surrounding ecosystem and soil fertility (Siebert, 2002; Philpott *et al.*, 2008; De Beenhouwer *et al.*, 2013). Denser planting, high dependence on irrigation, increased use of pesticides and fertilisers are all characteristics of un-shaded farming systems which are more dependent on agro-chemical inputs (Babbar and Zak, 1995; Donald, 2004). The increased use of synthetic agro-chemicals raises a set of health concerns to farm workers and have major implications for biodiversity, ecosystem services, resilience to climate change and sustainability of rural livelihoods (Jha *et al.*, 2014).

In recent decades the value of shade grown coffee has gained increasing attention from the public and scientific research communities (Perfecto *et al.*, 1996; Tscharntke *et al.*, 2011; Jha *et al.*, 2011, 2014; De Beenhouwer *et al.*, 2013). Traditional shaded cultivation systems are increasingly being recognised for their potential in supporting local biodiversity and providing livelihood diversification options (Perfecto *et al.*, 2007; Philpott and Dietsch, 2003; Schroth *et al.*, 2004; Donald, 2004; Tscharntke *et al.*, 2005, 2011; Garcia *et al.,* 2009; De Beenhouwer *et al.*, 2013). The improved microclimate-regulating ability of diversified shade have been found to contribute to improved cherry development (due to slower and more even maturation), healthier soil (Beer, 1988) and longer lifespan of individual coffee plants (Teketay and Tegineh, 1991). Well-managed, shaded coffee farms have been found essential in sustaining vital ecosystem functions which in turn provide ecosystem services fundamental for coffee production (such as pollination, pest control, erosion control, watershed management, climate regulation, nutrient cycling and carbon sequestration). The economic value of such services are estimated to be worth billions of dollars annually (Ricketts *et al.*, 2004; Zhang *et al.*, 2007; Bennett *et al.*, 2009). Shaded cultivation systems require a certain level and structure of shade tree canopy over the coffee plants. Studies have examined the impact of different coffee farming systems with varying degrees of shade cover on biodiversity and found that biodiversity is a function of the density of shade above the coffee trees (Gillison et al. 2004; Tejeda-Cruz et al. 2010). Shade cultivation systems, however, "vary greatly in their suitability as wildlife habitats, depending on the species of shade trees, size of the fragment, and the fragments' distance from remaining forest" (Donald, 2004, p26). The mere existence of some planted shade does not qualify as true shade systems as some shade trees can lose their leaves during dry season, leaving the coffee shrubs fully exposed to the sun (Donald, 2004). However, many legume shade trees native to coffee growing regions (such as the *Inga* spp.) have the ability to fix nitrogen, thereby increasing the nutrient content of the soil (Beer *et al.*, 1998; Perfecto *et al.*, 1996) and decreasing the need for agrochemical inputs (Jha and Dick, 2008). The complexity of the shade itself (Méndez *et al.*, 2007) is also important, as higher complexity of the canopy level has been found to suppress weed growth on the ground (Beer *et al.*, 1998) and can create habitat for higher levels of biodiversity (Perfecto *et al.*, 1996, 2005; Tejeda-Cruz and Sutherland, 2004). The following

diagram shows a simplified visual distinction between the different shade coffee management systems (Figure 11):



MANAGEMENT SYSTEM	%SHADE* COVER	SHADE TREE* RICHNESS
RUSTIC	71-100	> 50
TRADITIONAL POLYCULTURE	41-70	21-50
COMMERCIAL POLYCULTURE	31-40	6-20
SHADED MONOCULTURE	10-30	1-5
UNSHADED (SUN) MONOCULTURE	0	0

Figure 11: Shade coffee management systems. Source: Perfecto et al. (2005)

Since the majority of ecosystem services are a function of biodiversity levels (Wardle *et al.*, 2011), the changes in global coffee management systems are of particular concern to floral and faunal diversity and associated ecosystem services (Jha *et al.*, 2014). Full sun or unshaded coffee management systems are unable to provide the essential habitat for natural pollinators (Siebert, 20020; Jha and Vandermeer, 2010) and are unable to provide corridors for dispersing organisms that need the shade corridors to move between forest fragments (Muriel and Kattan, 2009). Due to their proximity to areas with high levels of biodiversity, in many Latin American countries more than 30% of the area surrounding coffee regions in a 50 km radius falls within protected areas (Moguel and Toledo, 1999). Considering the overlap of biodiversity hotspots and major coffee growing regions (Hardner and Rice, 2002; Ricketts *et al.*, 2004; Bhagwat *et al.*, 2008), the importance of

connectivity between coffee farms and surrounding natural forests and protected areas is undoubtable (Jha *et al.*, 2014). However, it is not only biodiversity that can benefit from shaded coffee systems. Shade production systems can benefit smallholder producer livelihoods by providing farmers with a variety of forest products such as firewood, construction materials, traditional medicines and food (Gooding, 2003) all of which can reduce producers' dependency on coffee thus make them less vulnerable to the volatility of the market (Jha *et al.*, 2011).

3.5.8. Diversification and differentiation

Given that a significant part of the global rural population is directly or indirectly dependent on the agricultural commodity sector for their livelihoods, changing production, trading and consumption patterns of commodities is at the centre of efforts to promote economic growth and eradicate poverty (ICO, 2006). Farm diversification, i.e. the amplification of the range of products grown in association with coffee (America, 2005, p. 19), has been one of the most commonly promoted climate change adaptation and livelihood development strategies in recent years. Diversification is particularly important for countries which largely depend on export revenues from climate-sensitive agricultural crops (ICO, 2009). Diverse farm management systems can provide income across the growing seasons, food for home consumption, contribute to improved fertilisation, erosion control and habitat for pollinators and pest predators (Rice, 2008; Jha *et al.*, 2011; 2014); this helps to reduce the need for off-farm inputs.

Although there are clear socio-economic and ecological benefits associated with diversified farm management systems, a number of challenges the need to be addressed in order to link coffee management with sustainable livelihoods (Méndez *et al.*, 2007). While smallholder families often intercrop coffee with annual subsistence crops such as tomatoes, beans and corn and sell other perennial crops such as plantains, bananas, orange, macademia, black pepper, avocado, apple, vanilla, etc. (Wintgens, 2014) on local markets, finding a global market for new crops can be challenging. Besides the technical challenges of diversification there are other barriers that limit farmers' ability to enter the global markets for commodities other than coffee such as limited infrastructure around growing areas and limited resources or knowledge for investment in new activities America, 2005). To a great extent coffee cultivation practices are intimately linked to local and global market forces, governmental subsidies, incentives for intensification and price premiums offered for differentiated products on the market (Jha *et al.*, 2014).

An alternative to diversification is differentiation within coffee production through various forms of value-adding activities. This can include compliance with particular social, environmental and quality standards such as certification and verification of production and trading methods. The following section explains the evolution of various voluntary certification and standard systems popular in the coffee industry today.

3.6. The birth of voluntary certification schemes

The first voluntary certification dates back to the early 20th century. To counter the dramatic increase in synthetic fertiliser use during the early 1900s, a group of German farmers set up the first organic (biodynamic) certification under the Demeter International label in 1928. The publication of Rachel Carson's *Silent Spring* in 1963 spurred the growth of several national organic movements that came together in in 1972 to form the International Federation of Organic Agriculture Movements (IFOAM). Although the 'fair trade' movement has been growing since the 1950s, organic certification was the single most important agricultural certification scheme up until the late 1980s. In 1988, the first Fairtrade certified coffee appeared on the Dutch market under the Max Havelaar label. Within a year, Max Havelaar coffee grew the market share of 'fairly traded' products on the Dutch market from 0.2 percent to 1.7 percent (Kuit and Waarts, 2014). Un until the late 1990s, organic and fairtrade certification were the leading agricultural certifications on the European market. The 1990s gave rise to a number of new certification initiatives in the agricultural sectors expanding certification concerns to deforestation, smallholder livelihoods, workers' rights and food safety. Rainforest Alliance certified its first banana plantation in 1993, followed by the establishment of the European retailer certification initiative, EUREPGAP (known as GLOBALG.A.P. since 2007) in 1997 and the UTZ Kapeh certification (today known as UTZ Certified) in 1998. For decades, businesses operating in the global agricultural sector have been struggling to reconcile their obligation to make profits with responsible sourcing behaviour towards suppliers. In the coffee sector, the early 2000s saw the dramatic decline in international coffee prices which pushed thousands of smallholder farmers below the poverty line. In the middle of the 'coffee crisis' years in 2002, Oxfam released a report titled *Mugged: Poverty in your coffee cup,* highlighting the tremendous gap between the quality of life of small-scale producers and the profitability of roasting operations. Over the next few decades the certification movement gained momentum and the market share of certified coffees grew from a relatively small niche market to increasingly mainstream. Although coffee prices have recovered since the early 2000s (reaching a historical high in 2011) the market price for conventional coffees remain extremely volatile.

Since the early 2000s, the use of certified raw materials has become almost a 'licence to operate' for businesses operating in global agricultural commodity sectors. Certifications demonstrate commitment to responsible sourcing and give credibility for businesses claiming to address social and environmental issues within their supply chains. In return, businesses pay a licence fee to the certification body as well as certification premiums to the producers. The licence fee is typically calculated as a percentage of total revenue generated from the sale of certified products (varies between 1-1.7 percent) while the certification premiums are paid to the producer on top of the market price for each lot of raw material (e.g. green coffee) purchased as certified.

3.6.1. Certifications, verifications and corporate guidelines

Voluntary standard systems can be divided into two fundamentally different conformity assessment processes: certification and verification. Compliance with certification or verification standards generally improves producers' position in negotiating a premium for their product (depending on various other factors such as access to appropriate higher value markets as well as the quality of the produce itself) and enables manufacturers to market their product as standard compliant (Mutersbaugh, 2005a; Reineke *et al,* 2012). Certifications tend to be consumer-facing, therefore, they are always accompanied by a visible logo or seal on the pack. The significance of such symbols, however, is changing, and their role is gradually decreasing in consumer facing communications (Nielsson *et al,* 2004).

> *"Certification is the procedure by which an independent third party certification body gives written assurance that […] the production process has been assessed and conforms to requirements specified by the Standards Bodies. Standards are agreed criteria [...] by which a product or a service's performance, its technical and physical characteristics, and/or the process and conditions, under which it has been produced or delivered, can be assessed." (Nadvi and Waltring, 2004, p6)*

Standards, certification and labelling are often used interchangeably, however, they are conceptually slightly different mechanisms and they don't necessarily have to go together:

- *Standards* – set and codify certain requirements that participants are expected to follow
- *Certification* – provides third-party assurance that a product, process or service conforms with certain standards
- *Labelling* – consumer-facing, on-pack claims, marks or seals that indicate conformance with the standard and serves as a tool to communicate standard compliance.

At the other end of standards compliance schemes are verifications which also aim to ensure that certain agreed criteria and practices are met during the production and trade of a commodity, however, verification processes are less stringent than certification and tend to require renewal on a less frequent basis. In contrast to certification which makes claims to external stakeholders by the use of a label visible to consumers, verification is used as an internal business-to-business assurance method and usually no label is used on pack (Potts *et al.*, 2014). The 4C Association – the Common Code for the Coffee Community – is the most rapidly expanding verification system in the coffee sector, promoting the most basic standards for social, economic and environmental sustainability. 4C offers specific guidelines for better coffee farming practices but its claims are not as specific as those of certification schemes. Their monitoring process relies on self-assessment and a three-year external verification cycle. The 4C Code of Conduct is intended to be a baseline standard for the coffee producer community, which aims to help producers advance to more demanding certifications. Corporate guidelines are another form of standard systems and differ from certification or verification schemes mainly by the fact that their criteria are company specific.

Due to the diversity of issues (social, economic and environmental) inherent in the coffee industry, a number of different voluntary standard systems have gained significant commercial value in the last decade and no two are the same. All major certification standards represent a combination of environmental, economic and social goals, although the emphasis on these goals varies across the different standard systems. The overlapping requirements of certification schemes has created confusion not only for producers and consumers but also for roasters, traders and other stakeholders in the supply chain (Nadvi and Waltring, 2004). At the time of writing, the main certification schemes with the most significant market share in the UK are: Fairtrade; Rainforest Alliance, UTZ Certified; and Organic. Another certification relevant to coffee is Bird Friendly, however, it is better known in the US. Detailed comparison of these schemes are provided in Section 3.6.7.

Individual certification schemes have different criteria for who or what can become certified. For example, in the coffee sector, the Fairtrade system only allows certification of smallholder producer groups who organise themselves in democratically run cooperatives. Individual producers cannot gain Fairtrade certification. In contrast, Organic and Rainforest Alliance certifications apply to individual farms and not the producers themselves. Implementation of certification, however, is not only a matter of organisational capacity. Certification can incur considerable costs in the form of training, investment in changing farming or administrational practices, certification fees and periodically reoccurring audit costs. Small-scale producers typically do not produce enough volume to make certification commercially viable. Exporting operations can choose to cover these costs and act as the certificate holders for a several small-scale producers. However, in these cases producers can only receive the certification premium enhanced price if they sell their produce to the certified exporting company. Certification typically involves compliance to a set of pre-defined standards or code of conduct and training to meet implementation requirements.

Certification code of conduct includes requirements for record keeping, use of agricultural inputs, no worst forms of child labour, compliance with occupational health and safety standards of the International Labour Organisation (ILO) code of conduct and various other agricultural or labour practices specified by the individual certification scheme. Compliance against these codes of conduct are checked during periodically reoccurring audits, typically annually but at least every three years. In case of group certification, such as certification of Fairtrade producer groups, not all farmers are audited every year. Certification schemes typically rely on third party auditors to conduct annual audits, with the exception of Fairtrade and Rainforest Alliance who instead required certificate-holders to be audited by their own auditing bodies; FLO-CERT for Fairtrade and RA Cert for Rainforest Alliance. Due to the consumer facing characteristics of certification schemes, the majority of the thesis will focus on the analysis of major certification schemes in the coffee industry.

3.6.2. Key characteristics of major certification schemes – relevant for the coffee sector

Voluntary standard systems employ a broadly defined notion of sustainability, placing varying level of focus on the three pillars of sustainable development - social, economic and environmental - (TCC 2009). All certification schemes and market-oriented sustainability initiatives offer a premium to producers for demonstrating compliance to a set of social and environmental criteria and usually cover three main areas of concern: production process, forms of market coordination and terms of participation (Consumers International, 2005). The following section will highlight the common characteristics and main differences inherent in the five main third-party certification initiatives relevant for the coffee sector: Fairtrade, Rainforest Alliance, UTZ, Organic and Shade grown or Bird Friendly.

3.6.2.1. Fairtrade

One of the most recognised and possibly most debated certification schemes on the market today is Fairtrade. The primary purpose of the first Fair Trade movement was to raise awareness of trade injustices in global commodity networks and to advocate policies that favor equitable trade. Fairtrade is defined as "an alternative approach to conventional trade that aims to improve the livelihoods and well-being of small producers by expanding their market access, strengthening their organisations, paying a fair price with a fixed minimum and providing continuity in trading relationships" (Giovanucci and Koekoek, 2003; p38). Conventional or free trade commodity markets often involve a large and complex network of supply chain actors whose relationships can be riddled with power inequalities and unfair terms of trade. Fairtrade claims to address these trade injustices by offering fair terms of trade, better prices and decent working conditions for producers and their workers in comparison to those operating in the conventional market.

Fairtrade standards currently extend to over 100 products, of which coffee is the most emblematic. Nearly half of all Fairtrade producers are coffee growers with over 812 thousand people across 30 countries, organised into 445 farmers' cooperatives (Fairtrade, 2015). With over 4,500 Fairtrade certified products, the UK is one of the biggest Fairtrade markets in the world and has the highest level of awareness amongst consumers (Fairtrade Foundation, 2017). Fairtrade products are now available to consumers in a wide range of outlets including supermarkets, independent shops, restaurants, cafes, wholesale and online. Some specialist shops are also registered as being part of the British Association of Fair Trade Shops (BAFTS). Fairtrade Foundation is an independent, non-profit organization that authorises the use of the FAIRTRADE Mark on products made in the UK in line with international Fairtrade standards. The FAIRTRADE Mark guarantees that a producers and their workers has received a 'better deal' during the trade of their product than they would have been able to achieve on the conventional market. The Fairtrade Foundation is the UK member of Fairtrade International (FLO) which joins together over 20 national labelling initiatives and 1,200 certified producer organizations across 74 countries around the world (Fairtrade Foundation, 2017). The Fairtrade International - based in Bonn, Germany - is in charge of developing and reviewing the Fairtrade standards. The Fairtrade certification and auditing

systems are administered by FLO-CERT GmbH, following the international ISO standard for certification bodies (ISO 65). The Fairtrade standard setting process follows the ISEAL Code of Good Practice for Social and Environmental Labelling.

The Fairtrade system is based on partnerships between producers and alternative trade organizations (ATOs) – such as Twin Trading, Oxfam Trading and Equal Exchange. The first ATOs developed in the 1950s and 1960s focusing on purchasing products (mainly agricultural commodities) directly from producer groups in in the global South, and selling them to end consumers via so-called 'Third World' shops in the global North. The earliest sings of Fair Trade in Europe can be traced back to the late 1950s when Oxfam UK started to sell handicrafts made by Chinese refugees. Handmade craft products provided much needed supplementary income for poor families and were often made by women who had even more limited opportunities for employment. At the same time, Dutch organizations began to sell cane sugar with the message "by buying cane sugar you give people in poor countries a place in the sun of prosperity" (FAO, 2003). From the early 1960s the Fair Trade movement grew as a response to extreme poverty in the global South and focused on improving market access of resource-poor communities by the marketing of handmade craft products. The first 'Fairtrade Organisation' was established in 1964, followed shortly by the opening of the first 'Third World Shop' in 1969. While the Fair Trade movement was trying to touch the consumers' conscience, the developing countries demanded "Trade not Aid" from the international political scene at the second UNCTAD conference (United Nations Conference on Trade and Development) in Delhi in 1968.

In 1973, Fair Trade Original in the Netherlands imported the first 'fair trade' coffee from a smallholder cooperative in Guatemala. In the last 30 years, coffee has become a flagship commodity for the Fair Trade movement, contributing to nearly half of the turnover of Fair Trade organisations. Following the footsteps of coffee, Fair Trade organisations soon started selling a number of other commodity food products as well such as tea, cocoa, sugar, wine, fruit juices, nuts, rice and spices through their networks. By the late 1980s, a number of country-specific 'labelling organizations' have developed – such as Max Havelaar Foundation in the Netherlands and Fairtrade Foundation in the UK – taking responsibility for labelling these 'Third World' products as 'fairtrade'. Certification labelling are meant to assure consumers that the product has been produced and traded according to pre-defined social, contractual and environmental standards. The first Fairtrade coffee was certified and labelled by the Dutch Max Havelaar Foundation in 1988. From the early 1990s, ATOs started promoting these 'fair trade' labelled products and soon they have appeared on mainstream retail shelves (Murray, Raynolds and Taylor 2003; Tallontire, 1999; 2000; 2001). From this point on, the popularity of the concept of labelling increased rapidly and the market share of Fairtrade labelled coffee grew to almost three percent within a year. During the 1990s, various non-profit Fair Trade labelling organisations were set up across Europe and North America then in 1997 their worldwide association, Fairtrade Labelling International (FLO, now Fairtrade International) was created. Today, Fairtrade International sets detailed standards for numerous

commodities while FLO-CERT, an independent certification and verification organisation, uses the Fairtrade standards to certify production and trade processes.

During its history of over 60 years, the Fair Trade movement has encouraged thousands of consumers to consider where their products are coming from and how they were produced. One of the main achievements of the Fair Trade movement and the subsequent certification and labelling system has been the awareness raising of many of the unjust circumstances of production and trade that continues to exist in commodity supply chains today. In spite of starting out from grassroots movement with small niche markets, the uptake of the Fairtrade certification by mainstream business was what helped the movement expand to a global scale. Currently, over two-thirds of Fair Trade products are sold by mainstream catering and retailing (WFTO, 2017).

Due to the relative complexity of the Fairtrade pricing mechanism there can be some confusion as to how the Fairtrade pricing systems works. The following section is meant to provide some clarity over the Fairtrade pricing structure as applicable to coffee.

Fairtrade as an alternative trade system is designed to protect farmers from the volatility of the market by offering a pre-defined minimum price and a fixed social premium that has to be invested in community development projects. The Fairtrade price is not calculated as a proportion of the final retail price (which is negotiated between the manufacturer/roaster and the retailer) but rather it is applicable at the point where the producer organization sells to the next supply chain actor - usually an exporter or importer or a roaster/manufacturer buying directly from Fairtrade certified producer organizations. The Fairtrade minimum price is the lowest possible price a Fairtrade buyer must pay the producer. Buyers of certified coffee, therefore, are obliged to pay producers at least the Fairtrade minimum price (and premium) or the market price (and premium) whichever is higher. As the Fairtrade minimum price is not reflective of the quality of the coffee, buyers and sellers can also negotiate on a 'differential' which can be added to or deducted from the New York 'C' reference price (i.e. the market price) based on quality, shipment date, logistics, risk, availability and the strength of relationship between the buyer and seller. The overall market price +/- differential, however, cannot fall below the Fairtrade minimum price. The structure of the Fairtrade pricing system and the relevant minimum prices for different green coffee categories are summarized below (Figure 12; Table 1).

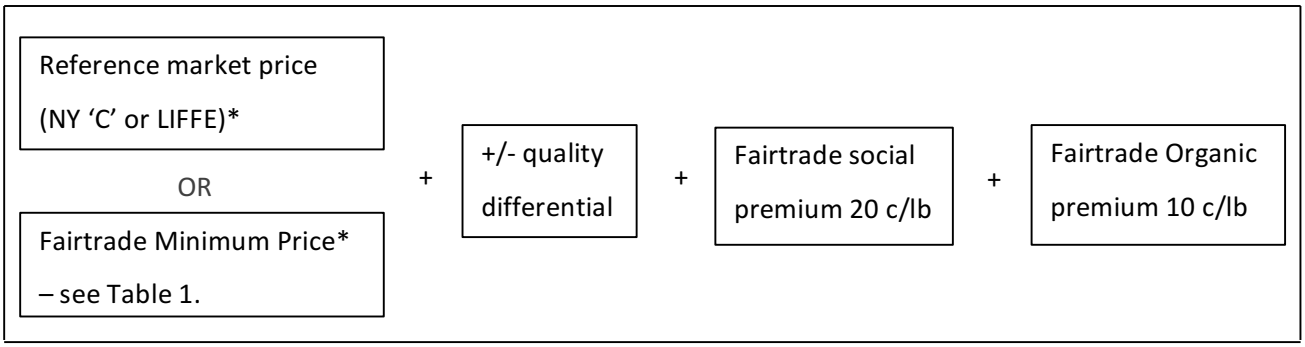


Figure 12: Fairtrade pricing structure. Adapted from Fairtrade International, 2014.

Table 1: Fairtrade minimum price and premium levels according to different processing types for coffee. Adapted from Fairtrade International, 2014.

USD/lb / Type	Fairtrade Minimum Price	Fairtrade Social Premium	Fairtrade Organic Premium	Total Price
Arabica washed	1.40	0.20	n/a	1.60
Arabica washed organic			0.30	1.90
Arabica natural	1.35		n/a	1.55
Arabica natural organic			0.30	1.85
Robusta washed	1.05		n/a	1.25
Robusta washed organic			0.30	1.55
Robusta natural	1.01		n/a	1.21
Robusta natural organic			0.30	1.51

While the Fairtrade system has undoubtedly benefited thousands of small scale farmers in the global South, and inspired consumers to express more conscious care towards people in need, it has a number of characteristics which Fairtrade continues to attract much criticism for:

- *Traceability limited to producer groups* - One of the cornerstones of the Fairtrade system is that its certification can only be attained by democratically run and politically independent smallholder producer organisations. Individual producers, no matter how large or small, cannot obtain Fairtrade certification on their own. This limits traceability to producer groups rather than individual producers.
- *Reliance on the politically risky producer organisations* - Fairtrade entails a strong social focus and relies on an artificial minimum price and fixed premium mechanism to deliver economic benefits to smallholder communities. The use of the social premium has to be decided by the democratically elected cooperatives which in many of the producing countries can be prone to corruption and unequal power relations.
- *Certified production vs. certified sale imbalance* - Although the minimum price can provide some level of price assurance to producers during extended periods of low market prices, there is nothing that would

guarantee continuous and reliable demand for Fairtrade (or any other) certified products (Dragusanu et. al, 2014)

- *Its pricing system attracts lower quality beans* - Although the original Fair Trade movement grew out of selling handicrafts, the Fairtrade certification and pricing system were designed for commodity products which are easier to standardise. As unique characteristics of a product (such as distinctive taste profile of coffee from specific origins) are difficult to standardise, the Fairtrade minimum price does not have any relevance to the organoleptic quality of the coffee. As the Fairtrade minimum price is guaranteed for the coffee regardless of its quality, this system incentivises a focus on volume rather than quality.
- *Globally uniform minimum price* - Although often glorified for providing much needed price security, the same minimum price applies in all producing countries where local production cost can greatly differ.
- *Fair trade doesn't necessarily help the poorest growers* - The majority of Fairtrade certified producer groups are in Latin-America while relatively little fair-trade coffee originates from some of the poorest countries in East Africa. This situation, however, may change over time.
- *High costs of certification* - Fairtrade imposes significant certification and audit costs on impoverished growers thereby potentially undermining its own benefits in the long run.
- *Limited scope of environmental standards* – The Fairtrade environmental standards are less rigorous than some of the more conservation focused certifications.

3.6.2.2. Organic

Coffee is the world's largest single organic crop – representing 7.7 percent of total area covered with coffee – of which 50 percent is grown in Latin-America and 30 percent in Africa (Willer and Lernoud, 2016). One of the most serious hazards of non-organic coffee farming is the potential harm agrochemicals can cause to people and the environment on the farm. Many of the pesticides and other synthetic agrochemicals that are banned or highly restricted in North-American and European countries, are still being used in many coffee producing origins. Due to the lack of proper handling, storage or personal protection, farm workers can be directly exposed to highly toxic chemicals. The toxicity of pesticides and herbicides also negatively impact on soil health and essential ecosystem functions (such as pollination), even when applied correctly. Organic certification has been developed as a production management system that restricts the use of agrochemicals and helps enhance soil quality and activity thereby aiming to improve the health and longevity of the plants and the safety of farm workers themselves. The organic standards are based on minimal use of off-farm inputs and prohibit the use of synthetic agro-chemicals or genetically modified seeds.

Following the first guidelines for organic production - developed by the Codex Alimentarius Commission (an FAO/WHO joint Food Standards Programme) in 1961 - IFOAM developed a set of standards for organic agriculture in the early 1990s. These so called 'Basic Standards' are usually not employed on their own but rather form a framework for national organic certification bodies to develop their own set of standards. In the

UK, organic certification is regulated by The Department for Environment, Food and Rural Affairs (DEFRA) and managed by a number of organizations, of which the largest are the Soil Association and Organic Farmers and Growers.

Soil Association is the UK's largest organic certification body and leading charity for food and farming. The Soil Association was founded in 1946 on the back of raising concerns about the health implications of increasingly intensive farming systems following the Second World War. Their main concerns focused on soil erosion and depletion and consequent decrease in the nutritional quality of food; exploitation of farm animals and agriculture's impact on the surrounding countryside and wildlife. Organic standards are developed by government authorities, international organisations such as the FAO/WHO joint Food Standards Programme (Codex Alimentarius Commission) and the International Federation of Organic Agriculture Movements (IFOAM). In many countries, organic certification is regulated by the government, and commercial use of the term *organic* is legally restricted and may be used only by certified producers. Originally, in the 1960s through the 1980s, the organic food industry was comprised of small, independent farmers, selling on local farmers markets. Due to the direct relationship between farmer and consumer, organic status was a matter of trust and didn't require the attainment of a label. Certification standards and the organic label were developed parallel with the expansion of the retails sector into supermarkets where direct contact with the producer is no longer possible. This regulation of organic certification, however, comes with significant costs and bureaucracy which poses a potential barrier to entry for many small producers.

Organic practices often incur substantial additional labour costs needed for hand weeding, large volumes of organic compost and implementation of integrated pest management. On the other hand, organic yields tend to be below the inflated yields of non-organic farms by as much as 34 percent (Seufert et. al, 2012). These extra costs combined with additional certification and audit fees and the lost premiums during the three-year conversion period are often too great to be covered by the organic premiums alone. For this reason, organic certification in the coffee industry is closely linked to Fairtrade as its social premiums are often needed to cover the substantial additional costs of organic production. Organic certification has the strictest standards regarding soil quality maintenance and water protection targeting particular farm management practices, including the total elimination of all synthetic agro-chemicals, fertilisers, pesticides and pharmaceuticals. It promotes the use of natural methods for enhancing soil-fertility and resisting disease (Raynolds et al. 2007) and encourages the protection of ecosystems through the restriction of land clearing, soil and water conservation practices (IFOAM, 2005a). Consumers of organic products tend to seek out the assurance of the label primarily for its believed health benefits – rather than because of moral considerations towards the social and environmental circumstances of production.

3.6.2.3. Shade grown and Bird Friendly

Shade grown is an umbrella expression used to describe certification schemes whose standards focus on conserving forest cover and wildlife habitat through the maintenance of forest canopy over coffee plantations. In traditional farm management systems, coffee is an integral part of a larger ecological system including indigenous tree species that provide shade for the coffee plants, habitat for wildlife, protect the soil, sequester carbon and help regulate the microclimate on and around the farm. Such agro-forestry systems are believed to contribute to the long-term sustainability of coffee farms as well as provide farmers with additional incomes through the provision of timber and other non-timber forest products. Sun-coffee, on the other hand, provide higher yields in the short term (due to high planting density and more rapid maturation of coffee fruit). Their management, however, requires the intensive application of external inputs, depletes the soil and causes the coffee trees to age pre-maturely. Due to the large-scale 'technification' (removal of shade cover) of coffee plantations in the 1980s and 1990s in Latin America, a number of shade coffee systems have developed aiming to re-establish the ecological balance of production landscapes while delivering additional premiums and livelihood diversification options for producers. As not all shade systems yield equal benefits, a common set of 'Conservation Principles of Coffee Production' was developed by Rainforest Alliance, SMBC and Conservation International, which has provided the foundation for a number of subsequent conservation-centred certification programmes and corporate guidelines on sustainable coffee production. The terminology 'shade-grown coffee', however, is not a certification and is not verified by an independent third party. The two main third-party certification schemes with meaningful shade and conservation criteria for coffee farming systems are Bird Friendly and Rainforest Alliance.

The Brid Friendly certification was set up by the Smithsonian Migratory Bird Centre (SMBC) in 1997 with the aim of promoting coffee farm management practices that support migratory bird-habitats over coffee farms. The Bird Friendly standards help ensure the creation of an agro-ecosystem that provides ideal habitat for wildlife and migratory birds, the abundance and diversity of which have shown to drop dramatically with the conversion of shaded farms to sun plantations. In regard to environmental criteria, the Bird Friendly certification is the most comprehensive, including complex standards for canopy cover and biodiversity protection as well as requiring Organic certification as a pre-requisite. Bird Friendly certification is often referred to as the only 'true shade-grown' certification as it provides strict standards for canopy height, foliage cover, diversity of woody species, total floristic diversity, structural diversity, leaf litter, herbs and forbs on ground layer, living fences, vegetative buffer zones alongside waterways and visual characterisation. It requires a "canopy at least 12 meters high, a minimum of 40% shade cover, and 11 species of shade trees" (Craves, 2010a, p1). Undoubtedly, with regard to actual environmental and biodiversity conservation benefits, the Bird Friendly certification is "the most rigorous environmental scheme" (Muradian and Pelupessy, 2005, p2035) and is considered as the gold standard for shade-grown coffee. Compliance with their standards are costly and demand for it is limited to a small niche market, concentrated primarily in the US, Japan, Holland and Canada.

3.6.2.4 Rainforest Alliance

In 1996, another set of sustainability standards were developed by the Sustainable Agriculture Network (SAN) with a strong focus on conservation and the ecological integrity of farming systems. The certification and labelling requirements are managed by the secretariat of the SAN network, Rainforest Alliance. The Rainforest Alliance is an international non-governmental organization (NGO) founded in 1987. Its mission is to "conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior" (SAN, 2015). The Rainforest Alliance system aims to utilize market forces to prevent the major drivers of deforestation and environmental destruction: timber extraction, agricultural expansion, cattle ranching and tourism. The Rainforest Alliance launched the world's first sustainable forestry certification program in 1989 to encourage market-driven and environmentally and socially responsible management of forests and helped found the Forest Stewardship Council (FSC) in 1993, the non-profit international body that manages the FSC forest certification standards ever since. As of 2016, the Rainforest Alliance has certified more than 83.5 million acres (33.8 million ha) of forests worldwide, making it the largest FSC certifier of forestlands in the world (Rainforest Alliance, 2017). Rainforest Alliance's sustainable agriculture program includes training programs for farmers and the certification of small, medium and large farms that produce more than 100 different crops, including avocado, cattle, cinnamon, coffee, palm oil, and potatoes, as well as tea, cocoa, and bananas. In recent years, the Rainforest Alliance has greatly expanded its work with smallholders, who now account for 75% of the farms (more than 783,000 farmers in all) certified by the organization. As of June 2015, 13.6 percent of the world's cocoa, 5.4 percent of coffee and 15.1 percent of tea comes from Rainforest Alliance Certified farms (SAN, 2015).

The broadest range of environmental criteria is covered by Rainforest Alliance's scheme. Although the Rainforest Alliance standards permit the use of some agro-chemicals (the allowed types of synthetic agrochemicals are strictly controlled by the SAN standards), it addresses a number of landscape and biodiversity issues that are not addressed by any other certifications. Rainforest Alliance focuses mainly on improving the environmental conditions of the farm while also aiming to help producers achieve sustainable livelihoods by transforming land-use and business practices. The Climate Module, a specific set of standards for climate-resilient practices -published in 2011, are no longer an add-on but they are embedded in the 2017 SAN standard. The latest standards cover habitat and wildlife conservation, encouragement of practices that protect the biological diversity of production areas, integrated crop management, agrochemical restrictions, soil and water conservation practices, and even on-farm waste management. Notwithstanding the strong conservation focus suggested by its name, the Rainforest Alliance standards combine rigorous social and environmental criteria and can be considered as one of the most comprehensive certification schemes on the market today, encompassing strong social and environmental standards. The Rainforest Alliance certification commands a price premium, however, the premium level is not predetermined and there are no minimum price requirements within its standards. As opposed to Fairtrade, the Rainforest Alliance certification can be awarded

to individual producers of any size – and not only producer groups. The Rainforest Alliance standards cover over 100 different agricultural products of which, coffee is one of the most significant. By 2014, 5.4% of global coffee production was produced under Rainforest Alliance standards (SAN, 2015). As of 2014 more than 170,000 coffee farmers in 26 countries have gained Rainforest Alliance certification, covering over 1 million acres (427,000 ha) (Whelan and Newsom, 2014).

The SAN/Rainforest Alliance standards get updated regularly and the latest 2017 SAN Standard becomes binding from July 2017. The main focus of the new standards is its 'continuous improvement framework' that measures performance levels throughout certification cycles. Farms must demonstrate continuous improvement each year and reach the highest level of performance by the sixth year. Recognizing the importance of several high-priority conservation and human rights issues, the 2017 SAN standard includes a set of 'critical criteria' that all certified farms must comply with from the outset. The issues addressed by the critical criteria include capacity building in farm management, mitigation of human rights risks to workers and nearby communities, improved housing and sanitation for farm workers and demonstration of the use of specific farming methods designed to eliminate deforestation and build climate resilience.

3.6.2.5. UTZ certified

UTZ certified (originally launched in 2002 as UTZ Kapeh – meaning 'good coffee' in a Mayan language) originally started as a foundation based in Guatemala and the Netherlands and was set up by one of the world's largest retail giants, the Dutch Royal Ahold Company. Its code of conduct for sustainable coffee growing was developed on the basis of the 'Good Agricultural Practices' of the European Retail Group (EUREP-GAP). EUREP-GAP, as the initiative of mostly large European retailers focused on developing technical specifications for fruits and vegetables, and soon extended its product specifications to tropical agricultural commodities, such as coffee, tea and cocoa. The UTZ standards initially stipulated a specific pricing system comprising of the New York C price, the quality differential plus a variable 'sustainability investment premium' or 'Sustainability Differential' the level of which varied so much that it has got abandoned over time and the certifications focus shifted on monitoring traceability.

UTZ certification defines itself as a certification programme for 'responsible coffee', fostering improvements in social and environmental quality in coffee farming practices and placing particular emphasis on traceability throughout the supply chain. UTZ Certified environmental standards are less rigorous than Rainforest Alliance's and mainly cover responsible use of agrochemicals, encouraging growers to minimize erosion, energy use, and pollution. Although the UTZ standards have indicators to protect wildlife and habitat (no deforestation of primary forests, use of native tree species as coffee shade trees, protection of endangered species), these guidelines appear to lack any specific requirements for the type and stratification or diversity of shade trees. Certification schemes make a number of claims regarding the benefits to farmers who participate in their

programmes. These claimed benefits can be grouped into four domains: social, environmental (including agronomy), economic and service. A more detailed range of criteria covered by the four main certification schemes are presented in. A more detailed range of criteria covered by the four main certification schemes are presented in Table 27 in Appendix 1.

Table 2: Claimed benefits of certification schemes – relevant to the coffee sector

Claim	Fairtrade	Rainforest Alliance	Organic	UTZ
Service provision				
Improved access to credit	•	•		
Technical assistance / training		•		
Improved organisational capacity	•	•		
Improved traceability	•	•	•	•
Environmental				
Improved farm management		•	•	•
Yield improvement / Productivity		•		•
Increased farm efficiency		•		
Improved climate resilience		•	•	
Preservation of waterways	•	•	•	•
Protection of biodiversity	•	•	•	•
Deforestation restrictions	•	•	•	•
Economic				
Improved livelihoods for farmers	•	•	•	•
Guaranteed minimum price	•			
Fixed certification premium	•			
New market opportunities	•	•	•	•
Social				
No forms of forced labour	•	•	•	•
Empowerment of farmers and workers	•			
Cleaner, safer working environment	•	•	•	•
Gender policies	•			
No (worst forms of) child labour	•	•	•	•

3.6.3. Market shares of certified coffee

Regarding data on the market shares of certified coffees, care must be taken when interpreting industry specific data as their terminology differs from the one used by academia. In industry specific terminology 'certified stocks' has nothing to do with the certification schemes discussed above. By 'certified' the industry means coffee stocks sold to and kept in the main commodity warehouses around the world such as the ones found in Antwerp and New York. Despite the considerable difference highlighted in earlier sections between certified and speciality coffee, in trade statistics, Fairtrade, Rainforest Alliance, Organic and UTZ certified coffee volumes are categorised as 'speciality coffee' or increasingly as 'sustainable coffee'. Neither of these terms are technically correct, the reason for which will be discussed in Chapter 7. In this thesis any reference made regarding certified coffees are aligned with the terminology used in the academic literature and refer to coffees accredited by voluntary certification bodies. The two most significant corporate guidelines are those of the Starbucks Coffee Farmer Equity (C.A.F.E.) Program and the Nespresso AAA Sustainable Quality scheme. Trade statistics estimating the size of 'sustainability certified' coffees often include coffees sold under these two corporate schemes. However, as these corporate guidelines cannot be classed as independent third-party certification schemes, they don't form part of the analysis presented in this thesis.

Global coffee production has increased from 110 million 60 kg bags of green coffee in 2001 to 151 million bags in 2017 (IC, 2017). Global supply of standard compliant and certified coffee rose from 1 percent in 2001 to 40 percent by 2012 (IISD, 2014). However, this figure is likely to be an overestimation as trade statistics are not able to account for all volume of double or triple certified coffees. According to industry estimations, around 25 percent of certified coffee carries multiple certifications which reduces the global share of certified coffees to around 29 percent (Kuit and Waarts, 2014). Certified coffee, differentiated by its social and environmental "credence attributes", is one of the fastest growing segment of the industry, with an average annual growth rate of 10% (Rice, 2010). Certified coffee sales are concentrated mainly in Europe and North America but Japan and Australia are seeing an increased demand for certified coffee as well. In 2007 Organic and Fair Trade had the largest coffee volumes with the most global production and marketing, whereas UTZ Certified and Rainforest Alliance certified coffee volumes were increasing at the fastest rate due to the integration of large-volume plantations (Raynolds *et al.,* 2007). There are, however, significant differences between the available and the purchased volumes, to the detriment of the latter. In 2013, only 28-35 percent of all the Fairtrade, Rainforest Alliance or UTZ certified coffee was sold as such (Panhuysen and Pierrot, 2014). The unsold certified coffee normally gets sold-on in the conventional coffee markets without any claims of added value or any premium for the producer. This gap between supply and demand for certified 'sustainable' coffees can partly be explained by difficult nature of gathering accurate data of certified coffee volumes as country records do not account for the overlap between multiple certification systems. The other reason for the lower demand for certified coffees is the fact that certification as purchasing criteria is mainly secondary to the buyers' quality requirements. When standard compliant (i.e. certified) coffee is produced but not sold as such, potential benefits of market access

and certification premiums are not accessible to certified producers (TCC, 2014). The implications of this phenomenon is further discussed in Chapter 6 and Chapter 7.

Certification standards have helped promote the importance of the environmental aspects of coffee growing by providing a framework for monitoring and compliance for best practices. The main claimed benefits of certification include improved access to credit and technical support (Mendez *et al.*, 2010), improved environmental practices and price premiums. The popularity and uptake of certification standards have undoubtedly increased in recent decades. Beyond the cause-related differentiation, sustainability standards address another crucial aspect of producer sustainability: consistency. Even though the highest quality is not always needed by large-scale commodity buyers (as lower quality coffees are perfect fillers for inexpensive blends), consistency of both coffee quality as well as business practices are hugely important in long-term business relationships between buyers and producers. Although none of the certification standards are willing to address quality, let alone consistency openly, the level of organisation their standards demand inevitably increases the likelihood of improved consistency.

Despite the rapid development and increasing popularity of the concept and practice of certification compliance, a number of challenges still need to be overcome by the industry. Although all certifications command certain level of premiums, the financial returns of investments in certifications are rarely immediate, while the additional costs of compliance can be considerable (Bacon *et al.,* 2008; Haggar *et al.,* 2010). Producers, who want to benefit from the differentiated market of certified coffee (Giovannucci and Koekoek, 2003), have to meet various standards on environmentally sound production, food safety and safe working conditions, the cost of which can arguably counteract the benefits gained by compliance and ultimately jeopardise both developmental and conservation success of the initiative. The most substantial costs include initial investments in equipment, water filtration, storing facilities followed by additional investments such as farmer training, set up of internal management systems (if not existed before), certification fee and annual audit fees (Haggar *et al.,* 2010). Since producers bear most of the costs, certification can become effectively a barrier to entry (Getz and Shreck, 2006) for those small producers who would benefit from the support of these schemes the most. Besides the economic costs, compliance with certification standards often requires a change in cultural practices and ways of living and working which might be unusual or unknown in certain producer regions (Rice, 2001). In order to make certification financially viable, it is estimated that average production per farmer needs to be between 1.72 to 3.48 mt of green coffee (Kuit and Waarts, 2014). Producers with lower productivity levels – as is the case in many African countries – have to rely either on donor funding or be able to sell higher than average percentage of their crop as certified.

Despite the increase in certified coffee sales, millions of coffee growers continue to struggle for survival (Bacon *et al.*, 2008). Contrary to general public expectations, livelihood challenges persist even in Fairtrade certified

communities (Arnould *et al.*, 2009; Mendez *et al.*, 2010b). Even though certified coffees often fetch higher prices than conventional, commodity grade coffee with no level of traceability, the associated certification (and audit) costs often counterbalance the extra income (Jha *et al.*, 2014). Food, labour and input costs have been increasing in producer countries but price premiums have not kept track with these changes; therefore, the real value of such premiums at household levels has declined (Bacon, 2010). The mainstreaming of sustainability certification systems raises further questions (Taylor, 2005b; Doherty and Tranchell, 2007). By definition, sustainable initiatives have been originally associated with niche markets, an obvious threat to their survival is that "*as supplies of certified coffee rise, so will premiums fall unless held to a floor price or minimum differential*" (America, 2005, p29). Although the various voluntary standard systems offer a diverse set of market mechanisms to transmit value along an otherwise convoluted supply chain, neither of these schemes should be considered as the ultimate formula for sustainability. Their success "require a commitment to ongoing capacity-building and long-term investment if they are to improve the conditions for farmers and communities" (Coffee Barometer, 2014).

3.6.4. Speciality coffee

Besides certifications, another, relatively new segment is showing rapid growth in the market: speciality coffee. The speciality market differentiates itself from the mainstream and the certified market by focusing on the trade of high quality, 'speciality grade' and fully traceable coffee. This quality- and traceability-focused sourcing strategy is commonly referred to as 'direct trade' and more recently as 'the relationship model'. Direct trade is a relatively new approach promoted by the speciality coffee industry. Direct trade is not a certification system and there is no third party verification that would regulate the use of the term. Direct trade is defined mainly as a trading model and a purchasing strategy but there is no industry wide definition for the term. In principle, the direct trade model is about developing long-term relationships, paying sustainable prices and sourcing high quality coffee with distinct taste profiles (The definition of speciality quality is discussed in more detail in section 3.6.4.1.). Direct trade, however, doesn't necessarily mean buying 'directly' from the farm. High quality coffees sourced via speciality importers are also referred to as 'directly traded' (discussed in more detail in Chapter 7).

The development of the speciality sector was driven by the desire to source good quality coffee that is traceable to the farm level. The development of the speciality coffee sector can be divided into three discernible periods referred to as 'waves'. Each 'wave' can be characterised by a particular focus (Figure 13). The roots of the 'first wave' period can be traced back to the 1800's when coffee merchants saw an opportunity to move coffee from a luxury commodity and make it affordable and available to the masses. Folger and Maxwell House were the leading household brands across the United States. Taste and quality were not of particular concern for the first wave, instead, emphasis was placed on convenience and mass production. Many of the high volume processing and packaging technologies including vacuum packing and instant coffee, were invented during the first wave. The appallingly low quality of the first wave coffee triggered the transition into the new era around the late

1960s. The phrase 'speciality coffee' was first used by a 'second wave' Californian coffee roaster, Erna Knutsen, who described speciality coffee as beans from specific 'appellations' which are grown in distinct geographic microclimates and possess unique flavour profiles (Weissman, 2011). Second wave consumers showed a new found interest towards the origin and taste profile of their coffee thus laid the foundations for the development of 'speciality coffee'. The wine industry and its key concepts such as terroir and flavour profile, is often thought of as being a key influence in the development of the speciality coffee sector. The second wave taught consumers about espresso, latte and the French Press and gave birth to the most charismatic coffee house chains: Starbucks. The second wave coffee houses have mainstreamed the social experience of drinking coffee out-of-home, though in the process they have arguably sacrificed their original focus of connecting consumers with the origin of their coffee. With the intention of reviving a love of great coffee and finding the connection with the source of the beans, a new group of coffee lovers have started referring to themselves as the third wave around the early 2000s, as a "reaction to the Starbucks-driven industrialization of gourmet coffee" (Weissman, 2011, p5). Since then, the third wave has developed into a movement, determined to educate consumers about great coffee. If the aim of the Fair Trade movement is to fight poverty, the third wave is a fight against mass produced 'bad coffee'. Besides quality, the third wave speciality coffee emphasises transparency and traceability all the way to the farm level. Information about the coffee variety, altitude of the farm and the processing method are of key concern for the speciality sector but it is not uncommon to see speciality roasters showing full transparency of the prices they pay to the farmers.

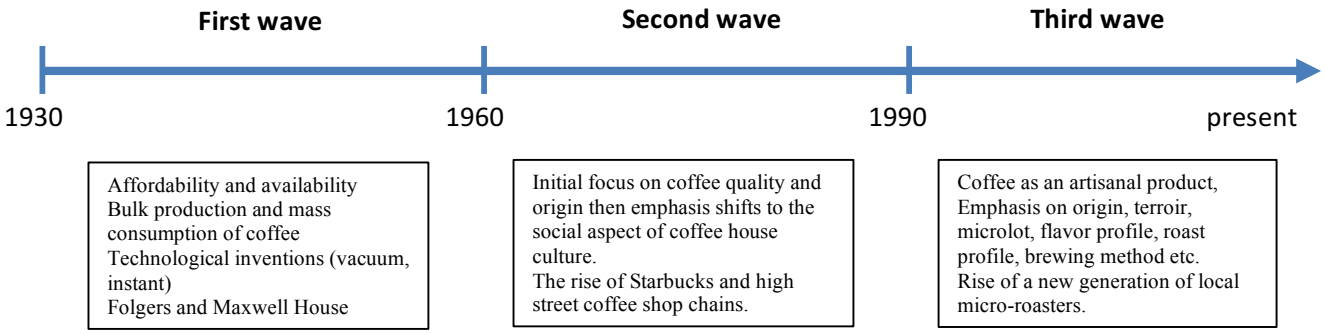


Figure 13: Development phases of the speciality coffee industry. Source: adapted from Borella et al. (2015)

The speciality sector is growing more rapidly than the certification market ever did. In 2016, there was an estimated 1,400 independent specialty coffee shops in the UK, and the number is estimated to double by 2020 with an annual growth rate of 12 percent (Allegra, 2016). The global market share of the speciality sector is estimated at 10 percent (Van Hilten et al., 2011) and is considered as the fastest growing segment in traditional coffee consumer markets such as US, Canada, Europe, Japan, Australia and New Zealand. The biggest market for speciality coffee is the USA with an estimated value of $25.3 billion (Speciality Coffee Association of America,

2014). The majority of global coffee production consists of mainstream, conventional coffees but there are a growing number coffees, sometimes with limited availability, and greater variety in taste characteristics fetching substantial premiums over mainstream coffees (ITC, 2013). Efforts to increase the income of producers historically tended to focus on improving productivity in the form of development of new varieties, mechanisation, irrigation and agricultural inputs. Since liberalisation of the coffee market took place in the early 1990s, the reduction of extension services in many producing countries has resulted in a decline in coffee quality and a simultaneous drop in the share of returns. Coffees regarded as specialty or sustainable are differentiated from commodity grade coffees on the basis of quality (Renard, 2005; Tovar *et al.,* 2005; Laderach *et al.*, 2006), ethical or sustainable production credentials and their more personal producer relationships (Bacon *et al.*, 2008). Quality is an essential part of product differentiation; however, the complexity of the concept of quality and the relative ambiguity in its definition as well as the difficulties in measuring the non-quantifiable aspects of certain product qualities (such as taste) makes quality improvement efforts rather challenging. While compliance to certain environmental or social standards can largely be measured and monitored, coffee quality is slightly more difficult to measure objectively. There are a number of industry-widely recognised tools that can frame the assessment and communication of coffee quality. The following section provides a brief explanation of these quality assessment tools and processes.

3.6.4.1. Speciality coffee quality

As the primary selling point of most food product is its (claimed) great taste, quality maintenance has been increasingly important in the protection of traditional coffee markets. Without satisfactory sensory experience (as perceived by the consumer), companies and products stand little chance to stay in the market in the long-term, regardless of their sustainability credentials (Giovannucci *et al.*, 2008a). Quality, therefore, is still key for growth in the traditional markets, where coffee drinking is an integral part of everyday life (Giovannucci *et al.*, 2008a). Quality, however, is an ambiguous term and holds different meanings to different stakeholders along the supply chain. In the coffee industry the definition and assessment of quality has historically been assigned to those who stand in the middle of the supply chain: exporters, importers and traders. The trade has developed a legal definition of quality in order to enable performance measurement to certain contracted quality parameters. In general terms this is the 'quality' the New York ''C'' coffee contract refers to. The NY C contract is an industry-widely recognised benchmark contract for arabica coffee and is used as a reference point the majority of coffee contracts. The original Coffee Exchange in New York city was founded in 1882 to handle the trade of futures contracts for Brazilian arabica coffees. Today the NY Coffee Exchange price refers to the price determined by coffee futures contracts that trade on the Intercontinental Exchange (ICE) and is the global benchmark price for arabica coffee. Robusta coffee varieties are traded on the London commodity exchange and their futures contract (LIFFE) is used as the benchmark for pricing physical robusta coffee. With these benchmark prices comes an agreed quality, the definition of which is based on objective, measurable features of a physical coffee sample. For example, in the conventional trade, good quality means large beans, low defects,

even humidity which are easily measured properties of green coffee beans. ICE and LIFFE contracts, however, do not make reference to the organolepic, sensory qualities of the coffee i.e. what it tastes like.
Driven by the desire to make taste a quantifiable and measurable property of coffee, the Specialty Coffee Association of America (SCAA) developed a 'cupping chart' in order to help communication between the roaster and the producer about the particular taste characteristics of their coffee.

According to the SCAA definition, the term specialty coffee refers to:

> *"the highest-quality green coffee beans roasted to their greatest flavor potential by true craftspeople and then properly brewed to well-established SCAA developed standards. Specialty coffee in the green bean state can be defined as a coffee that has no defects and has a distinctive character in the cup, with a score of 80 or above when graded according to SCAA Standards" (SCAA, 2015).*

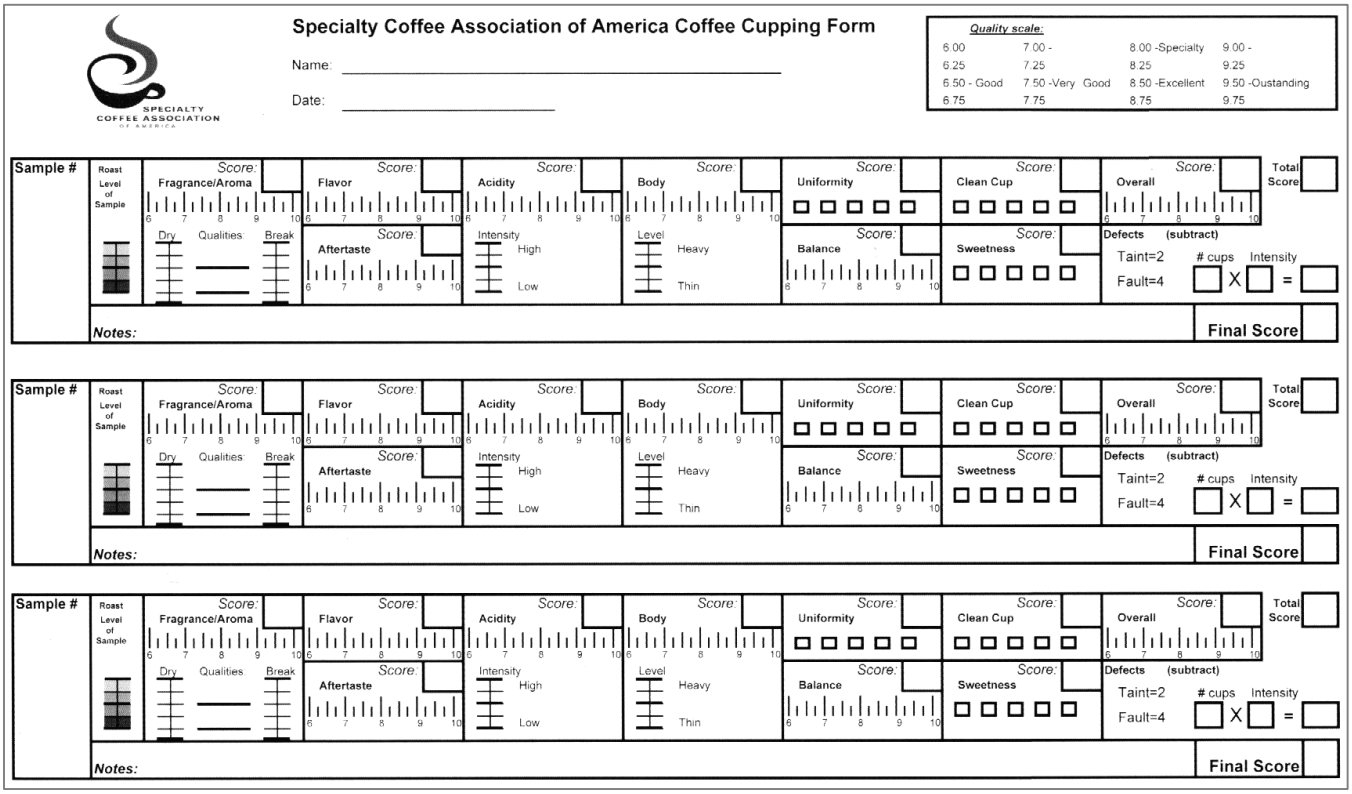


Figure 14: SCAA coffee quality assessment cupping form. SCAA online resource

On the SCAA cupping form (Figure 3.9.), the quality of a coffee is rated on a numeric scale between 0-100, created as the sum of various flavour attributes including: fragrance/aroma (of dry coffee grinds and the broken wet crust), flavour, aftertaste, Acidity, body, balance, uniformity, clean cup, sweetness, defects, and overall. This scoring system makes the otherwise subjective experience of taste more objective and comparable between tasters. Coffees that receive higher scores are free from defects, tend to have more sweetness, good body (appropriate for the origin) and are more balanced overall than coffees that receive lower scores.

The definition of quality remains a much debated subject between the different segments of the coffee industry. The most general divide lies between the classification of speciality vs. conventional coffee. The concept of quality has become ambiguous and the perception of quality of certain origins is still subject to historical prejudice. Producers of certain origins may not sit at the forefront of coffee production due to their historical reputation for low quality coffee and unreliable management therefore coffees originating from such countries are less likely to fetch prices as high as more traditional origins like Colombia. While for the consumer, understanding of quality is limited to whether or not the coffee is strong or weak, tastes good or not, professional coffee tasters in the industry can articulate a much deeper level of quality differentiation between coffee samples. The SCAA's Coffee Taster's Flavor Wheel (Figure 3.11) gives an example of the variety of expressions used by the industry to describe the quality and taste of a cup of coffee.



Figure 15: SCAA Coffee Taster's Flavor Wheel Source: SCAA online resource

3.6.4.2. Traceability and provenance

Coffee contains over 1000 chemical compounds creating an incredible diversity of flavour characteristics. Many of these flavours are determined by the local micro climate and environmental conditions specific to the growing region. While the final taste of a cup of coffee can be significantly altered by various processing, roasting and brewing methods, its inherent flavour potential is greatly dependent upon where the coffee was grown. Coffees from certain origins, such as Jamaican Blue Mountain, Hawaii Kona, Top Kenya AA and Guatemalan Antiguas, may command a higher price due to their specific flavour characteristics or historic reputation (ITC, 2013). However, coffees that don't carry flavour characteristics distinctive of their growing regions, are easily substitutable with other similar coffees, therefore, their prices are usually highly vulnerable to fluctuations of the market. At the other end of the scale, coffees with distinct flavour characteristics and traceable origins are much more difficult or often impossible to substitute and as a result, can fetch remarkable prices on the speciality market. The very best of these coffees are often sold through competition-based auctions, such as the Cup of Excellence programme, providing not only a marketing opportunity for high quality growers but also an opportunity to draw attention to the excellence of particular coffee regions and raise the profile of the producing country itself (ITC, 2013). However, the volume of such auctioned lots are generally very small and tend to only suit the needs of speciality micro-roasters.

Latest trends in the speciality coffee sector show an increasing focus being placed on improving the traceability of 'single origin' coffees down to a small region or a particular farm (Giovannucci, 2010). Geographical Indication (GI) attached to where coffee comes from provides a clear indication of the origin of a product and can be used to build brand recognition and product identity for the place of origin (ITC, 2013). Appellation of origin is a special kind of geographical indication (ITC, 2013), that describes terroir as the 'taste of place' thereby linking the quality perception of coffees to the geographical and cultural context of where they originate from (Mutersbaugh, 2005b). By putting an everyday purchase into a geographical context (Cook et al., 1998), the efforts of the speciality industry to raise consumer awareness of the origins where coffee is produced and their specific taste characteristics are believed to help dismantle the faceless nature of a global commodity and reduce the separation between places of consumption and production (Lyons, 2005). Ironically, this reconnection between producers and consumers seems to have been more successfully achieved in the quality and 'terroir' focused speciality sector than by the standards compliant and process oriented certified market.

3.7 Summary

Much of the challenges observed in the coffee sector are rooted in the history and the socio-economic and environmental circumstances of main producing regions. The boom-and-bust cash-flow cycles of smallholder coffee production is putting increasing pressure on food security, encourages migration and often attracts illegal crop production (ICO, 2014). Due to the short-term inelasticity of both supply and demand in the market, production surplus or deficit is not easily corrected in the coffee market. This supply-demand imbalance ultimately promotes price volatility and exacerbates the vulnerability of smallholder livelihoods (Ponte, 2002). Climate change induced shocks are increasing in number, magnitude and geographical coverage all over the world and coffee may be the proverbial 'canary in the coalmine' (Rootcapital, 2014) for its destructive impact on agriculture. The coffee leaf rust crisis of 2012/13 was a wake-up call for the industry, exposing serious deficiencies and a series of structural weaknesses in farm management systems across many traditional Central and South American growing regions.

The length and complexity of the coffee supply chain has historically left ample opportunity for the development of a range of social and environmental externalias, many of which have been exacerbated by the increasingly visible impacts of climate change. As the increasingly unpredictable weather patterns disrupt short-term supply levels, it seems likely that the global commodity price for coffee will continue to fluctuate. The search for more appropriate climatic conditions is likely to induce latitudinal migration within and outside existing growing areas. Such geographical re-zoning, however, is likely to be restricted by a number of existing socio-political, economic or environmental factors such as competition from other crops, inadequate soil, restrictions on cultivation due to the presence of protected areas and national parks, or in many cases simply an absence of adequate infrastructure.

Adaptation strategies that contribute to conservation of environmental resources, increase producers' income and reduce their vulnerability to changing natural and economic climates include the development of new market mechanisms that provide financial, technical support and capacity development to small-scale producers. The plethora of voluntary certification and other standard setting initiatives that emerged on the market in recent decades have undoubtedly achieved some considerable progress in internalising some of the social and environmental externalias of conventional coffee market. In light of the ongoing challenges inherent in the industry, the effectiveness of certification standards to deliver their claimed poverty alleviation and conservation benefits have become a much debated subject in recent years.

Voluntary sustainability initiatives have gone a long way in defining and operationalising standards for sustainable coffee production and equitable trade. By raising consumer awareness of the multitude of moral issues along commodity supply chains, certification initiatives have contributed to enhancing societal and consumer norms and expectations about acceptable and sustainable business practices. As well as helping

producers access new markets, certifications have always been intended to empower consumers to express their sense of care towards distant people and environments. By improving transparency and traceability along otherwise complicated global supply chains, certifications have driven operational changes in business practices and promoted multi-stakeholder collaboration at industry levels. At the same time, voluntary standard alone cannot eradicate poverty, human rights violations and environmental destruction from commodity supply chains. If standards are used as a mere compliance mechanism to 'ensure' or 'enforce' certain practices, then they are only as good as the audit procedures on which their compliance assessments rely. Sustainability, therefore, cannot be built purely on premiums and audit compliance alone. Strong trading relationships based on transparency, commitment and accountability need to be built among the various actors of the supply chain.

Quality, traceability and transparency lie at the heart of the speciality sector and define the pillars of the direct trade model. The direct trade approach has raised traceability to a completely new level and challenged conventional understanding of the way coffee supply chains can be managed. While the speciality sector's focus on quality and traceability helps dismantle the faceless nature of a global commodity, it may also face some limitations. Subsequent chapters of this thesis will explore both the opportunities and limitations that lie in the certified and the speciality sector and show how their different approaches can both contribute to enhancing the sustainability agenda of the coffee industry.

Chapter 4: Research Methods

4.0. Aims and objectives

This chapter explains the methodologies used for this study, investigating the perspectives of key stakeholder groups in the coffee value chain: consumers, producers and trade. Following an outline of the different methodologies used during the research, the chapter addresses key aspects of my positionality throughout the research. The chapter then provides an overview of the research design, study sites and participants, data collection and analysis for each of the empirical chapters presented in the thesis. Finally, the chapter considers the limitations of the research including limitations of positionality.

4.1 Introduction

In order to gain understanding of the role voluntary certification schemes play in advancing sustainability and expressing a notion of care towards distant people and places along the coffee value chain, I used both quantitative and qualitative methods to investigate the perspectives of three interlinked stakeholder groups: consumers, producers and industry experts. Data collection was divided into three separate periods:

1. As part of the fieldwork in the UK, data was collected from 367 consumers in the UK supermarkets and analysed using quantitative methods.
2. During the fieldwork in Honduras both quantitative and qualitative data was collected from 35 smallholder coffee farms, 40 interviews with producers, local coffee washing stations, the Honduran coffee quality institute (IHCAFE) and a local exporter division of the global coffee trading company Volcafe.
3. Finally, semi structured interviews were held with 30 small and mid size roasters and importers based in the UK. Representatives of Fairtrade and Rainforest Alliance were also interviewed during the final data collection period.

4.2 Connecting themes between different methodologies

By drawing on the intellectual tradition and integrative approach of critical human geography, this research addresses global connections, historical trends and systemic political-economic and socio-cultural relations within the global coffee value chain. Building on critical geographical methods of participation, this research on consumption, production and trade of coffee explores the complex motivations of different supply chain actors to care about the wellbeing and development of geographically distant human communities and their natural environments.

The three main areas of this research (consumer, producer and trade) are connected by geographies of care and responsibility –

1. On the consumption side, the research explores the role ethical certification labels play in influencing consumers' coffee purchasing decisions and their sense of responsibility to care about the wellbeing of geographically distant people and places within the coffee supply chain. The discussion explores the many faces of care and the barriers to caring through ethical consumption and challenges whether it is possible to be 'caring-at-a-distance' from an individual consumers' perspective.
2. At the production side, the livelihood development options and community dynamics in smallholder coffee producing communities is contrasted with the moral motivations of working together for a common goal. The way that social capital impacts on community relations is related to broader critiques of the idea of a 'community', challenging popular (mis)understandings about the way resource-poor rural communities are expected to function and the reasons why some community-level conservation-development projects might fail.
3. Motivations to care about societal development and environmental conservation is also explored from the perspectives of the speciality coffee trade; investigating the reasons why an innovative and progressive part of the industry - the speciality coffee industry - may feel the need to express their sense of care towards social development and conservation in ways that are independent from voluntary certifications and standards.

4.3. Integration of academic, NGO and industry perspectives

My evolving positionality throughout the research has been largely shaped by having an insider/outsider role in different aspects of the research, the advantages and limitations of which I discuss in the following sections. While being aware of the existence of other dimensions of the insider/outsider discussion (ethical concerns and feminist contributions – Riesman, 1987; Visweswaran, 1994; Wolf, 1996), here I limit the discussion to those issues relevant to positionality.

4.3.1. Positionality

Traditionally the 'outsider' researcher perspective was regarded as an objective and accurate way of collecting data in the field (Fontana and Frey, 2005), and researchers employing the 'insider approach' (Brayboy & Deyhle, 2000; Parameswaran, 2001) were believed to hold a biased position that complicated interpretation and analysis of data collected. Since the late 1970s, many have argued (Banks, 1998; Merton, 1978; Naples, 1996 cited in Chavez, 2008) against this interpretation of insider/outsider position on the basis that both approaches have to deal with specific methodological issues around positionality (Chavez, 2008). It has been argued that the researcher, in any case, is a co-participant in the research situation where both the researcher and the study participants position themselves in relation to the other according to their own assumptions of the situation (Gergen, 2000; Ellis, 2004). Therefore, complete lack of bias cannot be ensured in either the outsider or insider position; only the type of bias can be controlled. The danger of an insider position has been described as the possibility of being "overly positive or negligent if the knowledge, culture, and experience she/he shares with

participant's manifests as a rose-coloured observational lens or blindness to the ordinary" (Chavez, 2008, pp475). However, this view is supported by little empirical evidence. There is also little consensus about the definition of the 'insider', but generally the insider perspective has been described as a position that "endorses the values, perspectives […] and knowledge of his or her community and culture and is perceived by people within the community as a legitimate community member who can speak with authority about it" (Banks, 1998, pp 8). Since insider and outsider positions are not fixed or static positions (Naples, 1996) but rather continuously changing perspectives, neither of them can be granted monopoly on objectivity (Chavez, 2008).

My positionality has changed continuously throughout the research; I have had both an outsider and an insider role in different aspects of the research. My involvement with academia, the conservation NGO Operation Wallacea and the coffee industry granted me an insider perspective to all these different but overlapping perspectives, while at the same time has posed the challenge of reconciling sometimes conflicting values between these fields. Working with a conservation NGO, Operation Wallacea (Opwall), for a number of years prior to the start of my research, helped form my understanding of the practical challenges faced both by indigenous communities and environmental NGOs who seek to make positive changes to both conservation and livelihood development in rural agricultural settings. During the fieldwork in Honduras, my affiliation with Opwall, gave me access to communities with which Opwall had longstanding connections, and helped form a basic understanding about the cultural circumstances I was going to face once in the field. Using one of Opwall's long established research sites in Honduras not only helped decrease otherwise significant logistical costs but also gave me an opportunity to build on the trust that was already established between the community and Opwall in previous years. The trust and rapport I managed to build with the family I was staying with during my field research in Honduras, as well as my village guide and my translator in the field, allowed me to gain some degree of insider understanding about the challenges these communities and individuals face, and the tensions that exist between conservation-oriented efforts and community or individual household priorities. Considering the complexity of implications of an insider perspective, the advantages I experienced during the research included but were not limited to: convenience of rapport building, legitimacy in the field, access to insider information, knowledge of the practical realities of the field and detection of informants' actual behaviour versus their 'performed selves' (Chavez, 2008). My engagement with coffee industry stakeholders in Honduras, which included the Honduran Coffee Institute (IHCAFE) and the local exporter divison Molinos de Honduras which is part of the global coffee trade giant Volcafe,- shifted my position from a mere researcher to more of a participant activist, seeking change for marginalised small-scale coffee producers.

As a result of my direct engagement with the coffee professionals while conducting the industry interviews in the UK, an opportunity arose to become part of the industry via an Assistant Coffee Buyer position I was offered at Taylors of Harrogate. By accepting the offer, I gained on-going insight into the everyday workings of a mainstream coffee roaster and the decisions, responsibilities and challenges coffee buyers face while trying to

balance moral and sustainability considerations with customer expectations and market or budget constraints. This experience has put many of my previously formed ideas and opinions about potential solutions to ethical challenges into a new perspective. Being part of the industry has given me invaluable information and insights about the research subject that I would have not been able to obtain otherwise. During my time as Assistant Coffee Buyer, I have gained professional qualification in coffee tasting and coffee quality assessment (Q-grader exam) which helped in the interpretation of the coffee quality data collected previously during the field research. By the time of writing the final draft of this thesis, my position changed again to the Sustainable Sourcing Manager of Taylors of Harrogate, working closely with both the tea and coffee sourcing teams to develop and implement sourcing strategies that create prosperity and sustainable outcomes for both the company and its suppliers, the majority of whom are smallholder farmers.

4.3.2. Participation and impact-oriented research

In this section I address potential tensions between the 'insider' participatory action research approach and the traditional theoretical aspects of my research by drawing on the literature of 'critical geography' (Castree, 2000, 2001, 2003; Hay, 2001; Hubbard and Kitchin, 2010; Blomley, 2006, 2007) and 'participatory/activist research' (Pain, 2003; 2004; Williams and Brydon-Miller, 2004; Kesby *et al.,* 2007; Kindon *et al.,* 2008; Pain *et al.*, 2011; Hunter *et al.*, 2012). Since the notion of 'impact-oriented research' (Research Excellence Framework, 2014) the importance of 'reach and significance' in attracting funding (Parker and van Teijlingen, 2012) has been gaining increasing importance in academic research, it seems more appropriate than ever to address these tensions between participatory and traditional theoretical approaches.

The 'participatory turn' in human geography (Fuller and Kitchin, 2004; Cahill and Torre, 2007; Kindon and Elwood, 2009) has not been without criticism within the discipline (Hall, 2005; Kindon *et al*., 2007; Cooke and Kothari, 2001; Dick, 2004). The prospect of conducting 'meaningful' collaborative research has attracted the attention of a number of doctorate research students in recent decades (Maguire, 1987; Herr and Anderson, 2005). The methodology of Participatory Action Research (PAR) responds to calls for "more moral, caring and politically aware human geographies" (Pain, 2003, p. 650), and responds to broader concerns about the lack of tangible benefits for research subjects (Bero *et al.,* 1998; Breitbart, 2003; Cameron and Gibson, 2005). However, a critique against the rigour and effectiveness of PAR in doctoral research (McCormack, 2004; Moore, 2005) has hindered widespread uptake by early career researchers.

As the 'Impact, Exchange and Making a Difference' (IEMD) conference stated "one of the most important areas of debate in contemporary academic culture is the question of 'impact'– how academics can ensure their research is disseminated to, and used by, the widest possible audience, producing positive change in the wider world" (IEMD, 2013, p. 1). Of the plethora of diverse social scientific enquiries, critical geography is the one which most closely defines itself on the basis of impactful social research. Although the social impact of

academic research has been a 'longstanding concern' for geographers (Kindon and Elwood, 2009, p. 20), the appropriate way to define and measure impact, remains highly debated (Kindon *et al.,* 2008). As Blomley (2006, p. 87) pointed out, critical geography has become a defining part of the "rich and long-standing tradition of critical inquiry in social science" and embraces Marx's call to move beyond the mere interpretation and understanding of the world towards making meaningful changes to it: 'Heretofore the philosophers have only interpreted the world, in various ways; the point, however, is to change it' (Fay, 1987, p. 4; see also Reason and Bradbury, 2006; 2013). Contemporary critical science as defined by Fay as an "attempt to understand in a rationally responsible manner the oppressive features of a society such that this understanding stimulates its audience to transform their society and thereby liberate themselves" (Fay, 1987, pp. 4).

Although critical geography is remarkably varied in its commitments (Castree, 2000), and is often criticised for its lack of "distinctive theoretical identity" (Hubbard *et al.*, 2002), it is nonetheless "linked by a shared commitment to emancipatory politics within and beyond the discipline, to the promotion of progressive social change and the development of a broad range of critical theories and their application in geographical research and political practice" (Painter, 2000, pp. 126; see also Blackwell *et al*. 2003). Similar to 'applied' geographers, critical geographers, while seeking to 'effect change' through 'informative insight', also focus their energies on wanting to make a difference 'through forms of progressive praxis' (Blomley, 2007). These intentions of moving beyond mere informative enquiry make critical geographers collaborate with social movements and activists to achieve a shared aim of fostering social justice (Brand and Wissen, 2005). Citing Cahill and Torre (2007), Pain *et al*. (2010) argued that the increase of scholarly articles doesn't necessarily produce "a growth in engagements beyond the journal article", and expressed their support and recognition of "work that engages beyond the academy" (*ibid*, p. 184).

Participatory Action Research further advances this new paradigm of critical geography in "working across the boundaries of academia and other worlds […] questioning priorities, formulating questions so as to foster change and not simply to 'explain' what is" (Kindon, *et al*. 2007, pp xxiii). The tendency of PAR to embrace goals that are least easily achievable means it is far from being "an approach that can be rushed into, but one that takes time and talent, that requires the building of trust" (Kindon *et al*., 2007). PAR is best described an "umbrella term covering a variety of participatory approaches to action-oriented research" and is becoming increasingly important in impact-oriented research (Brydon-Miller *et al*, 2004). Stoeker (1999a, 1999b) has raised the issue of communities frequently questioning the relevance of academic research in meeting their needs. PAR approaches can help overcome some of the barriers to successful collaborative and community-based resource management by focusing on engaging communities to reinforce or adopt conservation-compatible livelihood strategies (Kindon *et al*., 2007). Though PAR aims to be 'with and for', rather than 'on' participants, critiques of the approach have pointed out that it can easily become "another form of power and can reproduce the very inequalities it seeks to challenge" (Cooke and Kothari 2001a, 2001b; Kesby, 2005;

Kapoor, 2005; Kothari, 2004). In defence of PAR, Kindon *et al*. (2007, p20) cited Foucault (1978) in arguing that "while the resources of participation can and do produce negative effects in some circumstances, these same resources can be deployed to achieve quite different effects". Despite its relatively unconventional approach, PAR's commitment to 'research-informed action' offers new ways of investigating global issues such as environmental degradation which are "so pressing that a research approach which documents and theorises, but doesn't find ways to act on the knowledge produced, would be inappropriate" (Kindon *et al*. 2007, pp. 30; see also Cahill and Torre, 2007 in Pain *et al*. 2010, pp184). Allowing for the flexibility of "working directly with institutions, policy-makers, public or charitable organisations from the outset" (Fuller *et al*. 2003) make PAR an appropriate approach to "bridge the world within and beyond the academy" (Kindon *et al*. 2007).

4.4. Fieldwork in the UK – a survey of coffee consumers

4.4.1. Research Design

The research on consumer knowledge of ethical schemes considered situational and physical factors of convenience, economic concern, trade-off evaluation between environmental consequences and personal benefits of purchasing a particular product. Drawing on consumption-centred theories of value from Baudrillard (1981, 1996) and Appadurai (1986, 1994), I focused on identifying the relative importance of ethical attributes to material-use attributes of coffee, assessed the level of awareness of ethical issues in relation to coffee production and trade, and explored general consumer knowledge of two coffee related certification schemes that are most relevant within the UK context: Fairtrade and Rainforest Alliance. Observations made during the questionnaire interviews significantly contributed to my understanding of how consumers conceptualise the social and environmental issues related to coffee production and what they value most about the coffee they like to purchase. In order to quantifiably measure and compare coffee consumers' and coffee producers' attitudes and beliefs about the intrinsic relationship between humanity and the natural environment, Dunlap et al.'s (2000) New Environmental Paradigm (NEP) scale was used as an indicator during both field work within the UK and Honduras.

With the consumer research questions, I aimed to assess the accuracy of consumer knowledge of the merits and limitations of certification schemes and the extent to which consumers distinguish between different positive environmental and ethical claims that certification labels make. The depth of the information sought by the research questions required the collection of both quantitative and qualitative data and at the same time it also required a large enough sample size in order to make appropriate estimations about the market potential of products with specific 'wildlife-conservation benefits'. A questionnaire survey containing only quantitative questions was combined with a qualitative interview-style data collection approach which following the methods of a closed fixed-response interview where "all interviewees are asked the same questions and asked to choose answers from among the same set of alternatives" (Valenzuela and Shrivastava, 2008, p. 5).

The questionnaire survey included a sample of 367 consumers. A copy of the full consumer questionnaire is provided in the Appendix. The questionnaire addressed themes relating to consumers' coffee drinking and buying habits, their familiarity with the main coffee industry certification schemes available in the UK and also contained questions assessing consumer understanding and views about the social and environmental impacts of the coffee industry and the state of the natural environment around coffee growing areas. At the end of the questionnaire, information was sought on the demographic characteristics of the respondents including their gender, age, education, household income. Observations made during the questionnaire interview significantly contributed to understanding how consumers conceptualise the social and environmental issues related to coffee production and what they value most about the coffee they like to purchase. The quantitative questionnaire data were complemented by two focus group discussions to which only respondents of the questionnaire were invited. The focus group discussions aimed to give space to explore some of the more complex qualitative issues related to the conceptualisation of ethical coffee certification schemes.

4.4.2. Study Sites and Participants

Informed consent was sought from participating consumers by explaining the purpose of the research from the onset of the discussion. The ethical principle of informed consent advises that participants must be fully aware of the research process (Bryman, 2008). A one-page information sheet was handed to each respondent, giving a brief summary about the aims of the research along with my full name and contact details. Potential participants were made aware that their participation was voluntary and they could withdraw at any time during the survey, so as not to coerce them into participating in the study (Moser and Kalton, 1971). Although incentives can encourage and motivate participants to take part in a research study (Lipps, 2010), the use of monetary or other incentives was decided to be unnecessary during the questionnaire research. Issues around confidentiality and anonymity of respondents was avoided because the names of participants was not recorded. Potential interviewees were always asked first if they consumed or bought coffee at all and only those who said yes were asked to complete the questionnaire. Approximately 10 percent of the consumers I approached in the supermarkets claimed they only consumed tea and not coffee and thus were not eligible to complete the questionnaire. On some occasions, even though the response to the first question was 'I never drink coffee', they were still asked to continue the questionnaire if they said they regularly purchased coffee for someone else in the household, since they were the ones who made the purchasing decisions on which coffee to buy. The personal interaction provided an opportunity to invite respondents to a focus group discussion, which aimed to explore some of the more complex qualitative issues relating to the concepts of coffee certification schemes. 40 percent of the interviewees expressed an interest in participating in a future focus group discussion and left their contact details on a separate sheet while the questionnaire remained anonymous. The first focus group discussion was held in Nottingham and another one was in Leeds a few weeks after the consumer survey. The

number of participants was 11 in Nottingham and 6 in Leeds. Both discussions were held in an independent coffee shop and lasted about 2 hours each.

4.4.3. Data Collection

The aim of the sampling approach was to draw a representative sample of the supermarket coffee consumer for the purposes of illustrating the ethical consumer decision making process. In order to ensure that all shoppers had an equal chance of selection I used non-probabilistic sampling approaches and two methods of data collection, each of which required different sampling strategies. The first employed a mix of quota and convenience sampling methods whereby I drew samples that were both easily accessible, showed clear signs of interest in the study subject and were willing to participate in the study. Both types of convenience samples – captive samples and volunteer samples – were used to collect responses in supermarkets. The second stage of the study brought volunteers of the questionnaire survey together in focus group discussions to collect qualitative data. For pragmatic reasons, this had to be conducted in my close to my locality.

The questionnaire data collected in supermarkets used closed, fixed response interviews (a sample of the questionnaire can be found in the Appendix). Two preliminary pilot studies were conducted prior to the start of the data collection. The pilot studies confirmed the effectiveness of the face-to-face questionnaire approach as it gave an opportunity to observe consumers' reactions and interpretation to the survey questions. The pilot study also provided an opportunity to clarify questions and avoid ambiguity around questions thereby reducing the chances of misinterpretation and increasing the accuracy of the collected data.

In order to retain the coherence and consistency of data, the consumer questionnaire was only used for data collection in four selected supermarkets. Due to the potential bias the specific venue of the interviews could have introduced to the research, supermarkets were selected choosing one smaller and more centrally located store as well as one larger store outside of the city centre for each supermarket type, which helped ensure a wider spread of socio and demographic mix in the sample. To gain permission to carry out the research in the selected supermarkets, the store managers and head offices were contacted by phone, email and letters. Where possible I also visited the store managers in the supermarkets in advance to explain about the purpose of the research and handed them a copy of the proposed questionnaire for reference. Written or verbal permission was given by Sainsbury's, Co-operative, M&S and Waitrose. Tesco and Asda refused my request to conduct surveys in their stores. Of the four supermarkets, M&S and Waitrose represented the 'higher end of the market' while Sainsbury's represented the mid-market and Cooperative slightly towards the value end of the market.

During the survey I asked every third consumer who walked past the coffee aisle in the supermarket if they were willing to help my research by completing a questionnaire. Respondents were interviewed individually, with the exception of some interviews carried out at Waitrose Meanwood in Leeds, where a few questionnaires

were handed to customers sitting in the store's internal café. This latter approach made it possible to have several questionnaires completed simultaneously, and since respondents were already sat by a cup of coffee, it seemed like an appropriate environment and time to ask them to complete the questionnaire. The time taken to complete a questionnaire varied between 5 to 15 minutes, depending on the respondents' confidence and speed in answering the questions, their interest in the topic and their willingness to engage in conversation about the subject. Out of the 369 respondents who started filling in the questionnaire only one individual refused to continue after the first page because they didn't have much time and another one stopped halfway because, despite being a coffee drinker, the content and depth of the questions were not of interest to them.

4.4.4. Data Analysis

The questionnaire data were analysed using quantitative methods. Although the questions were either in the form of a 5-point Likert scale (where available responses ranged from Strongly Agree to Strongly Disagree) or a five-element multiple choice question, during the analysis some of these variables were combined to create a semi-continuous score/index about the respondents' overall social and environmental concern, their knowledge about the certification schemes and the coffee industry. Since the Likert scale measures abstract concepts by generating a number of statements and obtaining the responses it can also be considered as a grouped form of a continuous scale and thus in some cases it was treated as a continuous variable for correlational analysis. Unless indicated otherwise, I took results as significant when $p \leq 0.01$ and regarded them as marginal when $0.01 \leq p \leq 0.05$.

Chi-square analysis was used to test for independence or relatedness between the various demographic characteristics (such as gender, age, education, household income) and responses measured on Likert-scale (such as Question 5 which assessed the relative importance of different criteria in coffee purchasing decisions). In some cases, when the Chi-square test detected a significant difference between the values of variables, additional non-parametric techniques were used to explore the results further, as follows. Mann–Whitney U-tests were used for testing the difference in a continuous variable (or grouped scores continuous variable) between the two categories of a binary grouping variable such as gender or city. Kruskal–Wallis H-tests were similarly used when the categorical variable had more than two groups, such as age and household income. Results were analysed using SPSS 19.0 and Microsoft Excel. As one of the aims of this research was to investigate UK consumers' understanding of voluntary certification labels as well as to estimate their level of interest in caring for distant places and people, the results of the consumer questionnaire were grouped and analysed to make up certain scores that correspond with this original research aim. The method of creating these scores is explained below.

4.4.4.1 Accuracy of consumer knowledge of coffee certification labels - Fairtrade and Rainforest Alliance knowledge scores

In order to estimate respondents' knowledge about the implications of Fairtrade and Rainforest Alliance schemes, ten statements were provided and respondents were asked to indicate how strongly they agreed or disagreed with each statement, using a 5-point Likert scale. The answers given were aligned in relation to the facts about each scheme (so that a score of 5 always represented correct knowledge), and summed to create a knowledge score about each scheme separately. Relevant responses (about perceived implications of Fairtrade and Rainforest Alliance) were also combined (summed) to create a third composite knowledge score, concerning both certification schemes together. The relationship between the general understanding about the Fairtrade and Rainforest Alliance schemes (as measured by Fairtrade and Rainforest Alliance knowledge scores) was examined using Spearman's Rank Order Correlation. In order to evaluate whether particular groups (analysed by age, gender, education, income level, supermarket and city) scored higher on the knowledge scores, Mann–Whitney U and Kruskal–Wallis tests were used.

4.4.4.2 Importance of showing care towards geographically distant people and places in coffee purchasing decisions - Environmental and Social Interest Scores

In order to gain understanding of who is likely to show interest in social and/or environmental issues in the coffee industry and buy coffees with some form of voluntary certification label, two further variables were created, and named Environmental and Social Interest Scores. The answers given about the relative importance of environmental and social issues in coffee purchasing decisions (Question 5) were combined with the proportion of environmental and social words chosen as words of interest on coffee packaging (based on the analysis of Q6). In Question 5 respondents were asked to rate the importance of 11 criteria on a 5 item Likert scale from 1 (not at all important) to 5 (very important). Of the 11 criteria, two were used to create this score: one referring to the importance of 'Fairness towards farmers and workers' as social criteria and one enquiring about the importance of 'Forests and wildlife conservation' as environmental criteria. In Question 6 respondents were asked to point out which of a proposed set of 24 words they look for on coffee packaging to help inform their purchasing decisions. Of the 24 words six were related to purely social and six to purely environmental credentials. The numbers of selected social and environmental words were combined to create the Environmental Interest and Social Interest scores.

4.4.4.3 Knowledge of coffee - Coffee industry knowledge score

In order for the consumer to recognise an improved product in the market, a certain level of knowledge and awareness of the issues related to the production and trade of the given product is required. Each respondent's awareness about social and environmental issues related to the coffee industry as a whole was assessed by

measuring answers on a Likert-scale. In Question 5 respondents were asked to indicate how strongly they agree or disagree with six statements about potential issues in the coffee industry on a 5 item Likert scale from 1 (strongly disagree) to 5 (strongly agree). After inverting the responses for negative statements, responses were then converted to a final Coffee Industry Knowledge Score, according to whether or not they reflected the actual issues of the industry.

4.4.4.4 Care and responsibility - Humans and Nature attitude score

The last section of the questionnaire aimed to evaluate consumers' general attitudes and views about humans' relationship with the natural environment. Respondents were asked to indicate how strongly they agreed or disagreed with eight statements, on Likert scale from 1 (strongly disagree) to 5 (strongly agree). The statements were based on selected items of the New Environmental Paradigm (NEP) scale (Dunlap *et al*., 2000) that aimed to assess their fundamental beliefs about the inherent relationship between humanity and the natural environment. The New NEP scale is a revised version of the original NEP scale developed by Dunlap and Van Liere in 1978, and seeks to tap into "primitive beliefs about the nature of the earth and humanity's relationship with it" (Dunlap *et al*., 2000 p427). The revised NEP scale consists of 15 items, grouped into five different categories exploring basic views about: (1) anthropocentrism; (2) the existence of natural limits to human economic development and growth; (3) the ability of nature to recreate balance in the ecosystem after major disturbances; (4) views about the 'human exemptionalism paradigm' (Dunlap and Catton, 1994) – which is based on the belief that the relationship between humans and the natural environment is not important because humans are exempt from environmental forces and capable of adapting via cultural changes (Cairns, 1999); and (5) current trends and notions of an 'eco-crisis' (Mueller, 2009). The first three of these statements were aimed at evaluating the respondents' concerns about tropical rainforest conservation, who/what they perceived as having responsibility to look after forest and wildlife conservation (the statement was referring to forest conservation being primarily the responsibility of environmental groups and organisations), and to what extent they believed in the ability of the individual to make a significant difference in protecting forests and wildlife by buying eco/wildlife-friendly products. The responses were coded in a way that strong agreement with statements 1, 3 and 7 and strong disagreement with statements 2, 4, 5, 6 translated into the highest possible score on the final Human and Nature Attitude score.

4.5. Fieldwork in Honduras

4.5.1 Research Design

The fieldwork in Honduras set out to investigate the main influences on, and constraints facing, smallholder coffee growing communities situated in the buffer zone of the Cusuco National Park with exceptionally high biodiversity levels and limited economic development. The study looked to establish whether the claimed

benefits of voluntary certification systems could provide livelihood development at the community level and a strong enough incentive for individual producers to engage in and stay committed to community-based conservation projects. Given the geographical proximity of local farms to a national park, the research also set out to investigate the relationship between the quality of the environment and the quality of the coffee produced in that environment. In order to achieve these aims, the information collected was divided into four sections: investigation of the producers' economic situation (interviews), their current farming practices (interviews and farm visits), the overall quality and biodiversity levels of their farms (based on observation and measurements during farm visits), and the quality of the coffee produced on their farms (coffee samples).

4.5.2. Study Sites and Participants

The location of the fieldwork was identified based on where Opwall have already had established research sites and where major issues with environmental destruction and coffee had been identified in the past. The Honduran Cusuco National Park and two coffee growing communities in its buffer zone, Buenos Aires and Bañaderos, were chosen as the fieldwork location due to the severity of ongoing deforestation around the study area and the lack of understanding about why previous community linked conservation efforts have failed in the past. The research was particularly relevant in the coffee landscape context as the two chosen communities are also geographically the closest to the core zone of the Cusuco National Park and many of them use natural resources from the park to help run their coffee farms (e.g. channelling water from a waterfall in the core zone of the Park to their coffee washing station). The majority of the people living in these communities rely on coffee as the main source of their income and grow additional crops primarily for their own consumption.

4.5.3. Data collection

As general field logistics were already available during the Opwall season, it made sense to time the research for the summer months. This helped keep research costs low and minimised the impact my presence had on the community. As the harvest season in Honduras runs between November and early March, the timing of the research during the summer months ensured that the producers I interviewed had more time to dedicate to the research than if I went during harvest season. Both communities studied had longstanding relationships with Opwall, benefitting from the extra income opportunities Opwall creates during their summer research seasons (in the form of local guides, transport and accommodation). The existence of this relationship between the locals and Opwall also helped build quick rapport with the people in the villages as they were already familiar with and supportive of the organisation. Additional remuneration for their efforts to participate in the research was therefore deemed unnecessary.

Criteria for selecting potential participants for the study included their level of involvement with coffee growing and their farm size based on data collected in these communities in previous years by other researchers affiliated with Operation Wallacea. Socioeconomic data were collected through questionnaire-based semi-

structured interviews with 39 smallholder coffee producers (22 in Buenos Aires and 17 in Bañaderos), including both open and closed questions, with the help of a translator who was local to the area. The interviews included a visual assessment of the house where the smallholder family lived, the number of people in the household, their main income sources (and the importance of coffee in their livelihood), use of labour on farm (hired or permanent), market access and understanding of the state of the national park surrounding their communities. Written notes and voice recordings were taken of all interviews. The socio-economic interviews were followed by an accompanied visit to the coffee farms to evaluate the ecological integrity and overall management practices used on the farms. The head of the household always accompanied the visit to their farms which allowed the continuation of the discussion started during the socio-economic interviews at their homes. A total of 34 coffee farms were visited and data were collected on farm quality, environmental quality and coffee quality.

4.5.4 Data Analysis

4.5.4.1. Socioeconomic data

The study was conducted in two villages within the buffer zone of Cusuco National Part: Buenos Aires and Bañaderos. Of the total of 147 households in the two study villages, socioeconomic data was collected of a total of 39; 22 in Buenos Aires, and 17 in Bañaderos. The interviews with the producers were conducted in Spanish with the help of a translator who was from local the area but lived in the United States. The translator was commissioned by Operation Wallacea. Written notes were taken of all interviews. All socioeconomic data were entered into an Excel spreadsheet whilst in the field. Interview questions are presented in the Appendix.

4.5.4.2. Farm quality

Farm quality was measured using walking transect method, during which notes were taken on leaf litter depth, shade tree cover, estimated shade tree height and general coffee plant health. A 25-point canopy scope was used to record levels of shade cover on each farm. Readings were taken from the centre of a 20 x 20 m plot. These variables were then used to create an overall composite score for farm quality.

4.5.4.3 Environmental quality

In order to investigate the strength of the relationship between environmental quality and coffee quality (analysed in Chapter 7) biodiversity indicator data were collected from each farm visited. Biodiversity indicators are statistical measures of biodiversity which help understand the condition of biodiversity and the factors that affect it. Environmental quality was measured using the surrogate of dung beetle biodiversity. Dung beetles are often used as model taxon for conservation science as their collection is cost-effective, relatively quick, easy to identify and they are considered as sufficiently effective tools for assessing the ecological integrity of an area (Cano and Schuster, 2009). The dung beetle samples were used to calculate overall abundance (total number of

individuals), species richness (total number of species), rarefied species richness, Simpson's diversity index and Shannon's diversity index - the latter two are commonly used measures that combine species richness and relative abundance information. Rarefied species richness is an estimate of the number of species that would be found in a sample of a fixed number of individuals (here set to 10). Dung beetle survey data were collected from all 34 farms visited. Dung beetles were collected using four baited pitfall traps per farm, one at each corner of a 20 x 20 m quadrat. Samples from each trap were collected at least three times (with 5-7 days between each collected sample) to account for changes in weather conditions which resulted in 90+ farm visits in a five-week period. In total, 618 dung beetle specimens were collected from the traps, all of which were identified to species level. Following standard procedures, all invertebrate specimens collected were exported to the UK (University of Oxford) for identification, with permits obtained by Operation Wallacea. At the end of the data collection, each farm was scored in terms of its contribution to supporting sensitive and indicator species.

4.5.4.4 Coffee quality

Coffee samples were requested from the producers participating in the study but due to seasonality of the harvest the samples could only be collected six months after the end of the field trip. The same local guide who assisted the data collection during the field trip also assisted in the collection of the coffee samples. Quality of the coffee was assessed after roasting, using standard industry assessment techniques (cupping and scoring based on the standard SCAA scoring system). Coffee quality was measured by commissioning two professional coffee tasters from a local coffee exporter house, 'Molinos de Honduras' in San Pedro Sula. Molinos de Honduras is the Honduran division of Volcafe, one of the leading coffee merchants in the world. The coffee was semi-dried by the farmers to 'humedo' or 'wet parchment' stage, but the rest of the drying, roasting and coffee preparation was performed uniformly for all the coffee samples by Molinos de Honduras. All coffee samples were roasted, tasted and scored by the same cuppers at the exporter house therefore the impact of roasting and preparation can be regarded as a constant. All SCAA cupping scores (in Spanish) are presented in the Appendix. Eleven aspects of coffee quality were assessed individually: 'fragrancia' (aroma), 'sabor' (flavour), 'resabio' (aftertaste), 'acidez' (acidity), 'cuerpo' (body), balance, 'uniformidad' (uniformity), 'limpieza' (purity), 'dulzor' (sweetness), 'puntaje catador' (overall rating) and 'defectos' (defects). Each quality aspects were scored on a scale of 0–10 independently by the two professional tasters and the mean of their scores used. The ten quality aspects were then summed to give an overall quality score out of 100, and this corresponds to the industry-standard coffee quality measure. If any defect were detected during cupping, the adequate defect score was deducted from the overall score based on the number of cups affected and the strength of the defect. According to the grading scale of the Specialty Coffee Association of America (SCAA), coffee which scores 80 points or above on a 100-point scale is graded 'speciality' (i.e. very high in quality). As the interviews with the producers revealed, all coffee produced in the study area are washed arabicas and therefore go through the same processing stages (depulping, washing, fermentation and partial drying to 'humedo' or wet parchment

stage). Prior to collecting the samples to be sent for scoring, all producers were asked to select only ripe cherries and wet ferment the parchment for 8-12 hours. The judgement of the level of ripeness of the coffee cherry and the settings of the pulping machine (which affect the amount of mucilage left on the parchment) were left with the individual farmer who supplied the sample. Although this may have introduced some level of variation in the processing methods of the chosen samples, given the time and resource constraints, it was the most controlled form of data collection available in the study area at the time.

The link between coffee quality and different environmental quality measures were explored using multiple regressions, to test which farm or environmental quality measures could account for variation in coffee quality. This part of the study aimed to further understanding of the ecological services that a healthy ecosystem provides for agricultural production and to use this understanding to investigate alternative ways to maximise the income received for quality coffee growing in a sustainable environment. The results of this analysis are presented in Chapter 7.

4.6 Interviews with the industry and certification agencies

4.6.1. Research Design

In line with the research aims to examine the motivations of key stakeholders to care about sustainability issues in the coffee industry and the extent to which voluntary certification and standard schemes are perceived to deliver the socio-economic and environmental benefits they claim, the last part of the research focused on understanding the perspectives of those who make coffee accessible to consumers: traders and roasters. As an essential part of the 'ethical' sustainable coffee value chain, the key certification NGOs were also interviewed with a view to establish how they see the benefits and limitations of their own standards. Due to the complexity of issues surrounding the coffee trade, in this part of the research I opted to engage in qualitative methods of data collection in order to retain an inductive and holistic approach to the study. The framework previously developed during the consumer and field research allowed me to base the sampling strategy of the industry interviews on both my theoretical and practical knowledge of the research area. In order to help create a list of the best potential interviewees, I attended major UK and European coffee events (conferences, competitions, trade exhibitions) sometimes working as a volunteer at these events. This initial engagement with the industry gave me an opportunity to gain more of an insider knowledge of the internal dynamics of the speciality coffee sector than a solely academic position would have naturally allowed. This partly outsider, partly insider position helped put much of the information received during the interviews into an appropriate context. My interaction with industry representatives at these trade events also helped me choose subjects who were likely to have specific experiences (critical case sample) and subjects with special expertise (key informant sample) relevant to the research. Some of the interviewees were also suggested as potential candidates for the study by previously interviewed subjects (snowball sampling technique).

4.6.2 Study Sites and Participants

I interviewed small and midsize roasters (both those who imported coffee directly from origin and those who solely bought their coffee from importers), the importers themselves (i.e. those who do not engage in any form of manufacturing process) as well as independent speciality coffee shop owners (some of whom also roast their own coffee). Finally, I also interviewed representatives of the two certification bodies who have the largest presence in the UK: Fairtrade and Rainforest Alliance. The study reached a stage of theoretical and thematic saturation, when new themes stopped emerging after about 15 interviews, and an acceptable interpretive framework was constructed after 25 interviews. In total, 30 interviews were conducted, 12 with coffee roasters (most of which also act as importer and some also operate their own coffee shops), 8 with coffee importers, 6 with independent coffee shop owners and 4 with certification agencies.

4.6.3 Data Collection

The data collection involved a mix of key informant and semi-structured interviews with coffee professionals: traders, roasters, buyers, speciality coffee shop owners. Since the total population of key informants within the speciality coffee sector in the UK is small, this was to some extent necessarily a mix of convenience and snowball sampling, though there was an element of judgement approach, since efforts were made to ensure that participants came from a range of backgrounds with regard to their role in the supply chain. Speciality and certified coffee being the focus area of the research (as opposed to large-scale mainstream commodity grade coffee), for the interviews I selected a mix of stakeholders who either claimed to be part of the 'speciality coffee' segment or were trading with certified coffee.

4.6.4 Data Analysis

In this part of the research I explored how the efforts of coffee certification schemes to enhance producer livelihoods, environmental quality and coffee quality are viewed and trusted by the trade and what motivates their engagement in voluntary standard systems or other ethical, sustainable trading arrangements. In parallel with the consumer and producer interviews, I aimed to assess industry professionals' motivation to care about the sustainability of the sector, their knowledge and understanding of coffee related certification schemes as well as their views on what makes or would make the coffee industry truly sustainable. Interviewees were asked about their views concerning the role that certification schemes play in the current market, the benefits that voluntary standards schemes bring to their business and the extent to which they think certifications can deliver their claimed social and environmental benefits to producers. I also set out to investigate how certification agencies relate to the limitations of their own claims and what links, if any, they make between certification standards and the material quality of certified coffees. The results are presented in Chapter 8.

4.7. Limitations

4.7.1. Consumer research limitations

Despite my best efforts to make data collection as comprehensive as possible, the methods employed did introduce limitations to the study. Due to the personal interview-style approach chosen for the consumer part of the research, the number of consumers I was able to interview and collect data from within the given timeframe was limited, compared to the potential coverage of a larger scale online survey. The funding available for the research put further constraints on the number of different venues I was able to collect consumer data from. As a result, the questionnaire research was only carried out in two cities, Nottingham and Leeds. Both are middle sized, metropolitan cities with major universities with all major demographic groups well represented in both places. The personal interview-style approach introduced another limitation in that at certain times of the day and on certain days during the week people were more/less approachable and willing to answer questions. More difficult times included Thursday and Friday mornings just before office work hours, any days around lunchtime, between 1-2pm, on Sunday afternoons and close to supermarket closing times people were less willing to participate in the research. Despite my effort to select respondents with the minimum personal bias, a certain element of unconscious bias towards 'open and relaxed' people might have been introduced during the data collection. It is important to note that my positionality as a university researcher (as opposed to a commercial/retail market researcher) helped build the rapport initially needed to engage respondents in the study. Another limitation was introduced by the fact that the two focus group discussions were organised after the supermarket interviews had been completed. Had the focus group discussion with the consumers been arranged prior to the supermarket surveys, it could have helped build a more accurate understanding of the effectiveness of the proposed questions and hence could have potentially increased the reach and depth of the main consumer questionnaire.

4.7.2. Producer research limitations

Due to resource constraints, the field work in Honduras had to be conducted in those specific villages near Operation Wallacea's existing research sites. The length of the fieldwork in Honduras was limited to the summer months when field logistics of the regular Operation Wallacea summer research programme was available in the study area. The lack of certified farms in the study villages limited my ability to assess the impacts of certification standards in the area. This part of the research, therefore, focused on evaluating the effectiveness of existing livelihood strategies and the potential benefits voluntary certifications or other sustainable trading approaches could bring to the study communities. In terms of the research on the links between environmental quality and coffee quality, the geographical location of the villages and farms (high altitude in close proximity to natural forest with high levels of biodiversity) limited the variability of coffee quality that I was able to sample. The assessment of the biodiversity levels of the surveyed farms was limited to the collection and analysis of dung beetle taxa. The fact that the field research on smallholder producer livelihoods focused on Honduras only

(as opposed to a potential comparative research of similar production environment in different coffee producing countries) limited the conclusions to the Honduran smallholder context.

4.7.3. Industry research limitation

Although I aimed to include a wide range of industry representatives in the interviews with industry stakeholders, the research was limited to individuals and companies operating primarily in the speciality or certified, high-end commodity segment of the market and did not include large global companies such as Nestlé or Starbucks. This limited the research to the perspectives of a relatively small but dynamically growing segment of the market while perspectives of larger market players could only be given limited consideration.

4.7.4. General limitations

Despite the extensive desk research carried out prior to the start of the data collection, during the research planning and data collection phase, I did not, at that point, have access to the insider industry knowledge I have gained since commencing employment with Taylors of Harrogate. Much of the knowledge I hold today about the issues and challenges of the industry would have helped form deeper and more specific questions in all three areas of the research. For example, gender related issues at smallholder and community levels, and concerns about human rights and modern slavery in coffee supply chains are some of the issues this thesis is unable to cover.

4.7.5 Limitations of positionality

Despite the many advantages this insider positionality within the industry has given me, it also changed my previously independent academic role and automatically introduced a potential bias towards the perspectives of a single supply chain actor, a midsize UK-based roaster. As all field data collection, including interviews with industry stakeholders, were fully completed and analysed prior to the start of my employment with Taylors of Harrogate, there was no conflict of interest between myself and my interviewees. At the same time, the insider industry position has provided an invaluable opportunity to access the latest industry-led research and information on current trends in the market, with special regard to the practical challenges around sustainability and ethics of trade. Overall, both of my insider and outsider positions (industry and academic) have introduced advantages and limitations to the research. On perspective, I feel that the mixed approach to the study, encompassing part-industry and part-academic roles, has provided benefits that outweighed those of a purely academic position.

Chapter 5: Ethical considerations in consumer choices – motivations to care about 'distant others'

5.0 Aims and Objectives

This chapter presents the results of the field research carried out in the UK to investigate the importance of ethical labels in consumers' coffee purchasing decisions and their motivations to care about the wellbeing of geographically distant people and places within the coffee supply chain. The chapter evaluates the level of consumer awareness of the issues inherent in the coffee industry and the accuracy of consumers' knowledge of the claimed benefits of ethical labels.

The main questions this part of the research set out to answer:

1. What do consumers care about the most when purchasing coffee? To what extent do ethical labels influence consumers' purchasing decisions?
2. How do consumers see their responsibility in ensuring sustainability along the coffee supply chain? Who should care about geographically distant coffee producers and tropical environments around coffee farms?

The chapter includes an assessment of the views and attitudes consumers hold about humans' relationship with nature as this is an important factor that influences consumers interest in ethical or sustainability claims of certification labels. The discussion explores the many faces of care and the barriers to caring through ethical consumption and challenges whether it is possible to be 'caring-at-a-distance' from an individual consumers' perspective.

5.1 Introduction

This chapter builds on theoretical concepts of geographies of care and the well-documented 'attitude-behaviour gap' in ethical consumption. The results presented in this chapter focus on examining the main factors influencing coffee purchasing decisions including the relative importance of environmental conservation and social concerns; the accuracy of consumers' knowledge of popular coffee certification schemes; and consumers' perception of responsibility in caring about the wellbeing of geographically distant people and places. The analysis also explores factors that most encourage consumers to buy coffee with an ethical label; the demographics of socially and environmentally conscious consumers; consumers' attitude towards conservation and the perceived relationships between humanity and the natural environment. Further to the theoretical concepts of the 'informed-consumer myth' (Eden et al., 2005, 2008), this chapter provides empirical evidence for the mismatch between consumers' knowledge about ethical certification schemes and their actual merits and limitations, and highlights also the lack of knowledge about social and environmental issues in the coffee industry.

5.2 Results

5.2.1. Demographics of the sample

The questionnaire survey was carried out in two UK cities (Nottingham and Leeds), as described in Chapter 4. Both are middle-sized, metropolitan cities with major universities, where all main demographic groups are well represented. It total 367 questionnaires were completed, across four supermarket chains: Sainsbury's, Waitrose, Marks and Spencer and the Co-op (Figure 1).

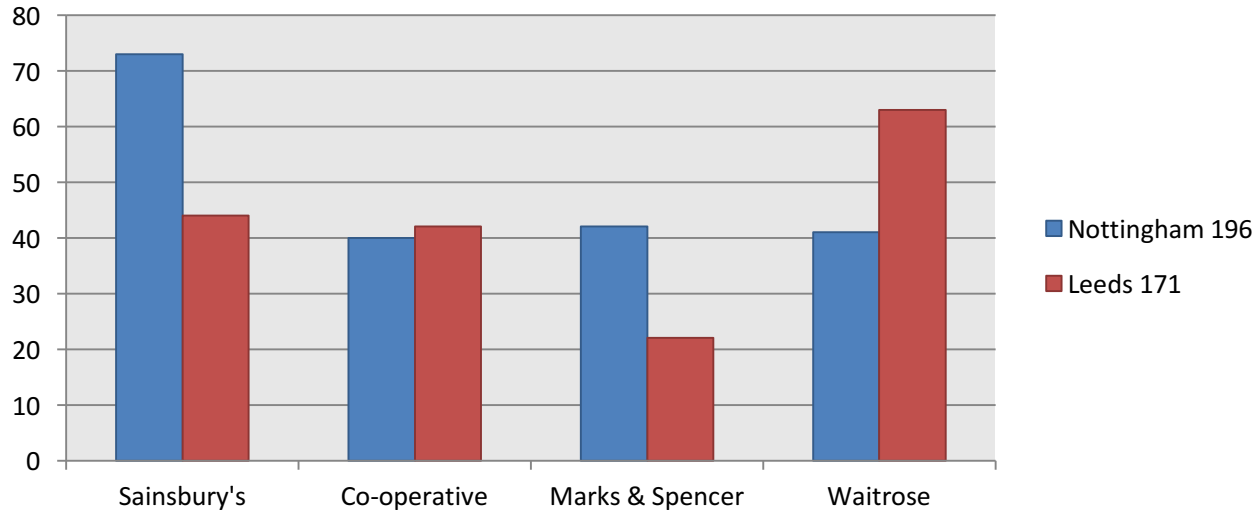


Figure 16: Sample distribution amongst supermarkets

I sought to reach a broad range of different socio-economic, age and educational groups in the sample for the purpose of gaining insight into the general perception of certification schemes amongst coffee consumers. Respondents were relatively evenly spread in terms of income, education level and supermarket type, though the age groups 35-49 and 50-65 were somewhat over-represented, as were people with higher education (Table 1). Despite the common assumption that women tend to do more of the shopping in supermarkets than men, the distribution of gender in the overall sample was fairly even (60 percent women). The over-representation of age groups 35-49 and 50-65 may have been a consequence of the surveys being in relatively large supermarkets. There was a fairly even spread in the sample in terms of income, with Waitrose having the most even split across the different income levels. The highest proportion of people with higher education was found in Waitrose.

Table 3: Demographics of the sample – Consumer research

		Total	Sainsbury's (1)	Coop (2)	M&S (3)	Waitrose (4)
Gender	Female	219	73	44	49	53
	Male	142	44	37	15	46
	Not disclosed	6	0	1	0	5
Age	up to 25	25	5	8	3	9
	25 to 34	60	16	18	6	20
	35 to 49	124	45	26	18	35
	50 to 64	113	44	22	23	24
	65 and above	44	7	8	14	15
	Not disclosed	1	0	0	0	1
Education	GCSE / O-level / Standard	69	25	18	9	17
	BTEC / A-level / Highers	25	6	10	5	4
	Vocational / NVQ	20	8	5	2	5
	Other	27	11	2	11	3
	Total secondary education	141	50	35	27	29
	Degree or equivalent	139	49	27	25	38
	Postgraduate qualification	86	18	20	12	36
	Total higher education	225	67	47	37	74
	C - Not disclosed	1	0	0	0	1
Income	Up to £20,000	65	23	14	9	19
	£20,001 - £35,000	75	27	15	8	25
	£35,001 - £50,000	65	21	24	7	13
	£50,001 - £70,000	63	20	14	10	19
	£70,001 - £100,000	38	15	5	6	12
	Above £100,000	32	7	5	9	11
	Not disclosed	29	4	5	15	5
	Overall total	367	117	82	64	104

5.2.2 What do consumers care about the most when purchasing coffee? To what extent do ethical labels influence consumers' purchasing decisions?

In order to identify the extent to which consumers show interest in ethically sourced coffee, I asked respondents to rate eleven criteria according to how important they are in their coffee purchasing decisions, using a 5-point Likert scale: 1 = Not at all, 2 = Somewhat, 3 = Relatively, 4 = Quite, 5 = Very. According to the responses, 'Taste' and 'Quality' were found to be the most important criteria in consumers' coffee purchasing decisions. The way interviewees rated the importance of 'Taste' and 'Quality' (distributions shown in Figure 5.3) suggests that the two are perceived as the same concept in consumers' eyes. Therefore, an aggregated value of 'Taste and Quality' is used in some of the further analyses.

Of all the criteria listed in the question, the least concern was shown towards 'Uniqueness' (i.e. limited edition or very rare coffees that are hard to find), which 45 percent of respondents rated as 'Not at all' important (Figure 5.4). 'Price' was rated surprisingly low in importance in purchasing decisions, however, the dispersion of the answers given about the importance of 'Price' is much more symmetric and centred on the middle score, 'Relatively important' (Figure 5.2). Concern about 'Forests and Wildlife' showed a mean response of 2.7 and a median of 3 (Figure 5.2). The mode, however, was 1, with 30 percent of respondents answering that this criterion was not important at all for them, while 44 percent gave scores of 3 or 4 (Figure 5.5). The mean importance score for social concern at 3.23 - expressed as 'Fairness towards farmers and workers' - was significantly higher than the mean score for environmental concern, 2.71 (Figure 5.2; Wilcoxon rank sum test $P<0.01$). Further, the mode for social concern was 4 (Figure 5.5), with 30 percent of respondents answering that this issue is 'quite important' in their coffee-buying decisions, and a further 20 percent saying it was 'very important'. Overall, consumers' responses showed greater concern towards social than to environmental criteria.

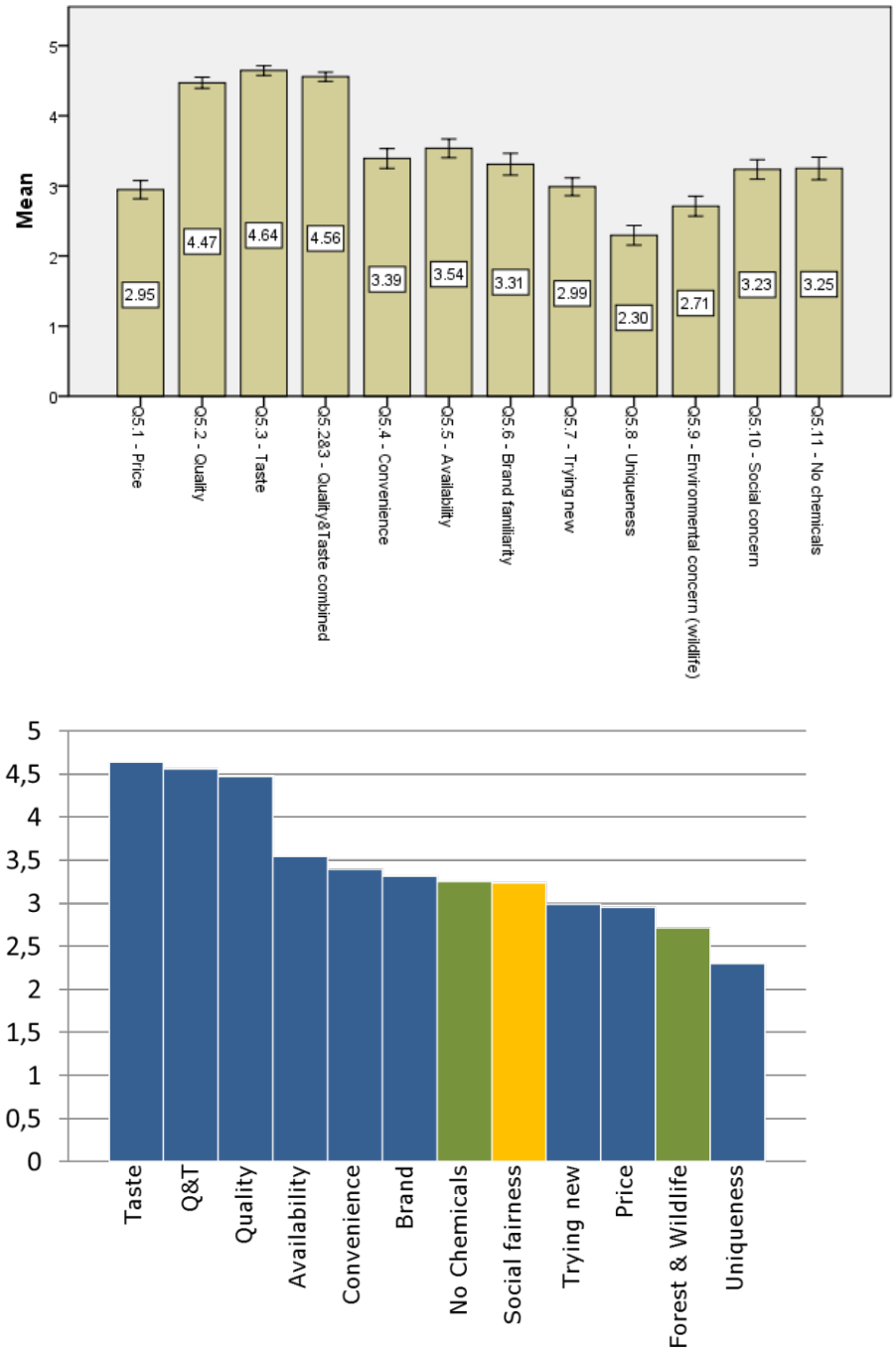


Figure 17: Relative importance of individual criteria in coffee purchasing decisions, measured as mean scores of 5-point Likert scales. Top panel: exact mean is stated within each bar; error bars are 95 percent confidence intervals. In the top panel the criteria are in order of appearance in the questionnaire. In the bottom panel they are ranked in order of importance, as judged by the responses, and colour coded to indicate the environmental (green) and social (yellow) ones.

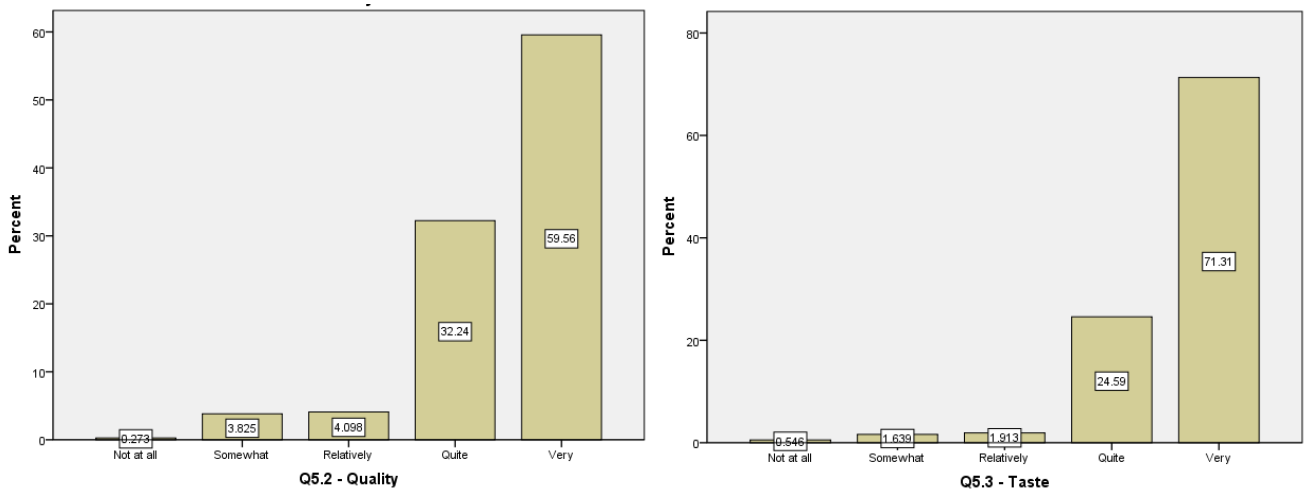


Figure 18: Distributions of responses for the Taste and Quality criteria in coffee purchasing decisions. Exact percentages are given inside the bars.

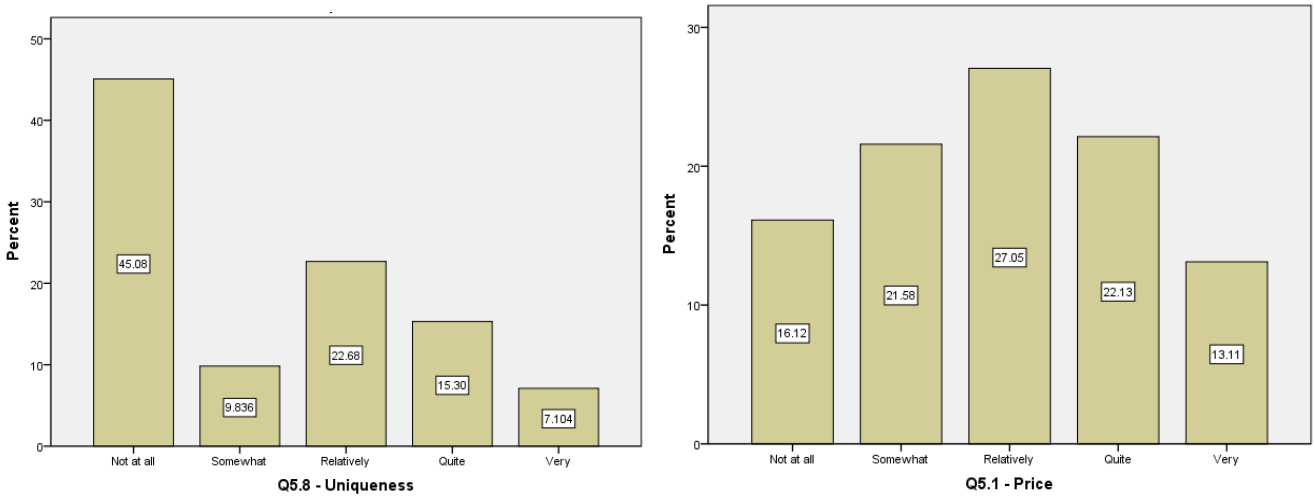


Figure 19: Distributions of responses for the Uniqueness and Price criteria in coffee purchasing decisions. Exact percentages are given inside the bars.

5.2.2.1. The importance of environmental and social concerns in consumers' coffee purchasing decisions

In order to gain further insight into the relative importance of environmental and social concerns compared to other attributes that might be important in coffee purchasing decisions, each respondent was asked to point out a few words from a list, that they would consciously look for on coffee packaging. The list comprised of 24 words and short expressions, which had been previously identified by observing recurring patterns in frequently used expressions on coffee packaging. The first half of the list contained words which refer to some form of personal gratification while the second half contained equal number of words referring to various aspects of social and environmental concerns. The popularity of the 'Fairly traded' concept, and the importance of 'Great taste' and 'Freshness', shows clearly in Figure 5.5. In the social category, the least popular concepts were 'Cooperatives' and 'Charity donation'. There was less variation in popularity between the words in the environmental category, but 'Organic' and 'Rainforest protection' scored the highest and 'Tree planting projects' the lowest.

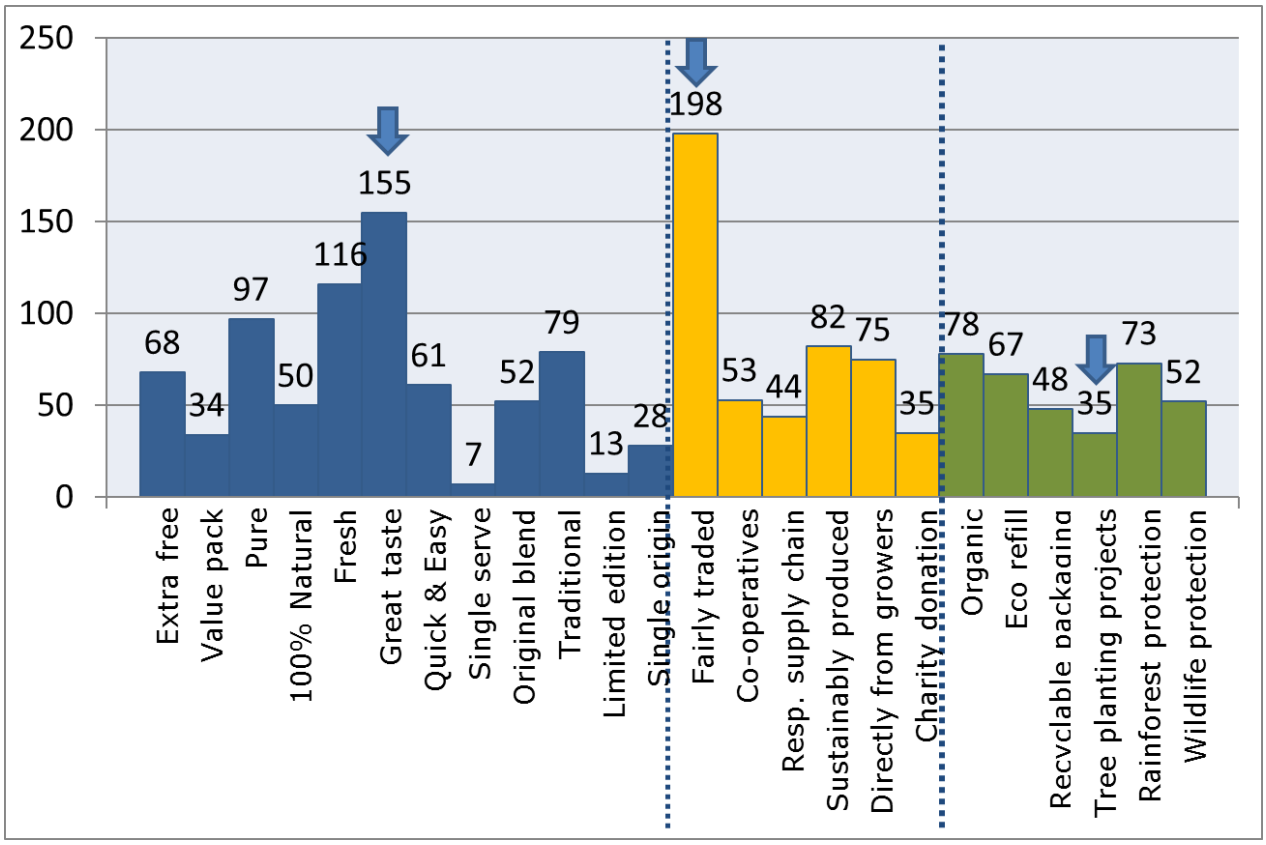
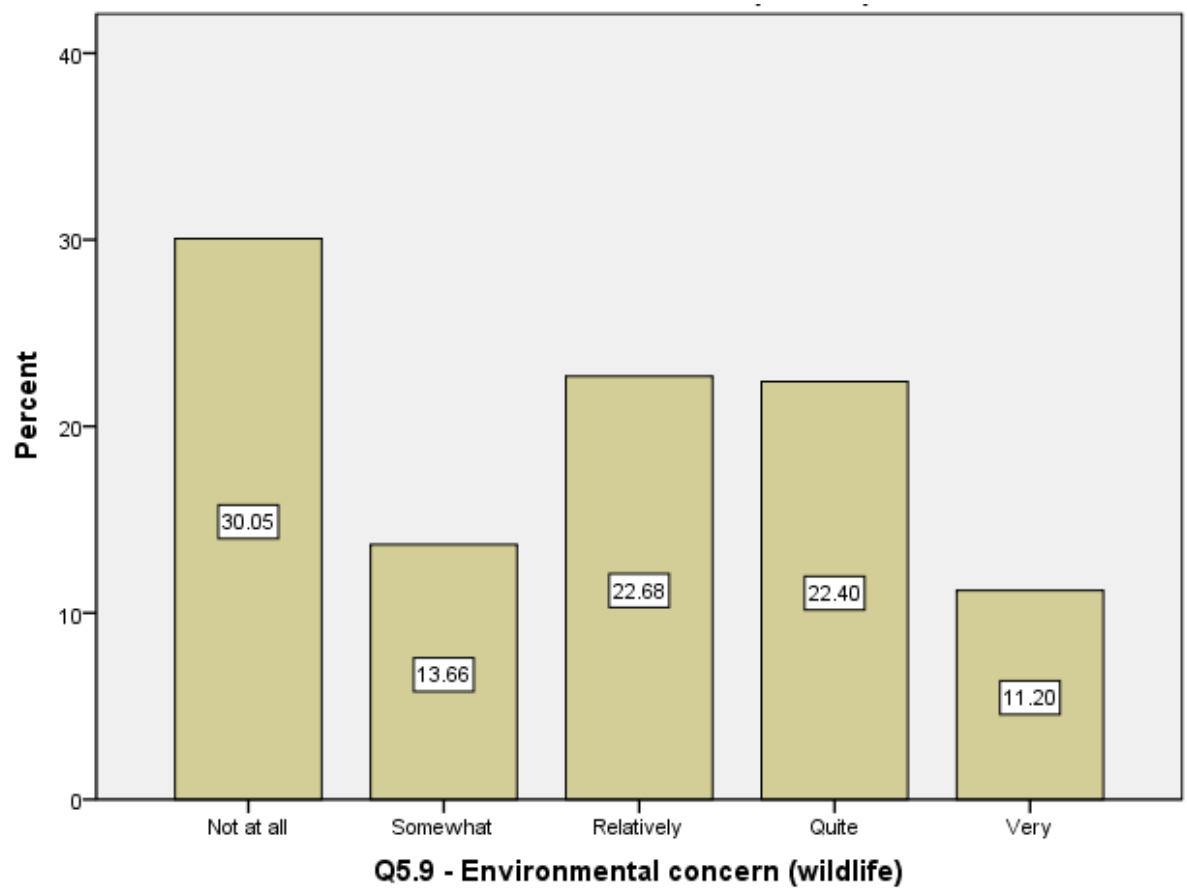


Figure 20: Number of respondents who stated that they look on coffee packaging for the word or expression shown (exact numbers displayed above the bars). The words and expressions are grouped into types, divided by dotted lines: personal gratification (blue bars)



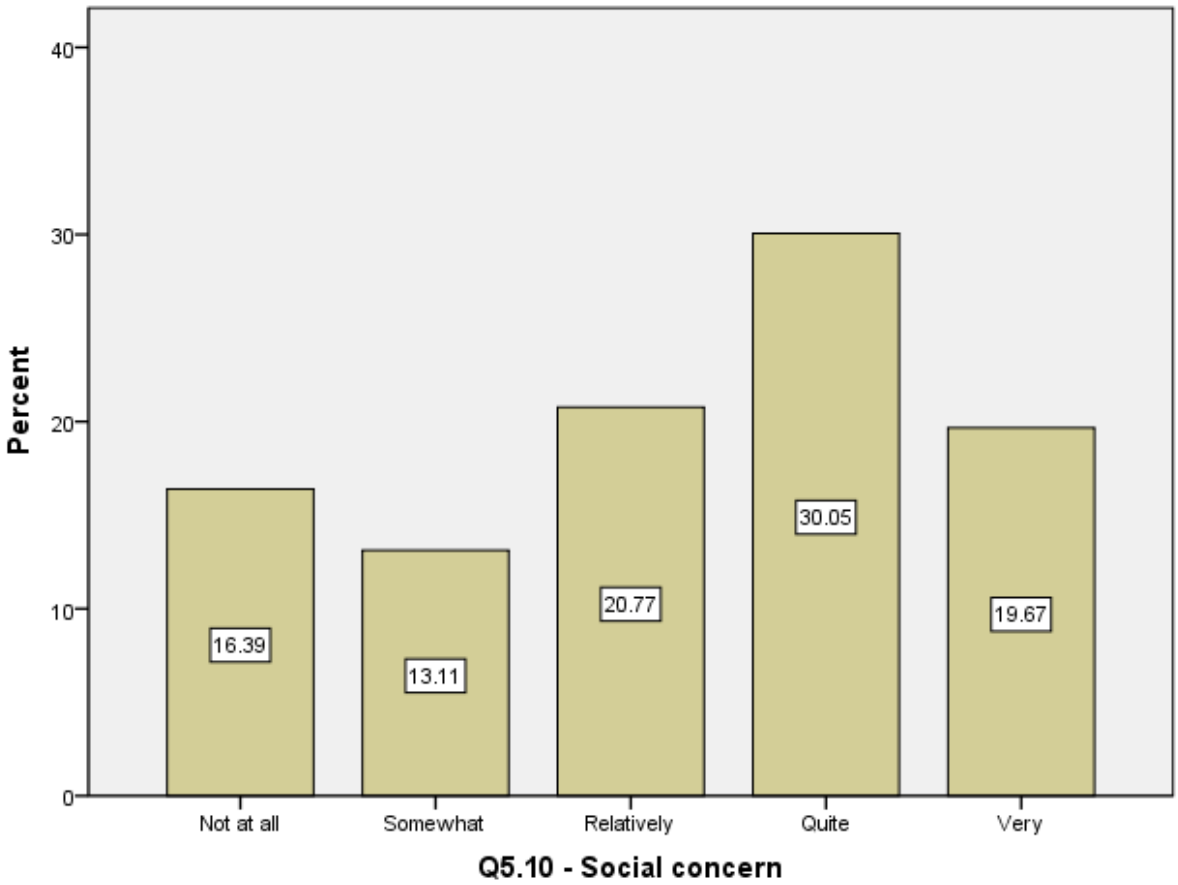


Figure 21: Distributions of responses for environmental concern (forest and wildlife) and social concern criteria in coffee purchasing decisions. Exact percentages are given inside the bars.

In order to further explore the relative popularity of environmental vs. social claims on coffee packaging, the average number of words and expressions relating to social concerns chosen by each respondent was calculated, and the same done for environmental concerns. The proportion of all words chosen that were in each of these categories was also calculated. Table 5.3 compares these means and proportions.

Table 4: Mean number of social and environmental words in Question 6 chosen per respondent, and proportion of all words chosen in each category.'SE' is the standard error of the mean or proportion. 'Difference' is the difference between the means or proportions (social minus environmental), and 't' is Student's t, which expresses each difference as the number of standard errors of that difference. In both cases the difference is significant (t-test: P<0.01)

	Social	Environmental	Social	Environmental
Mean	1.324	0.962		
Proportion			0.295	0.190
SE	0.069	0.069	0.013	0.011
Difference	0.362		0.105	
t	5.238		8.713	

If the words had been randomly selected from the list then we would expect the percentage of social and environmental words both to be 25 percent (each group contained a quarter of the available choices). However, the percentage of social-related words chosen was significantly higher than this, at 30 percent and the proportion of environment-related ones chosen was significantly lower (19 percent). The distribution of this preference across all the respondents is displayed in Figure 5.7.

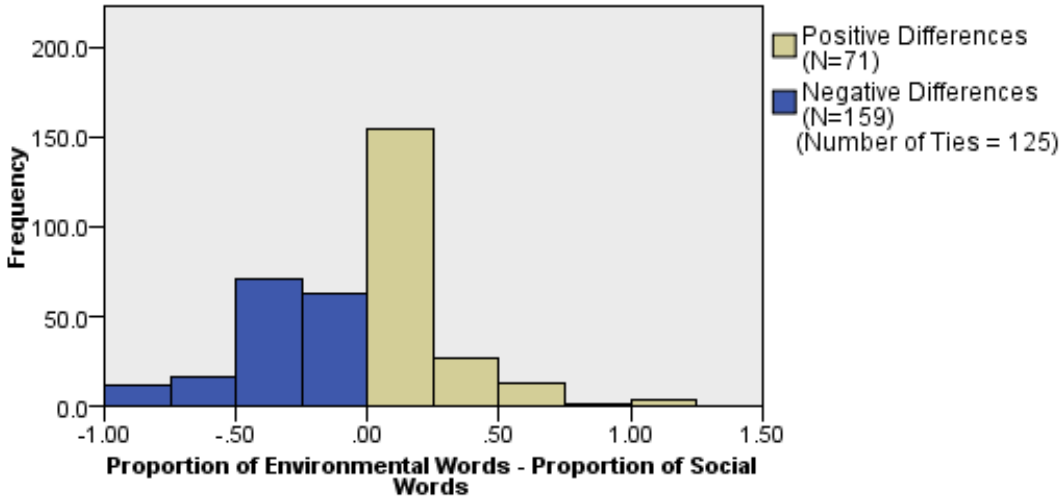


Figure 22: Difference between the proportions of words relating to social and environmental concerns chosen by each interviewee. If all the words chosen by an interviewee are social concerns the difference between proportions is -1; if all are environmental concerns it is +1. Equal numbers of words in each of the two

categories (including none chosen in either category) gives a difference of 0; the 0s are included in the 0-0.25 bin. The tendency was for individual people to choose a higher proportion of social-concern words and expressions than environmental-concern ones (excluding the 0s from the 0-0.25 bin, the blue bars are significantly higher; Wilcoxon rank sum test, P<0.01).

Overall, respondents tended to show greater concern towards social issues than to environmental ones. The relative unpopularity of the idea of 'Tree planting projects' in relation to coffee suggested that consumers might not associate extensive forest loss with coffee growing practices (or may not be aware of schemes seeking to rectify this). Interestingly, during the focus group discussion, some participants expressed their disapproval of tree planting projects in South American rainforests (advertised on Taylors of Harrogate coffee packaging), questioning "why can't those trees just be planted in Yorkshire instead" – suggesting a lack of understanding about the distinctive conservation value of healthy tropical rainforest ecosystems.

5.2.2.2 Influence of demographic factors on coffee buying decisions

The relative importance of different criteria in coffee purchasing decisions (Q5) was further analysed by gender, age, education, household income, supermarket and city to determine who are likely to seek out certified coffees. Neither Chi-square analysis nor the Mann-Whitney U-test could detect any significant difference between consumers in Nottingham or in Leeds in terms of the relative importance they attach to the various criteria in their coffee purchasing decisions. For other demographic variables, some significant differences were found, as follows. Consumers interviewed in M&S and Waitrose rated the 'No chemicals' criterion slightly higher (marginally significant) than consumers shopping in the other two supermarkets (Figure 5.8).

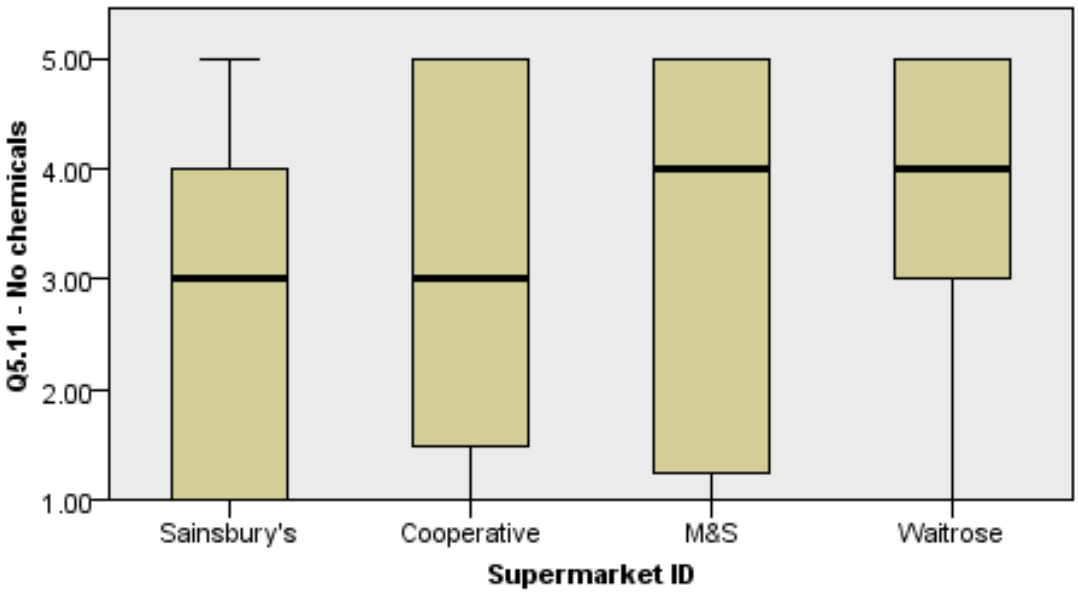


Figure 23: Differences between supermarkets in the importance of 'No chemicals' in coffee purchasing decisions of their customers (Kruskal–Wallis test statistic=9.270, P=0.026, n=366)

In terms of gender, women rated the relative importance of 'price', 'availability' and 'convenience' significantly more highly in their purchasing decisions than did men (Figure 5.9).

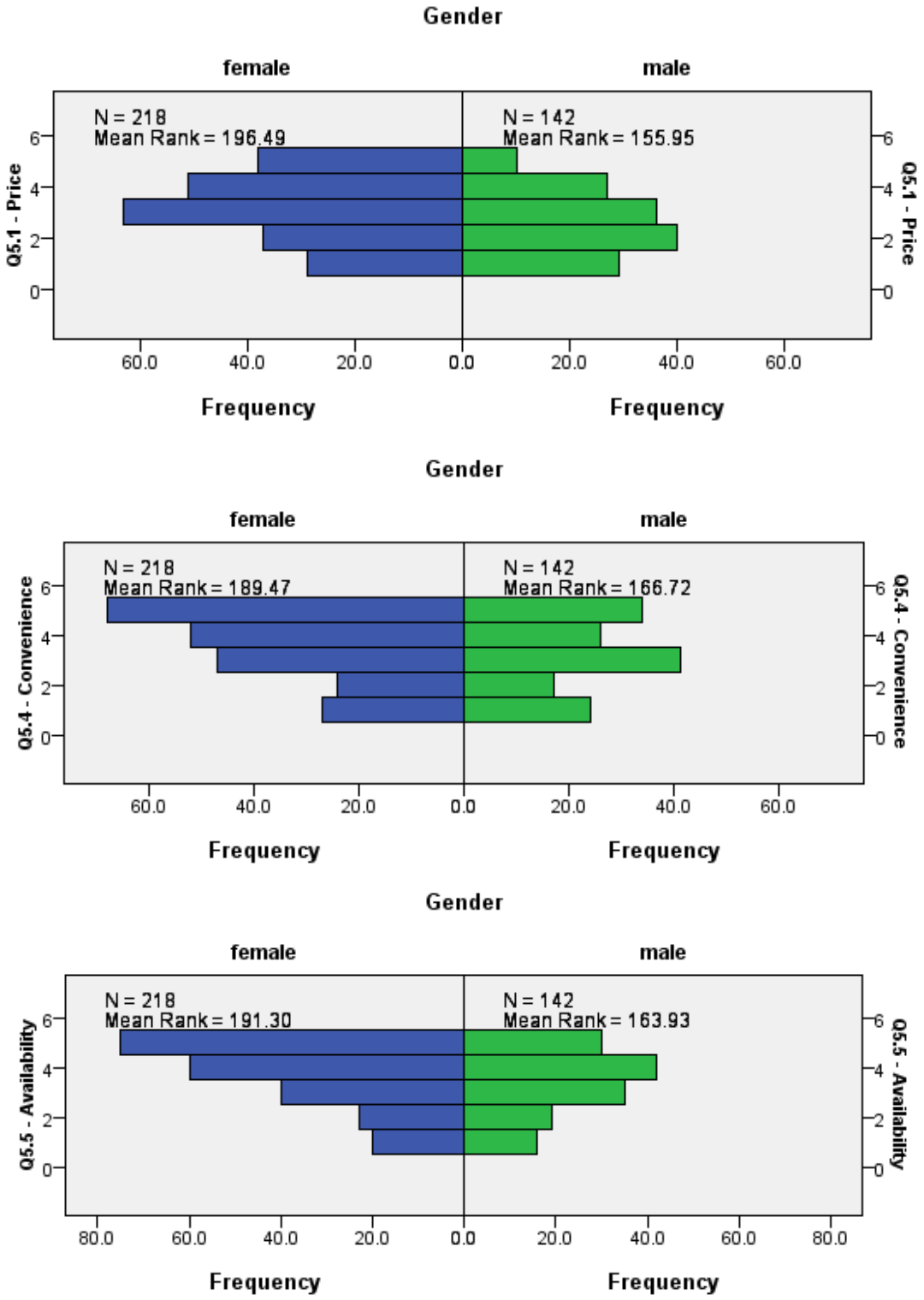


Figure 24: Relative importance of three criteria in coffee purchasing decisions analysed by gender, with women rating all more highly than men. The difference is highly significant for 'Price' (top panel; Mann-

Whitney U test, z=-3.701, P=0.000, n=360) and marginally significant for 'Availability' (middle panel; z=-2.514, P=0.012, n=360,) and 'Convenience' (z=-2.082, P=0.037, n=360).

There were some differences between age groups in the importance of 'Quality', 'Taste', 'Availability', 'Brand familiarity', 'Environmental concern' and 'No chemicals' in coffee purchasing decisions (Table 5.4, Figure 5.10). Respondents above the age of 35 attached greater importance to the quality, taste and availability of the coffee they buy than younger age groups. 'Familiarity with the brand' seems to be more important to consumers above the age of 50, and also important for people under 25. Concern about the environment ('Forest and wildlife conservation'), however, seemed slightly more important for people above the age of 65, though the significance was marginal. The knowledge that no chemicals were used during the production of coffee seems to be most important to consumers over 50.

Table 5: Kruskal–Wallis tests of difference across the five age categories in the importance for coffee purchasing decisions of the criteria shown (N= 365, df=4).Differences between at least two age categories are significant where the null hypothesis is rejected (shaded rows); these are displayed in Figure 5.10.

Q5 \ Age	P	Decision	Test statistic
Price	0.700	Retain null	2.194
Quality	0.004	Reject null	15.168
Taste	0.002	Reject null	16.964
Convenience	0.158	Retain null	6.609
Availability	0.001	Reject null	19.870
Brand	0.025	Reject null	11.136
Trying new	0.513	Retain null	3.274
Uniqueness	0.495	Retain null	3.392
Environmental concern	0.047	Reject null	9.646
Social concern	0.166	Retain null	6.481
No chemicals	0.001	Reject null	19.573

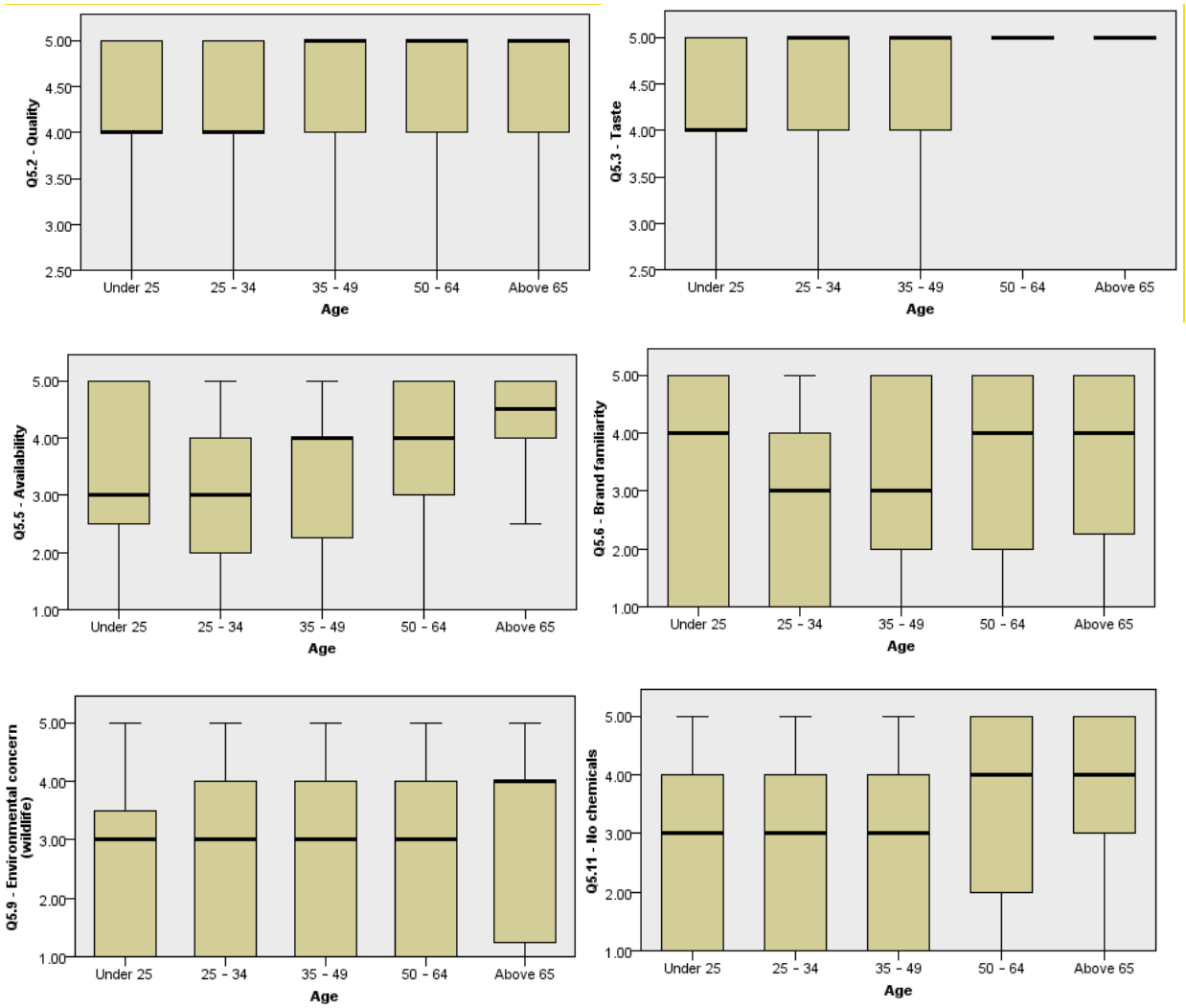


Figure 25: Boxplots showing variation in the importance of different purchasing criteria within five age categories.

The importance consumers attach to some coffee attributes seems to vary significantly with education (Table 5.5), though notably not for 'price', 'quality' or 'taste'. Both 'convenience' and 'availability' seem to matter less to people who have higher levels of education and 'brand familiarity' was more important to those who don't hold a degree. Even though concerns about 'forest and wildlife conservation' and the 'use of chemicals' in the process of coffee production generally had relatively low importance in coffee purchasing decisions, people with a degree tend to give somewhat more consideration to environmental issues than people without higher education.

The importance of 'price' and (to a lesser extent) 'availability' decreased with higher income levels (Table 5.6; Figure 5.11). 'Convenience' was significantly more important for the lowest income groups than all the middle income groups. Respondents in the highest income category seemed to be to most open to 'trying something new' when purchasing coffee, which may have considerable implications for positioning a new coffee certification scheme on the market.

Table 6: Mann–Whitney U-tests of difference between consumers with and without a degree in higher education in terms of importance of each criteria in coffee purchasing decisions. Differences are significant where the null hypothesis is rejected (shaded rows)

Q5 \ Degree	P	Decision	Test statistic
Price	.112	Retain null	14.271
Quality	.096	Retain null	14.371
Taste	.179	Retain null	14.751
Convenience	.000	Reject null	10.070
Availability	.000	Reject null	9.137
Brand	.000	Reject null	11.357
Trying new	.073	Retain null	17.499
Uniqueness	.110	Retain null	17.274
Environmental concern	.000	Reject null	19.275
Social concern	.015	Reject null	18.107
No chemicals	.338	Retain null	16.704

Table 7: Kruskal–Wallis tests of difference across the six income categories in terms of importance of each criteria in coffee purchasing decisions (N= 337, df=5).Differences between at least two income categories are significant where the null hypothesis is rejected (shaded rows); these are displayed in Figure 5.11.

Q5 \ Household income	P	Decision	Test statistic
Price	.001	Reject null	19.665
Quality	.694	Retain null	3.041
Taste	.147	Retain null	8.164
Convenience	.024	Reject null	12.969
Availability	.013	Reject null	14.459
Brand	.078	Retain null	9.911
Trying new	.016	Reject null	14.004
Uniqueness	.489	Retain null	4.429
Environmental concern	.182	Retain null	7.561
Social concern	.503	Retain null	4.332
No chemicals	.847	Retain null	2.015

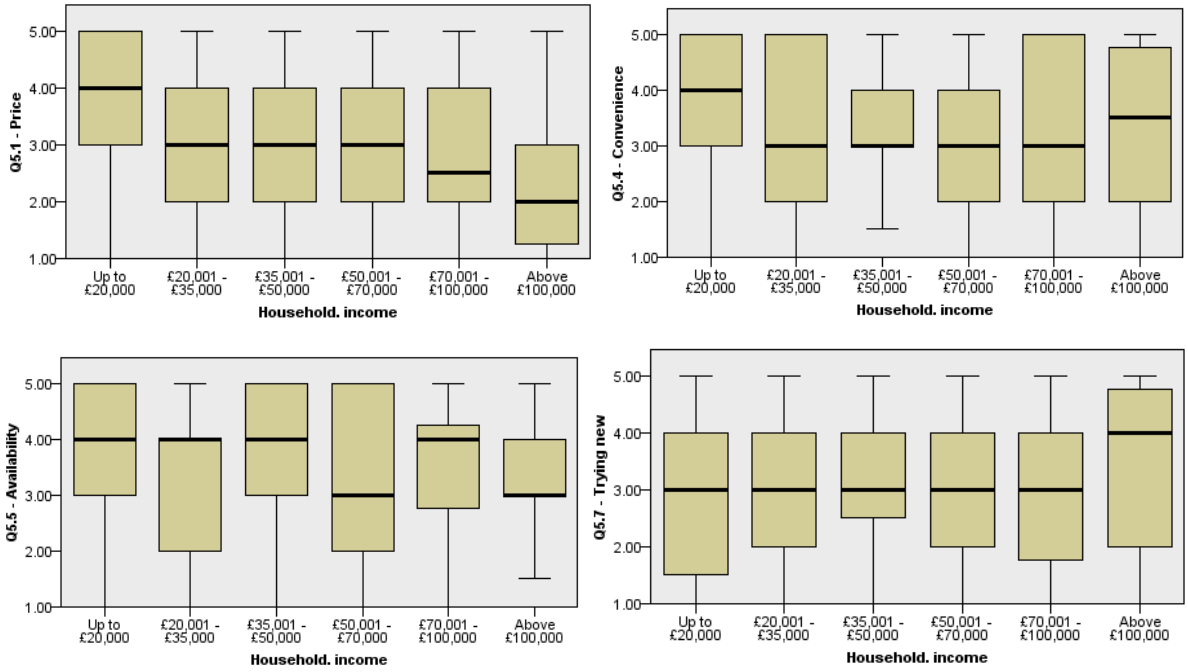


Figure 26: Effects of household income levels on 'Price', 'Convenience', 'Availability', and willingness to 'Try something new'

5.2.2.3. Influence of certification on frequency of purchase

To investigate whether there is a relationship between the importance consumers attach to the various coffee attributes (Q5) and the claimed frequency of their purchases of certified coffees (Q8), Spearman's Rank order correlations were performed (Table 5.7). Since both variables were measured on a 5 point Likert-scale but answers were ordered in the reverse direction in Q5 and Q8, a positive correlation between the two variables means that the more important a given criterion (such as 'convenience', 'availability, and brand familiarity) was rated, the less frequently people tend to seek out certified coffees. The strongest relationships suggest that higher importance attached to environmental or social concerns is associated with increased frequency of certified coffee purchase.

Table 8: Correlations between the importance that respondents attached to the various coffee attributes (Q5) and the claimed frequency of their purchase of certified coffees (Q8).Significant correlations are shaded (heavier shading indicates more significant correlation)

Q5 – Q8 Correlation	r_s	P
Price	.084	.110
Quality	-.044	.405
Taste	.068	.192
Convenience	.231	.000
Availability	.200	.000
Brand	.149	.004
Trying new	-.126	.016
Uniqueness	-.217	.000
Environmental concern	-.486	.000
Social concern	-.546	.000
No chemicals	-.290	.000

5.2.3. What do UK consumers believe ethical labels actually mean?

5.2.3.1. Recognition of different certification schemes

Nearly half (46.5 percent) of the respondents said they consume coffee at least once or twice a day, and 38 percent said they have at least three or more cups of coffee every day. Most of this is consumed at home (44 percent) and at work (23.5 percent) or at coffee shops (22 percent). The type of coffee drunk most appears to be instant (44 percent) – which most people referred to as 'normal' – followed closely by ground (37 percent); only 12 percent of the respondents chose the 'whole bean' option.

In order to assess the popularity certified coffee, interviewees were asked about their familiarity with main coffee related certification schemes – Fairtrade, Rainforest Alliance, Organic, Bird Friendly and UTZ Certified. Of these five, Fairtrade and Organic appeared to be the most well-known (Table 5.2), which shouldn't be surprising given that nearly 50 percent of all Fairtrade certified coffee is also Organic certified (FAO, 2009). About three-quarters of the respondents have knowingly bought Fairtrade-certified coffee, but only about half have knowingly bought organic coffee; much of the overlap may be an effect of the regularity of double certification. A surprising 40 percent of the respondents did not recognise Rainforest Alliance by its name and not even after an explanation of the logo 'with the little green frog'. The recognition of Bird Friendly and UTZ was negligible (5.2 percent and 3.9 percent) – despite the high profile of UTZ in Ikea stores and its growing availability in supermarkets. Those who did recognised Bird Friendly,

were either from the USA or have lived in parts of continental Europe (especially France or Germany) recently. The majority of those who claimed they have heard about Bird Friendly and UTZ, have not consciously bought coffee with these certifications.

Table 9: Familiarity with coffee certification schemes.Percentages of respondents who have not heard of the schemes listed, and percentages of respondents who said they have both heard of the scheme and bought coffee with that certification, bought other products with the certification ('Bought scheme other'), and not bought anything with the certification

Coffee scheme	Not heard of	Heard of…		
		Bought scheme coffee	Bought scheme other	Bought nothing from scheme
Fairtrade	1%	77%	34%	11%
Organic	2%	51%	35%	29%
Rainforest Alliance	40%	22%	10%	30%
Bird Friendly	95%	1.6%	0%	3.3%
UTZ	96%	0.5%	0%	3%

The survey also collected information about where consumers choose to buy their coffee normally. Nearly 9 percent of respondents said they regularly buy coffee in Health Food or Organic Shops, and 17 percent said they regularly buy coffee in Specialty Coffee Shops. The majority (64.5 percent) of interviewees, however, said they mainly buy their coffee in supermarkets, but these results are likely to be biased by the fact that the respondents were interviewed while they were already doing their shopping in supermarkets. Respondents were also asked to estimate how often they buy any of the certified coffees, on a five-point scale, with 'some of the time' being the most popular answer (Figure 5.20).

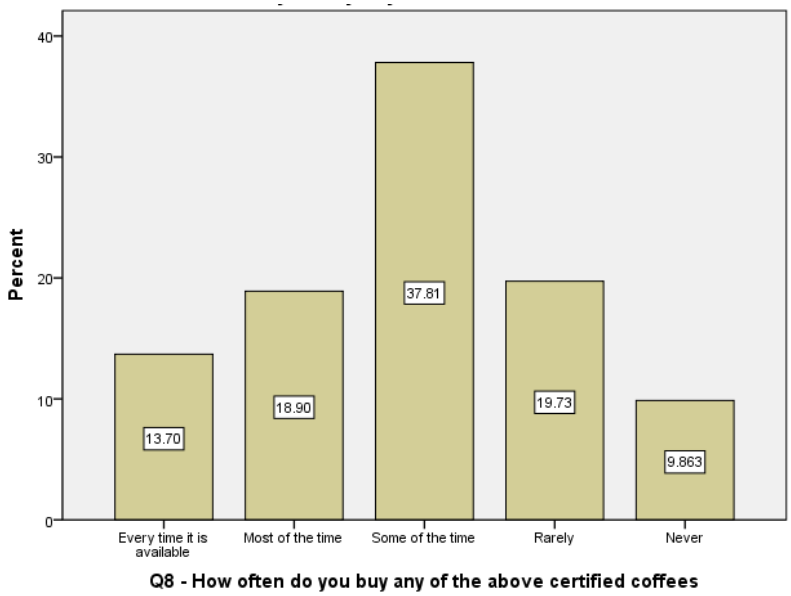
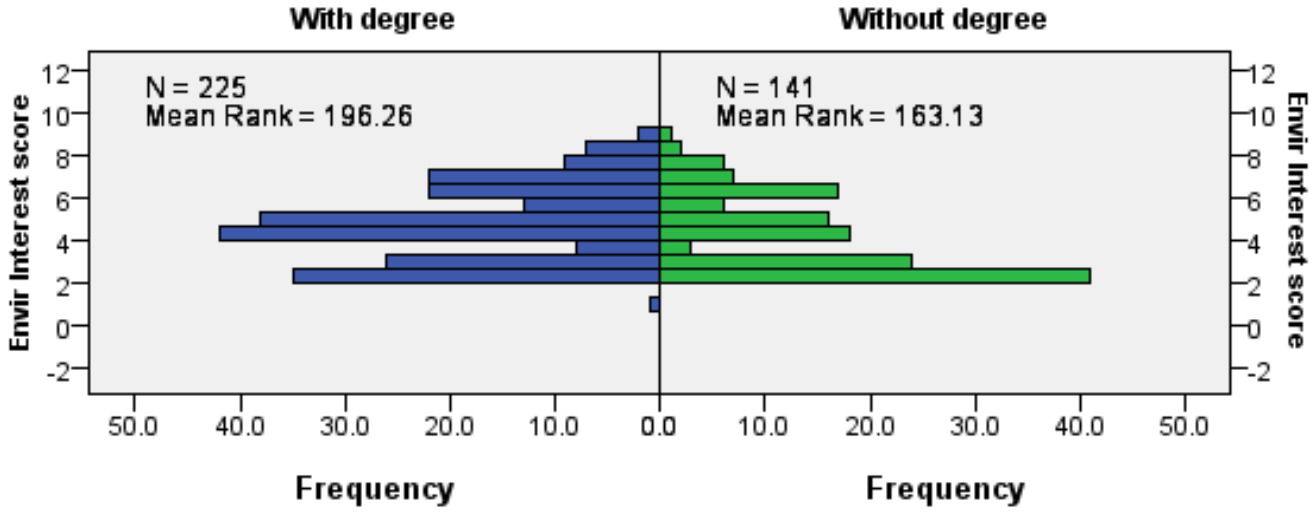


Figure 27: Frequency of certified coffee purchase claimed by the respondents

5.2.3.2. Who are the consumers of certified coffees?

To identify 'who is the current market' for certified coffees, the total sample of 367 respondents was analysed to see whether there was a particular group (analysed by age, gender, education, income level, value system) that is significantly more interested in ethical-environmental issues related to coffee than others.

Mann-Whitney U-test was used to establish whether demographics made any significant difference in the interest shown towards environmental or social issues. According to the results, education was the only factor that made a significant difference in the Environmental and Social Interest scores (see Chapter 4) of those with degrees in higher education and those without (Figure 5.21).



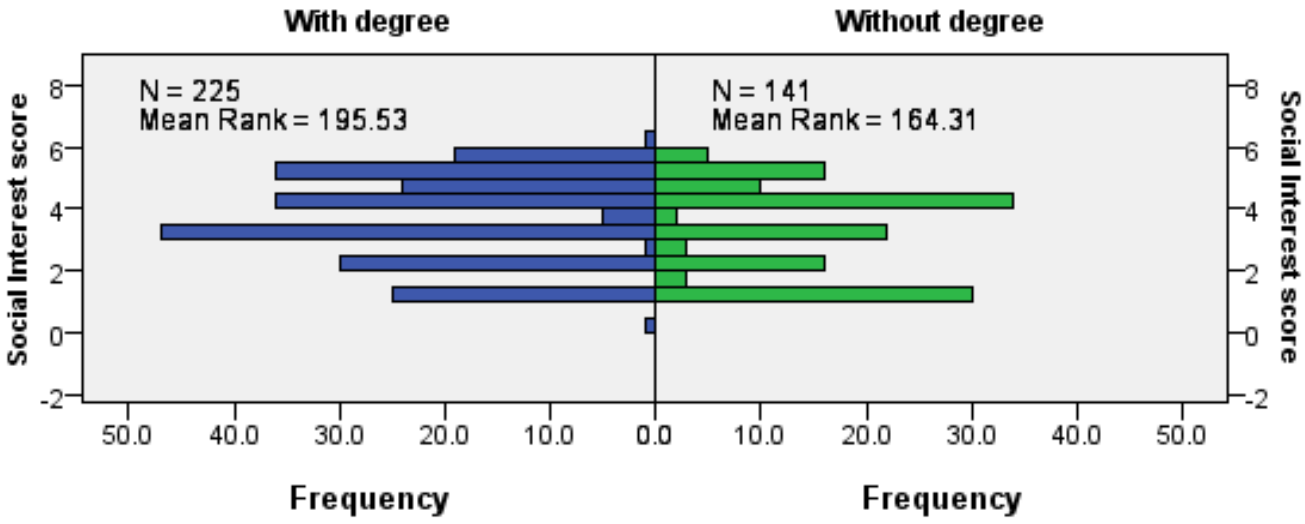


Figure 28: Environmental and Social Interest scores compared between education categories.Those with degrees scored more highly on both the environmental score (top panel; P=0.003 in Mann–Whitney U-test) and the social interest score (bottom panel; P=0.006).

Chi-square tests were used to identify whether the differences between the number of consumers claiming to have heard of and bought Fairtrade, Rainforest Alliance or Organic coffee was significant in terms of their gender, age, education, income as well as in terms of the supermarket and the city they were interviewed in. Given the low levels of recognition of either Bird Friendly or UTZ certification, they were omitted from this analysis. In this section, I discuss the results of the Chi-square tests combined with those from the other tests reported above, and summarise them in Figure 5.12.

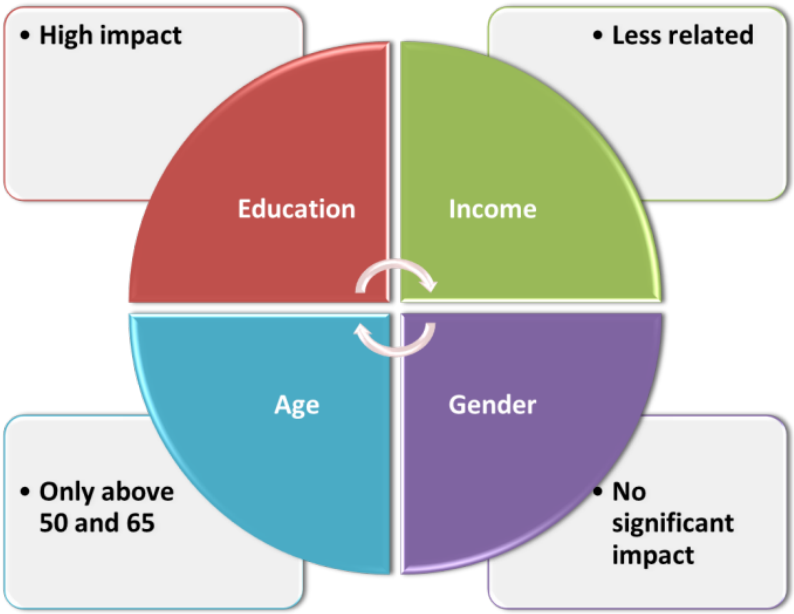


Figure 29: Summary of impact of demography on certified coffee purchases

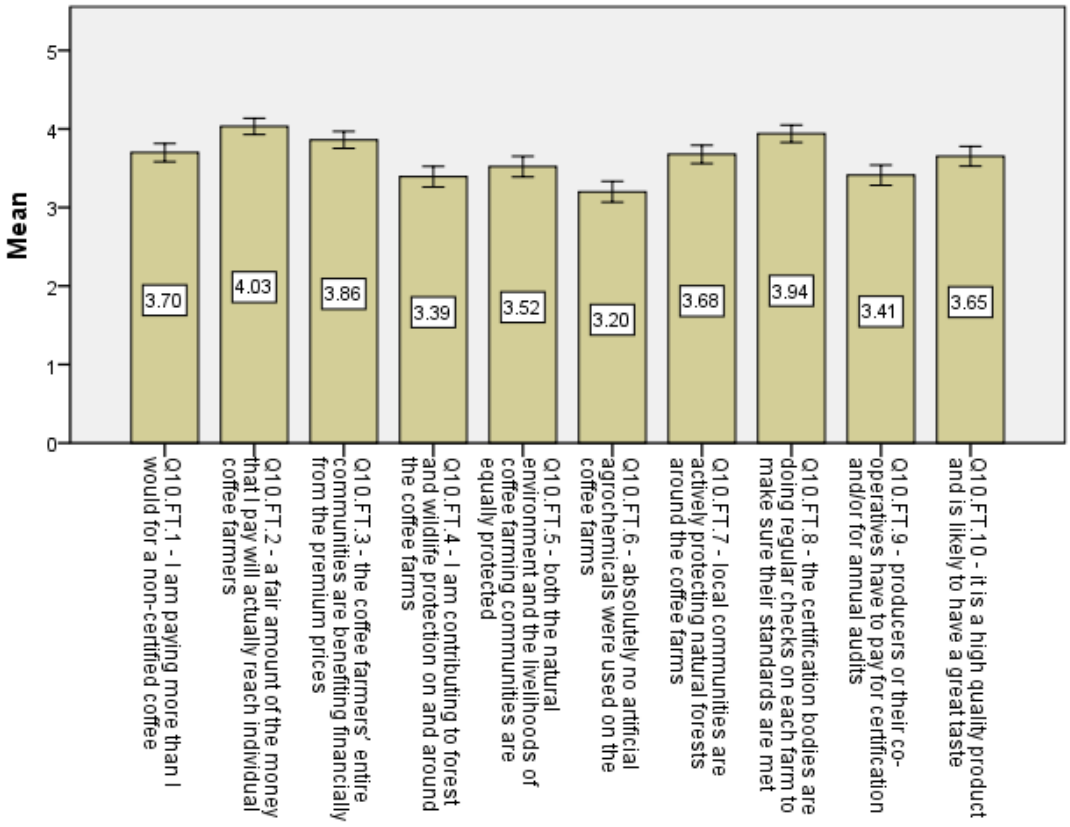
No significant differences were found in either gender and age categories between consumers who have bought Fairtrade or Organic coffee before. However, there was a significant difference between men and women in their recognition of the Rainforest Alliance name - men showing higher level of familiarity with Rainforest Alliance - gender didn't seem to make a difference in certified purchases. As regards age, more than twice as many people have consciously bought Rainforest Alliance coffee in the 35-49 age group than in any other age groups. More than twice as many people in the 35-49 and 50-65 age groups had bought Fairtrade, Organic or Rainforest Alliance coffee before (even despite the over-representation of these age groups in the sample). Contrary to expectations, household income levels were not strongly related to coffee-buying decisions. Surprisingly it was not the people with the highest income level who claimed to have heard of and bought Fairtrade coffee before but it was mostly people in the second lowest income category (defined in the questionnaire ranging between £20,000-£35,000 per annum) that had tried Fairtrade coffee at least once and tended to consciously choose certified coffees of any kind. As expected, education had a strong impact on coffee-purchasing decisions: people with a degree tended to consider both environmental and social issues more than people with lower levels of education. The difference between people with a degree and those without appeared to be significant in terms of familiarity with Fairtrade and Organic coffee but education didn't seem to make a significant difference in familiarity with Rainforest Alliance. Opinions shared during the focus groups illustrated very different attitudes about the environment–development debate, even amongst the highly educated. The type of supermarket did not seem to make significant difference to people's familiarity with Fairtrade, Rainforest Alliance or Organic coffee (Table 5.8). However, respondents in Nottingham appeared to be more familiar with Organic coffee than respondents in Leeds. The claimed frequency of certified coffee purchase only seemed to be influenced by degree and household income. These results are summarised in the Table 5.8 (based on the analysis of Q7).

Table 10: Effects of demographic characteristics on consumers' familiarity with coffee certification schemes and the claimed frequency of their certified coffee purchase ('Q7').

Q7/2	Gender	Age	Degree	Hh. Income	Supermarket	City
Fairtrade	No	No	YES	YES	No	No
Rainforest A.	YES	YES	No	No	No	No
Organic	No	No	YES	No	No	YES
Q8	No	No	YES	YES	No	No

5.2.3.3. Consumer perceptions about what Fairtrade and Rainforest Alliance schemes actually mean

In the second part of the questionnaire, respondents were asked to indicate how strongly they agreed or disagreed with ten individual statements about the social and environmental implications of Fairtrade and Rainforest Alliance schemes. It was made clear to the respondents that the question was intended to assess their hopes, beliefs and expectations about the schemes recognising that it would be difficult for an individual to be absolutely certain about the real impacts of either scheme. This made the respondent's more comfortable with giving answers other than 'I don't know'; however the majority still felt it was necessary to emphasise after almost each statement that they were only guessing, hoping, imagining that the statement reflected the reality. Figure 5.13 shows the mean scores (5-point Likert scales) of each of the answers given to the statements about Fairtrade and Rainforest Alliance. There was little difference between Fairtrade and Rainforest Alliance in how consumers thought about their social implications, and a slight majority of respondents associate both schemes with high quality and great taste (Figure 5.13).



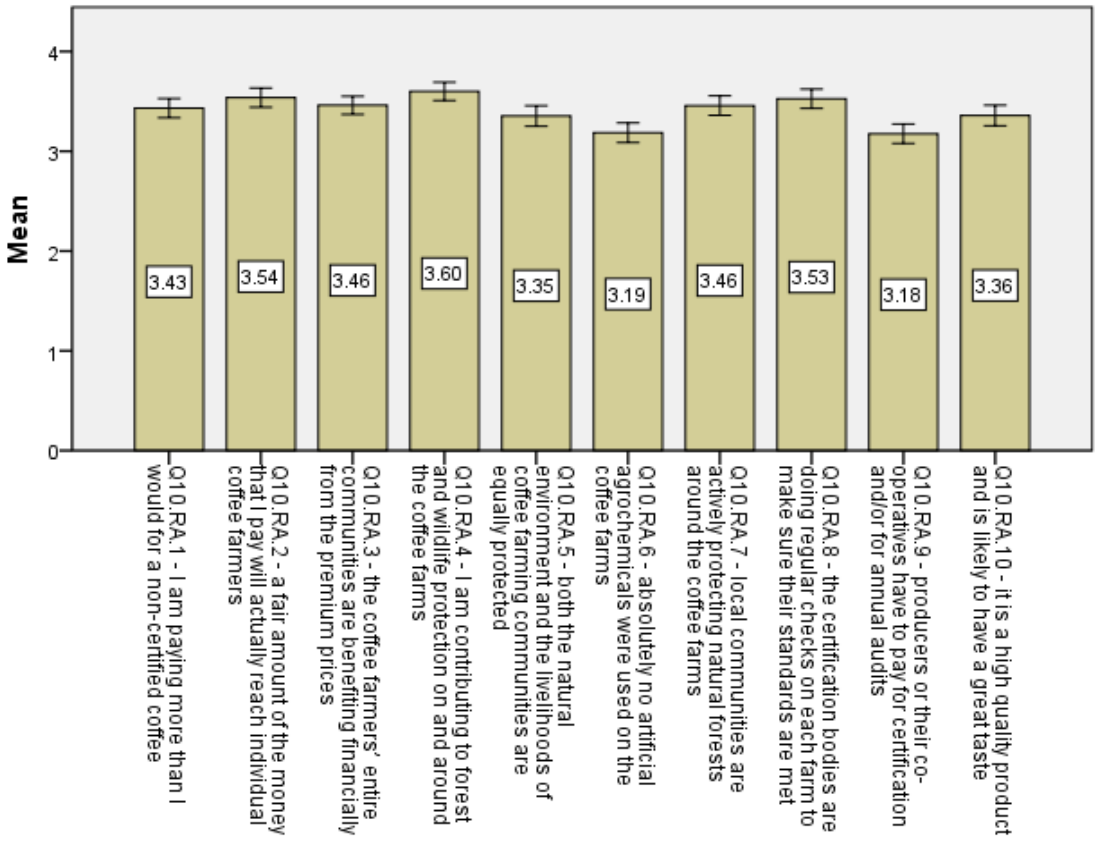


Figure 30: Means of consumer responses to each of the 10 questions asked about each of the Fairtrade (top panel) and Rainforest Alliance (bottom panel) schemes. Error bars: 95 percent confidence intervals. Note the different scales on the vertical axes.

Nearly 50 percent of respondents either agreed or strongly agreed that a 'fair amount of the money paid for Fairtrade coffee will actually reach individual coffee farmers' (Table 5.9). For Rainforest Alliance, the figure was 42 percent. Responses to the question about whether the coffee farmers' entire communities benefit from the premium prices reflected a high degree of uncertainty with regard to the Rainforest Alliance scheme (54 percent opted for 'Neither agree nor disagree'), although confidence about the reality of this statement was still high in relation to Fairtrade (71 percent chose either 'Agree' or 'Strongly Agree'). In terms of the environmental implications of Fairtrade and Rainforest Alliance, there was uncertainty about the forest and wildlife conservation impacts of the Fairtrade, although the majority (59.4 percent) of respondents thought they were 'contributing to forest and wildlife protection on and around the coffee farms' when buying Fairtrade certified coffee – compared with 72 percent recognising the wildlife conservation value of Rainforest Alliance (Table 5.10). Even though the preliminary expectation was to find greater agreement with this statement in relation to the Rainforest Alliance scheme, about 51 percent of respondents were unsure as to whether this statement was true or not about Rainforest Alliance. Nevertheless, more than ten times as many people agreed or strongly agreed with this statement than those who disagreed with it. The last statement ('local communities are actively protecting natural forests around the farms') highlights an important consumer expectation towards both

schemes and suggests that on average they make no real distinction between Fairtrade and Rainforest Alliance in this respect.

Table 11: Consumer understanding of social impact of Fairtrade and Rainforest Alliance

By buying FT/RA I believe that ...	FT/RA	Strongly disagree	Disagree	Neither	Agree	Strongly Agree
... I am paying more than I would for a non-certified coffee.	FT	6,5%	10,7%	10,7%	**45,1%**	27,0%
	RA	5,1%	9,8%	19,1%	**41,9%**	24,2%
... a fair amount of the money that I pay will actually reach individual coffee farmers.	FT	2,8%	5,6%	10,2%	**41,9%**	39,5%
	RA	2,8%	4,2%	21,4%	**37,2%**	32,6%
... the coffee farmers' entire communities are benefiting financially from the premium prices.	FT	3,3%	6,5%	16,7%	**43,7%**	29,8%
	RA	3,3%	3,7%	27,4%	**39,5%**	24,2%
... the certification bodies are doing regular checks on each farm to make sure their standards are met.	FT	4,2%	6,0%	16,3%	**36,3%**	**37,2%**
	RA	3,7%	5,1%	24,7%	**33,0%**	**33,5%**
... producers or their co-operatives have to pay for certification and/or for annual audits.	FT	14,0%	10,2%	27,4%	**28,4%**	20,0%
	RA	11,2%	10,7%	**34,4%**	26,0%	17,7%
... it is a high quality product and is likely to have a great taste.	FT	8,4%	14,0%	14,9%	30,7%	**32,1%**
	RA	7,0%	13,0%	24,7%	26,5%	**28,8%**

As depicted by Table 5.10, the majority of respondents (53 percent) couldn't decide whether the statement 'both the natural environment and the livelihoods of coffee farming communities are equally protected by the scheme' was true or not about Rainforest Alliance and almost twice as many respondents agreed or strongly agreed with this statement about Fairtrade than those who did about Rainforest Alliance (61 percent as opposed to 36 percent). Doubts about restrictions on the use of artificial agrochemicals on coffee farms were more pronounced in the case of Fairtrade certified farms (27 percent of respondents thought Fairtrade did allow the use of some agrochemicals) however, 41 percent still thought there are 'absolutely no artificial agrochemicals used on Fairtrade coffee farms' and 61 percent couldn't decide whether this was true or not in the case of Rainforest Alliance farms. The general understanding about the involvement of local communities in the protection of natural forests around certified coffee farms, is that it should be true in the case of Fairtrade certified farms and communities (62 percent chose 'Agree' or 'Strongly agree') but the confidence about the reality of this statement was lower in the case of Rainforest Alliance (40 percent opted for 'Agree' or 'Strongly agree'). Seventy-two percent of respondents in the case of Fairtrade, but only 40 percent in the case of

Rainforest Alliance, agreed or strongly agreed with the idea that 'the certification bodies are doing regular checks on each farm to make sure the standards are met'. As for the costs of certification from the producers' point of view, the majority (57 percent) of respondents agreed or strongly agreed with the idea that 'producers or their co-operatives have to pay for certification and/or for annual audits' in the Fairtrade system; about the same percentage (58 percent) of them couldn't decide whether it was true or not in the case of Rainforest Alliance.

Table 12: Consumer understanding about the environmental impact of Fairtrade and Rainforest Alliance

By buying FT/RA I believe that …	FT/RA	Strongly disagree	Disagree	Neither	Agree	Strongly Agree
… I am contributing to forest and wildlife conservation	**FT**	13.6%	8.4%	18.7%	**38.8%**	20.6%
	RA	1.9%	2.8%	23.4%	**38.8%**	33.2%
… both the natural environment and the livelihoods of communities are equally protected	**FT**	13.1%	7.5%	16.8%	**36.9%**	25.7%
	RA	9.8%	6.1%	26.2%	**32.7%**	25.2%
… absolutely no artificial agro-chemicals were used on the coffee farms	**FT**	13.6%	15.9%	**32.2%**	18.7%	19.6%
	RA	8.4%	14.0%	**38.3%**	19.2%	20.1%
… local communities are actively protecting natural forests around the farms	**FT**	6.5%	8.9%	22.9%	**35.0%**	26.6%
	RA	4.7%	7.9%	26.2%	**31.8%**	29.4%

5.2.3.4. Fairtrade and Rainforest Alliance knowledge scores

Responses concerning the perceived merits of Fairtrade ('FT') and Rainforest Alliance ('RA') were used to create a composite knowledge score for each scheme, summarising the level of understanding and potential misconceptions about the benefits and limitations of both certification schemes. The FT and RA knowledge scores were calculated using responses given on a five-point Likert-scale as values (1=Strongly disagree, … 5=Strongly Agree) for each statement, the average of which was taken, meaning that each person had a score on a continuous scale from 1 to 5, with 5 representing the highest knowledge level. In this calculation, responses for statements in which the correct answer was to disagree were subtracted from 6 (i.e. reversed) before the average was calculated. Because 40 percent of the respondents said they had not heard of RA, their answers

were excluded from the RA knowledge score and all analysis of it. The distributions of the respondents' FT and RA composite knowledge scores are displayed in Figure 5.14.

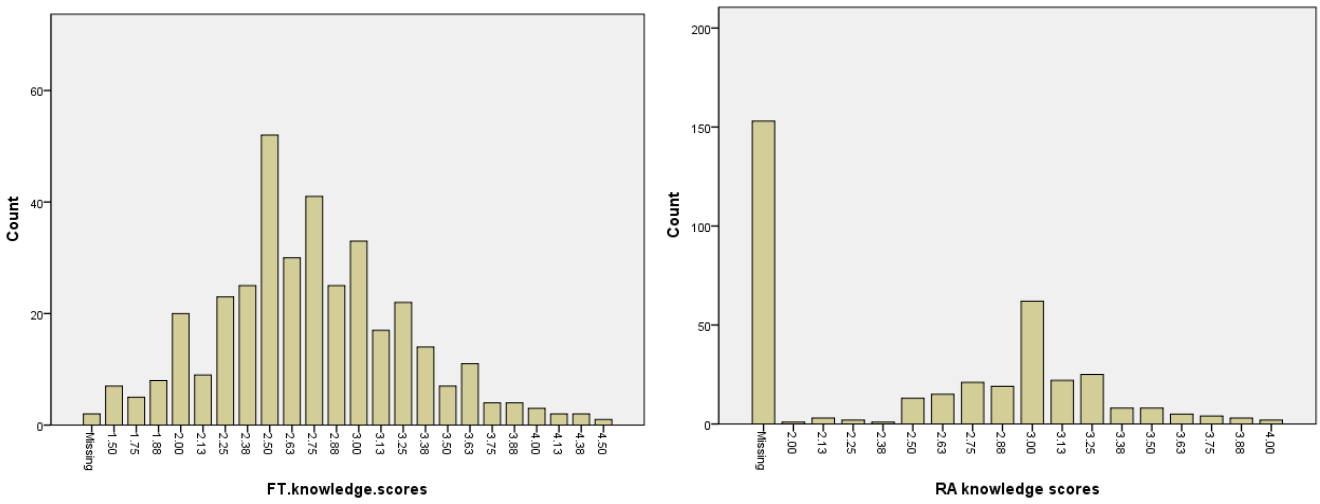


Figure 31: Distributions of the Fairtrade (top panel) and Rainforest Alliance (bottom panel) composite knowledge scores(one score per person, on a continuous scale with minimum and maximum possible values of 1 and 5, respectively, with higher scores indicating better knowledge).

The composite FT and RA knowledge scores were significantly correlated, though not strongly so (Figure 5.15), indicating that people who know about RA also tend to know about FT and that consumers' assumption of what Fairtrade means is rather more accurate than their knowledge of what Rainforest Alliance stands for. No significant correlations were found between frequency of ethical purchase and either of the composite knowledge scores (FT and RA; Figure 5.16). This result supports Eden et al.'s (2004, 2008) 'informed consumer myth' phenomenon and indicates that familiarity with a scheme does not necessarily increase certified 'ethical purchases'. At the same time, most respondents had little understanding of how 'certification' actually work. The way consumers talked about Fairtrade indicated that they perceived it as a brand, which competes with their 'usual' coffee brand and failed to realise that their preferred coffee brand might have a Fairtrade or Rainforest Allinace certified product line. The only other significant correlation involving respondents' FT or RA knowledge scores was between their FT knowledge score and their Coffee knowledge score (see below). Perhaps surprisingly, this correlation was negative (r= -0.168)!

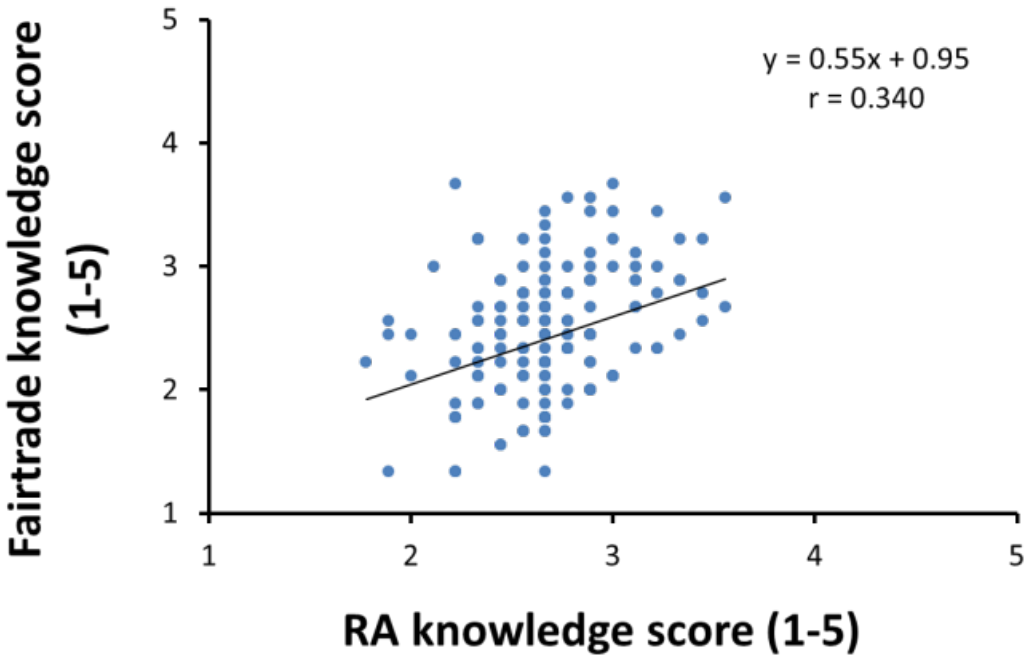


Figure 32: Correlation between FT and RA knowledge scores.Each dot represents one or more respondent. The best-fit line has been added, and its equation is shown, along with Pearson's r, which indicates a relatively weak correlation, though highly significant (P<0.01, n=217).

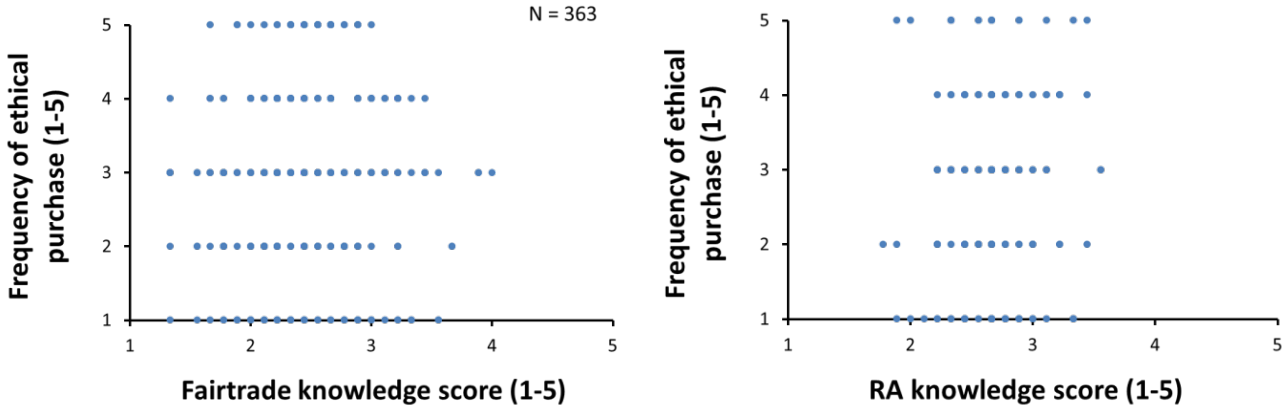


Figure 33: Scatterplots of the frequency of purchase of certified products, in relation to their Fairtrade and Rainforest Alliance knowledge scores.Each dot represents one or more respondent. Neither correlation is statistically significant.

With regard to demographics, gender made no significant difference in the FT or RA knowledge scores. Education, however, did made a significant difference where respondents with a degree had significantly higher FT (but not RA) knowledge scores than respondents without a degree (Mann–Whitney U-test, P=0.004). Respondents knowledge of Rainforest Alliance was significantly better in Nottingham than in Leeds. Waitrose consumers had the highest FT knowledge score, and those in M&S the lowest (Figure 5.17; Kruskal–Wallis test, P=0.008, n=365). As for age, the oldest age group (65+) had slightly higher RA knowledge score than the 25-34 age group (Figure 5.18; Kruskal–Wallis test, P=0.036).

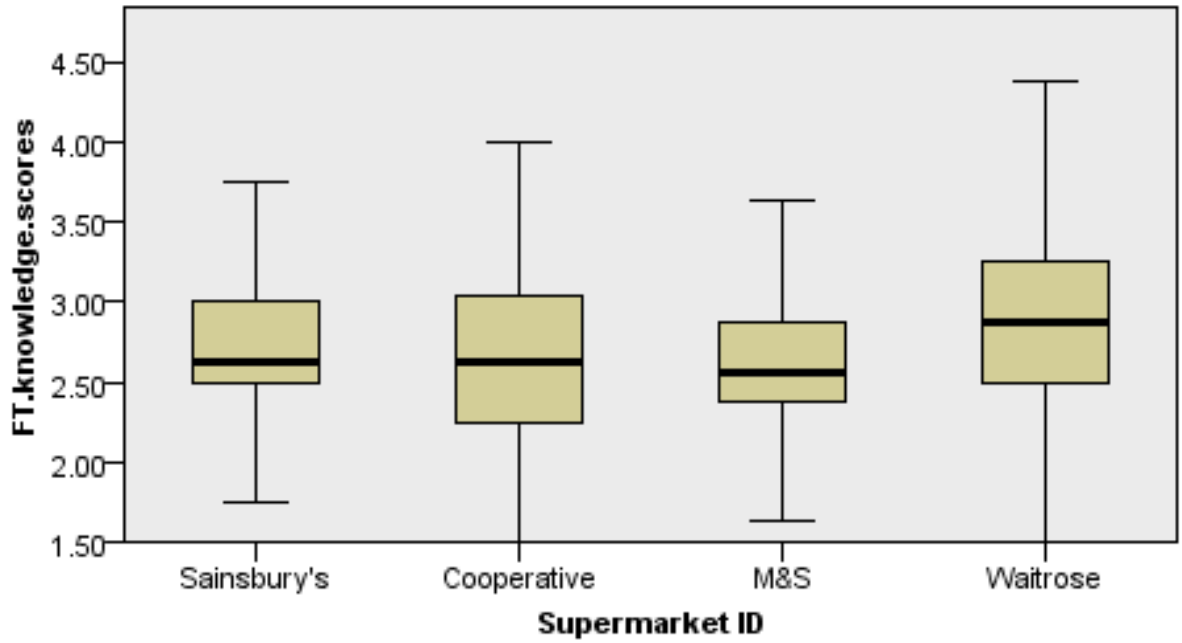


Figure 34: Fairtrade knowledge scores analysed by supermarkets

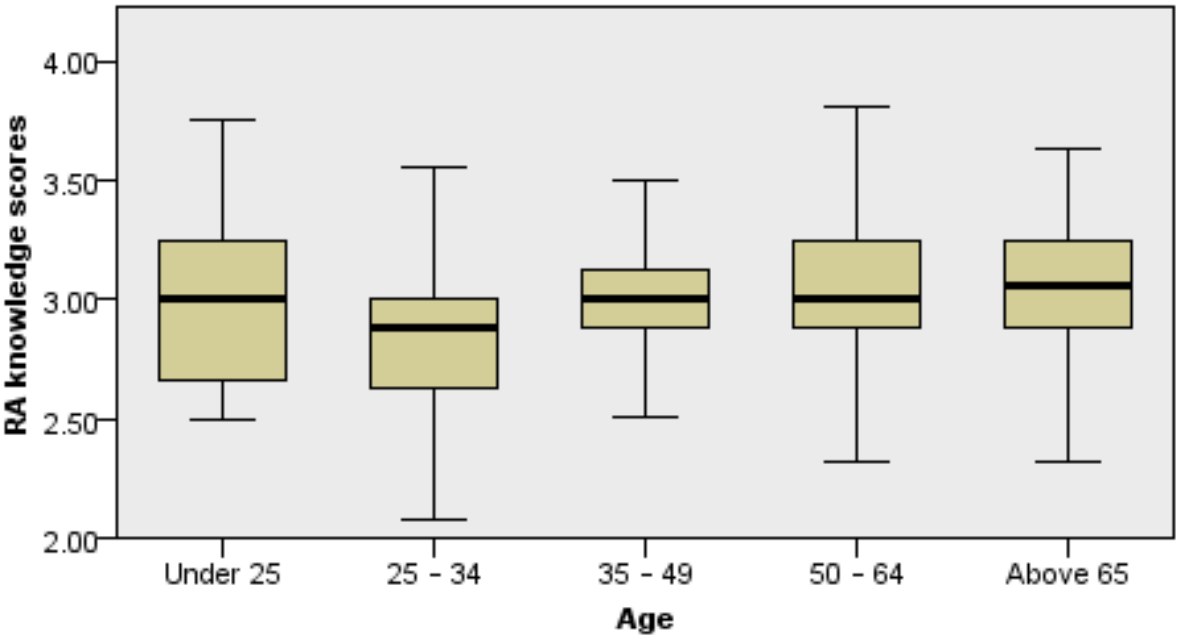


Figure 35: Rainforest Alliance knowledge scores analysed by age group

In order to evaluate the extent to which people associate Fairtrade and Rainforest Alliance certification with great taste, the number of people who think that Fairtrade or Rainforest Alliance certified coffee is 'likely to be a high quality product and have a great taste' (Q10) was compared to those who said they had bought Fairtrade and/or Rainforest Alliance certified coffee before (Q7). It was found that 50 percent of those who had bought Fairtrade certified coffee before agreed or strongly agreed that the coffee is likely to be of high quality while only 11 percent of the people who bought Rainforest Alliance certified coffee before also thought it is likely to have a great taste.

Table 13: Perception about the quality of Fairtrade coffee

Count		Q7 - Have heard of FT and bought FT coffee		Total
		No	Yes	
Q10. It is a high quality product and is likely to have a great taste	Strongly disagree	6	20	26
	Disagree	7	39	46
	Neither agree nor disagree	24	40	64
	Agree	31	91	122
	Strongly agree	15	92	107
Total		83	282	365
Chi-Square Test: $Chi^2 = 14.547$; $P<0.01$				

5.2.3.5. What encourages consumers to buy more certified coffee?

Consumers were asked about what would encourage them to buy more certified coffees and were provided with eight multiple-choice options. The most popular motivations for trying and consuming more certified coffee were lower cost and free samples (Figure 5.19). Most people didn't admit to being influenced much by media/advertising – which may be due to the unconscious influence of media coverage – however, 'Recommendation by a friend' was admittedly a strong influence in encouraging purchase of certified coffees. This echoes research on geographies of trust (Eden et al, 2008a; 2008b; 2008c; Goodman, 2002; Sassatelli, 2001), highlighting that confidence in the credibility of the source of information has a powerful impact on consumer behaviour. Trust formation is an often neglected part of research in consumer behaviour studies and a potentially valuable area of study for helping to clarify the connections between ethical purchasing attitude and actual patterns of behaviour (Follows and Jobber, 1999; Carrigan and Attalla, 2001; Caruana, 2007). 'Clearer explanation about the benefits on coffee packaging' also showed greater popularity amongst respondents (Figure 5.19). The focus group discussion later on revealed the need for a 'clearer', but not lengthier, explanation about the benefits of the certification schemes.

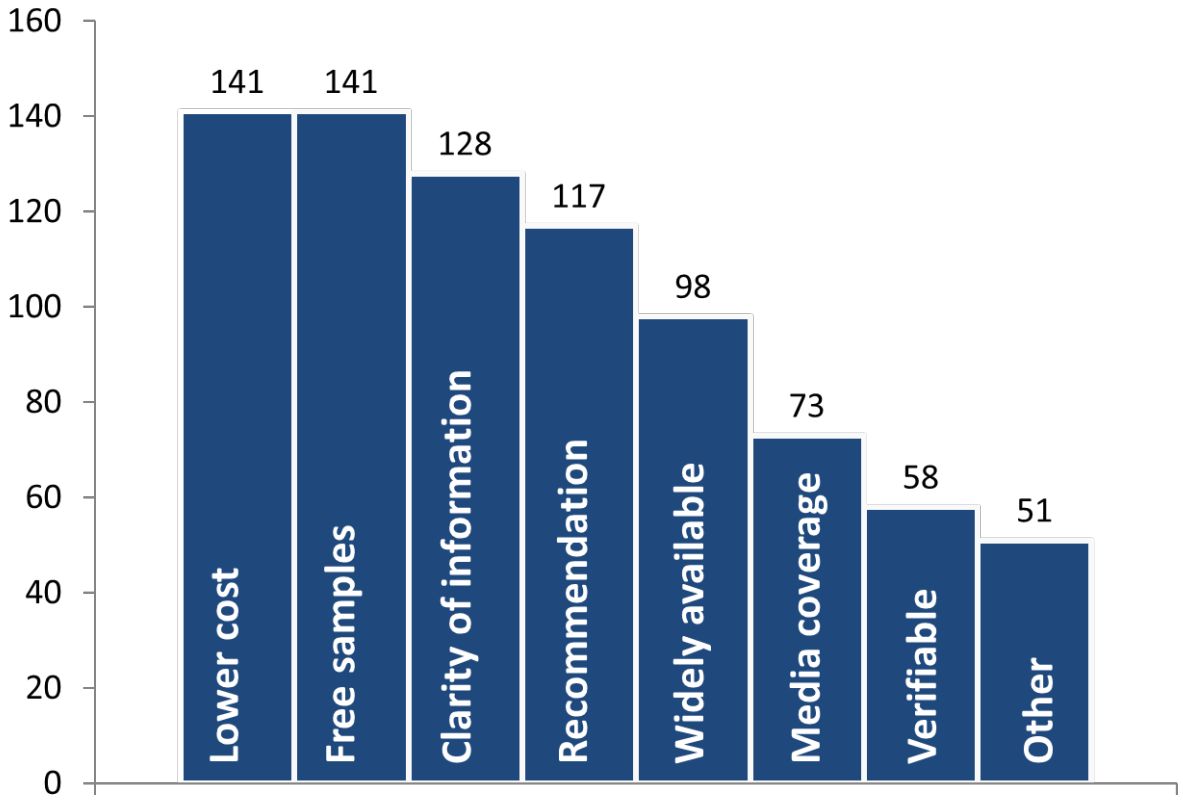


Figure 36: Popularity of concepts in encouraging more certified coffee purchase

5.2.4 How do consumers see their responsibility in ensuring sustainability along the coffee supply chain? Who should care about geographically distant people and places?

Alternative food networks arguably depend upon the willingness of consumers to pay a premium (Loureio and McCluskey, 2000) for products that are perceived as better in some ways, either for the environment (Moon et al, 2002), for producers or society (De Pelsmacker et al, 2005). However, in order to create interest in products with social or environmental claims, certain level of knowledge and awareness of the issues related to the production and trade of the given product is needed. Without the awareness of an issue, it is difficult to recognise the significance of an improved product on the market. Even though various studies have highlighted that information on its own is not enough to generate long-term commitment to an ethically labelled product, it has also been shown that in addition to an ethical label, consumers prefer extra information on the package that explains about the benefits of the ethical scheme represented by the label (DePelsmacker et al, 2005). Respondents' reactions to some questions, and in focus groups, revealed that most people had never thought about the environmental impacts of coffee production and did not know that it is a rainforest understorey plant. As regards consumer awareness of social issues, the picture is similarly simplified. Mostly thanks to the advocacy work of the Fair Trade movement over the last three decades, those who are aware of the Fairtrade initiative realise that unfair conditions do exist within many commodity industries, including the coffee sector, however, they may not be able to articulate what these issues are in very much detail.

5.2.4.1. Sense of responsibility and power to influence change

In order to assess consumers' sense of responsibility towards caring about environmental issues within the coffee industry, the last section of the questionnaire aimed to evaluate consumers' attitudes about their relationship with the natural environment.

First, the question of responsibility and power were raised in order to assess who consumers would like to see take responsibility for driving positive change in environmental questions. The majority of respondents (76.73 percent) claimed that 'Tropical rainforest conservation is of great concern' for them and 62 percent did not think that 'Forest and wildlife conservation is primarily the responsibility of environmental conservation groups and organisations' (Table 5.12). Many of them considered environmental conservation as mainly the responsibility of 'governments' and 'those who live in those particular environments needing protection'. With regard to the effectiveness of individual effort, 83.6 percent believed that buying eco/wildlife-friendly products can make significant difference in protecting natural forests and wildlife.

Table 14: Attitudes about tropical rainforest conservation

	Strongly disagree	Disagree	Neither	Agree	Strongly Agree
Tropical rainforest conservation is a great concern for me.	3.8%	11.9%	7.7%	**32.8%**	**43.8%**
Forest and wildlife conservation is primarily the responsibility of environmental conservation groups and organisations.	**31.8%**	**30.7%**	8%	18.6%	10.9%
Individual people's efforts, like buying eco/wildlife-friendly products, can make significant difference in protecting natural forests and wildlife.	3.3%	3%	10.1%	**45.2%**	**38.4%**

Selected items from the New Environmental Paradigm (NEP) scale were then used to tap into *"primitive beliefs about the nature of the earth and humanity's relationship with it"* (Dunlap *et al.*, 2000 p427). The revised NEP scale consists of 15 items, grouped into five different categories exploring basic views about (1) anthropocentrism; (2) the existence of natural limits to human economic development and growth; (3) the ability of nature to recreate balance in the ecosystem after major disturbances; (4) views about human exemptionalism; and (5) the current trend and notion of the eco-crisis. In the questionnaire, one statement from each of the above five NEP categories were used (Table 5.13) and coded in a way that disagreement with the first four statements and agreement with the last one translated into a higher score on the 'Humans and Nature Attitude scale'.

Table 15: Responses to NEP scale items in the questionnaire

	Strongly disagree	Disagree	Neither	Agree	Strongly Agree
The so-called 'ecological crises' facing humankind has been greatly exaggerated.	**37.8%**	**27.1%**	17%	12.3%	5.8%
Humans have the right to modify the natural environment to suit their needs.	**28.2%**	**20%**	16.2%	23%	12.6%
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	**42%**	**32.1%**	11.7%	6.3%	7.9%
Humans will eventually learn enough about how nature works to be able to control it.	**32.1%**	17.5%	13.7%	22.5%	14.2%
The earth is like a spaceship with very limited room and resources.	3.3%	3.6%	8.2%	**36.7%**	**48.2%**

Responses to the NEP scale statements showed that there was general agreement amongst respondents that the 'so-called ecological crisis facing humankind' is not an exaggeration and that the 'balance of nature' is not necessarily 'strong enough to cope with the impacts of modern industrial nations'. Opinions about humans' right to modify the natural environment to suit their needs' were less consistent, with 64.4 percent disagreeing and 35.6 percent agreeing with the idea. Similar patterns in responses occurred in respondents' beliefs that 'humans will eventually learn enough about how nature works to be able to control it' with slightly more people disagreeing with the idea as opposed to those who thought human control over nature was a valid and realistic concept. Agreement was strong with the notion of 'Spaceship Earth' and the idea of limited habitable space and resources available to humanity.

5.2.4.2. Humans and Nature Attitude score

To investigate the correlation between the claimed frequencies of certified coffee purchases (Q8) the aggregated scores of Environmental and Social Interest, Coffee Industry knowledge and Humans and Nature Attitude were analysed using by Spearman's Rank correlation test. Due to the way Q8 was coded (1=more frequent certified coffee purchase; 5= no purchase at all), negative correlations between the variables indicated that people who claimed to purchase certified coffee regularly scored higher on the other analysed scores. The slightly stronger correlation with the Social interest score supported one of the earlier findings, namely that concern about social issues have a somewhat higher influence on consumers' claimed frequency of certified coffee purchase than concern about environmental issues. The results are presented in Table 5.14.

Table 16: Correlation between claimed frequency of certified coffee purchase ('Q8') and all listed variables

	Environmental Interest score	Social Interest score	Coffee Industry knowledge score	Human-Nature Attitude score
Q8	-.453**	-.570**	-.291**	-.288**

** Correlation is significant at the 0.01 level (2-tailed).

Strong positive correlation was found between the Environmental and the Social Interest scores as well (Table 5.15; $r=0.664$, $n=367$, $p<0.01$). As indicated in Table 5.15, higher consumer interest in social and environmental issues results in greater awareness about issues relating to the coffee industry itself and strengthens an environmentalist approach to humans' relationship with nature.

Table 17: Spearman's Rank Correlation analysis of aggregated attitude and knowledge scores

	Environmental Interest	Social Interest	Fairtrade knowledge	Rainforest Alliance knowledge	Coffee industry knowledge	Human-Nature Attitude
Environmental Interest		.664**	-.048	.079	.232**	.275**
Social Interest	.664**		-.090	-.015	.311**	.247**
Fairtrade knowledge	-.048	-.090		.328**	-.168**	-.009
Rainforest Alliance knowledge	.079	-.015	.328**		.024	.126
Coffee industry knowledge	.232**	.311**	-.168**	.024		.290**
Human-Nature Attitude	.275**	.247**	-.009	.126	.290**	

*** Correlation is significant at the 0.01 level (2-tailed).*

The strength and direction of the relationships between the various knowledge and attitude scores and the importance that respondents attach to the individual criteria in their coffee purchasing habits were also analysed (Table 5.16). The positive correlation between the importance of coffee 'quality' and the environmental interest scores suggests that the perceived coffee 'quality' has higher importance than its perceived 'taste'. The importance of 'price' didn't seem to correlate with the interest or knowledge scores.

Table 18: Correlations between the importance of individual criteria in coffee purchasing habits and all aggregated scores (N=366)

	Environmental Interest score	Social Interest score	Coffee Industry knowledge score	Human-Nature Attitude score
Price	.051	-.027	-.062	-.072
Quality	.124**	.127*	.045	.123*
Taste	.083	.082	.017	.073
Convenience	-.238**	-.202**	-.039	-.220**

Availability	-.143**	-.131*	-.025	-255**
Brand	-.075	-.092	-.054	-.188*
Trying new	.160**	.116*	.079	.093
Uniqueness	.330**	.241**	.052	.022
Envir. concern	.917**	.719**	.244**	.281**
Social concern	.685**	.975**	.290**	.225**
No chemical	.479**	.491**	.147**	.125*

** Correlation is significant at the 0.05 level (2-tailed).*

*** Correlation is significant at the 0.01 level (2-tailed).*

5.3 Discussion

This chapter presented the results of the field research carried out in the UK to investigate the importance of ethical labels in consumers' coffee purchasing decisions and their sense of responsibility to care about the wellbeing of geographically distant people and places within the coffee supply chain. The analysis evaluated the level of consumer awareness of the issues inherent in the coffee industry and the accuracy of consumers' knowledge of the claimed benefits of ethical labels. Building on Foucault's (1997) notion of 'ethics as care of the self' and Barnett et al.'s (2005) model of collective responsibility, the following section highlights the many faces of care and the barriers to caring through ethical consumption and challenges whether it is possible to be 'caring-at-a-distance' from an individual consumers' perspective.

5.3.1 Relative importance of ethical concerns in coffee purchasing decisions - What do consumers care about the most when purchasing coffee?

Consumers are often assumed to want to pay more for products that claim to be produced in ways that are in alignment with certain 'ethical/sustainability' principles regardless of the material quality of the product itself (e.g. taste) (Lawson, 2007; Aprile et al., 2016). While taste has been argued to dominate ethical considerations in the context of food products which are considered self-indulgent treats such as chocolate (Poelmans and Rousseau, 2016), there was less clarity as to whether the same is true for everyday food products which might not be considered as luxury items, such as coffee. This research found evidence that taste and quality are rated as the most important criteria in coffee purchasing decisions while the social/environmental benefits occurring in distant coffee producing locations seem to have a much smaller influence on purchasing behaviour. The benefits of certified coffee, from the consumers' point of view, are intangible, difficult to monitor and seem to be detached from the actual material quality of the product (Anderson and Laband, 2005; Grunert, 2002; Larson, 2003).

Ethical certifications are generally thought to help reconnect consumers with the places where their food originates from and this sense of connection is meant to invoke a moral calling to care about the wellbeing of these distant places. Contrary to this notion, this research found evidence that most people had never thought about the environmental impacts of coffee production and few were aware that coffee is a rainforest understorey plant traditionally grown by smallholder producers. In terms of social issues, the results showed that consumers' sensitivity to social issues was significantly greater than concerns about environmental issues. As regards the demographics of the result, it is important to note that there might be a difference between those already buying coffee with some form of ethical certification and those who are sensitive to social and environmental issues but do not show strong preference toward ethically labelled products. The latter group could potentially be motivated to support ethical initiatives, however, contrary to expectation, presentation of more factual information about the merits of a scheme is less likely to win the support of potential new consumers (Eden *et al.*, 2008a, 2008b; Kneafsey et al., 2016; Ewans and Miele, 2017). In terms of incentives to

buy more certified coffees (of any kind), the most popular motivations were lower price and free samples. This supports the assumption that price might matter more to people than most would prefer to admit (Gallenti et al, 2016; Schäufele and Hamm, 2017) and that a tangible experience of the material qualities of a food product, such as coffee, plays an invaluable role in encouraging purchase of coffees with ethical labels which typically emphasise intangible attributes (Poelmans and Rousseau, 2016). Of all the analysed demographic criteria, education seemed to be the most influential factor in purchasing decisions of ethically labelled coffee products. Results highlighted that people with a degree in higher education tend to show deeper consideration towards environmental and social issues than people who have lower levels of education. These results, however, need to be examined with some criticism as awareness of social and environmental issues may only reflect a tendency to choose the 'socially more desirable answer' (Boulstridge and Carrigan, 2000; Belk et al, 2005; Milfont, 2009). Both education and household income had an influence on consumers' familiarity with Fairtrade certification but not with Rainforest Alliance. Recognition of Organic certification was only a function of education. The fact that respondents in the highest income category seem to be most open towards 'Trying something new' when buying coffee, can hold some opportunities towards the potential positioning of any new coffee certification scheme on the market.

In terms of consumers' familiarity with coffee certifications, Fairtrade and Organic were found to be the most well known schemes amongst consumers while Rainforest Alliance had somewhat lower recognition. On many occasions the consumer was actually holding a bag of Rainforest Alliance certified coffee in their hands while claiming they have never heard of this certification. These results are in alignment with the figures published by the Fairtrade Foundation UK, claiming that *"The UK is one of the world's leading Fairtrade markets, with more products and more awareness of Fairtrade than anywhere else. Around 20 percent of roast and ground coffee sold in the UK are now Fairtrade"* (Fairtrade Foundation UK, 2012). Recognition of a label, however, doesn't necessarily reflect understanding and correct knowledge of the scheme the label represents nor does it promote ethical purchasing behaviour (McEachern and Warnaby, 2008). Consumer responses regarding the meaning of the Fairtrade logo and the Rainforest Alliance seal suggest a mismatch between the actual impacts of these schemes and the public understanding of what they are aiming to achieve. Most respondents couldn't articulate the major differences between different certification schemes. Those who are familiar with Fairtrade tend to view certification as a brand and they are likely to buy it as such. The environmental standards of Fairtrade were generally overrated while the strength of the social standards of Rainforest Alliance remained largely unrecognised. The popularity of 'clearer explanation about the benefits' (of certification) on the packaging also highlighted that there is still considerable confusion about the meaning of individual certifications (Bounds, 2009).

5.3.2. Who should care about geographically distant people and places?

The third part of the consumer questionnaire aimed to explore the extent to which consumers feel a sense of responsibility to caring about social and environmental issues along the coffee value chain. Besides the different ways in which consumers make choices in the market place, they also have different understandings as to who should take responsibility for 'distant others' in commodity supply chains and how the 'good deed' should be carried out (Kjaernes et al., 2007; Kjaernes, 2012; Hosta and Žabkar, 2016; Savolainen, 2017). Consumers' sense of responsibility is not only a function of factual information but rather it is closely related to feelings of trust and a sense of power (Kjaernes et al., 2007). As Kjaernes (2007, p. 43) put it: "*what if people think they are (already) doing the right thing, that others should take responsibility, or that specific purchases are not an efficient form of action?*"

According to the results of this research, the majority of respondents considered the current state of tropical rainforest loss as of great concern and did not think that forest and wildlife conservation would be 'primarily the responsibility of environmental conservation groups and organisations'. Instead 'local governments' and 'those who live in those particular environments needing protection' have been highlighted as having the greatest responsibility for environmental conservation. Individual efforts (such as buying eco-friendly products) was also recognised as having the ability to make a significant difference in protecting natural forests and wildlife, environmental concerns, however, ranked fairly low in everyday purchasing decisions. There was a general agreement amongst respondents that there is some sort of ecological crisis and that the balance of nature may not be eternally strong enough to withhold the negative impacts of industrialization. There was less agreement on whether or not we have the right to modify nature to suit our needs while most respondents were of the opinion that society can never fully control the environment, environmentally conscious behaviour therefore was recognised as important in the long-term. Unsurprisingly perhaps, the notion of 'Spaceship Earth' and the idea of limited habitable space and resources available to humanity was a widely recognised concept and one which most respondents (living in cities) could personally relate to.

The results support arguments in literature which stress the importance of understanding consumers' sense of responsibility to caring about distant people and places (Kjaernes, 2012; Hosta and Žabkar, 2016; Savolainen, 2017) and the many ways in which care can be expressed in everyday consumption (Kjaernes, 2012). The results also draw attention to the problematic nature of expecting individual consumers to exercise 'care at a distance' (Young, 2003) and suggests that there may be value in further exploring the dynamic relationship between individual and collective responsibility (Barnett et al., 2005; Caruana and Chatzidakis 2014).

5.4. Summary

Much of the debate on geographies of care and care ethics (Popke, 2006) has been concerned with distance between places of production and consumption where notions of care arise out of a sense of responsibility toward unseen others. Debates about caring-at-a-distance in ethical consumption have been concerned with the possibilities of extending a notion of care towards those spatially removed from the places of consumption (Corbridge, 1993, 1994, 1998; Silk, 1998; Smith, 1998, 2000, 2002; Lee and Smith, 2004). Many have argued that consumption can and should be interpreted as an important site of moral behaviour (Sayer, 2003; Grauel, 2016) and that 'sustainable consumption' can be guided by notions of 'ecological citizenship' (Sassatelli, 2001; Goodman, 2002; Conradson, 2003; Barnett *et al.*, 2004; Popke, 2006; Seyfang, 2006; Lewis and Potter, 2011; Lewis, 2016). Results of this research are in support of the idea that 'everyday' consumption practices may already involve ethical considerations (Hiller et al., 2016) and consumption of ethically labelled products may not be the only (nor necessarily the best) ways to express a sense of care and responsibility to social and environmental concerns (Kjaernes, 2012). Given that the benefits of certified products, from the consumers' point of view, are intangible, difficult to monitor and are often detached from the actual material quality of a product (Olshavsky and Miller, 1972; Anderson and Laband, 2005; Grunert, 2002; Larson, 2003), product certification schemes claiming to deliver social and environmental benefits could gain considerably higher market share if their claims could be attached to the more tangible characteristics, such as taste and perceived quality of a cup of coffee. Although the recognition of certification logos is growing, there is still considerable confusion amongst consumers regarding the benefits of individual schemes. While more factual information likely not going to increase uptake of certified labelled products (Eden *et al.*, 2008a, 2008b; Kneafsey et al., 2016; Ewans and Miele, 2017), clearer communication about the benefits and limitations of each certification scheme could help consumers understand their positionality within the global supply chains of their food.

Chapter 6: Smallholder barriers and opportunities in terms of care and responsibility for livelihood development and conservation in Cusuco National Park, Honduras

6.0 Aims and objectives

This chapter presents the results of the field research carried out in Honduras investigating the constraints smallholder coffee growers face in a remote coffee-growing community context and exploring the opportunities producers could have for livelihood development by taking more responsibility for caring towards the wellbeing of others within their local community and the non-human environment that surrounds them.

The main questions the field research in Honduras aimed to explore were:

1. What responsibilities do smallholder producers have from family level to farming? How do these responsibilities compare with the requirements of voluntary certifications?
2. What barriers and opportunities do smallholder farmers have in terms of caring and responsibility for community development and environmental conservation?

The chapter starts with an introduction to the study area and the socioeconomic conditions of the study communities. Following a description of the current livelihood strategies of smallholder coffee producers, an analysis is given on the current farm management practices and the way they impact the productivity of the farms. The chapter then goes on to explore the way smallholder coffee producers perceive their relationship with the natural environment and the implications this holds for local conservation projects. Finally, a discussion is provided to consider some key situational issues that currently pose limitations to economic development of individual farmer and community-based conservation efforts in the study communities. It also highlights what opportunities smallholders may have for improving their own livelihood development options by extending a sense of care towards the collective interest of the community and that of the natural environment.

6.1. Introduction

The study focused on two smallholder coffee growing communities (Buenos Aires and Bañaderos) in the buffer zone of Cusuco National Park, Honduras. Operation Wallacea (the external part-funding body for this research) attempted to set up a community-based conservation initiative within the study area (Wildlife Conservation Products scheme). As none of the farms in the study villages have achieved certification by any major certification schemes and there was no record of a co-operative, the WCP scheme attempted to fill this gap by initiating the establishment of a community-level co-operative (which 90 percent of the community signed up to) and promised improved coffee prices in exchange for measurable reduction in the levels of hunting and logging in the surrounding Park. For reasons unknown to the Operation Wallacea team, at the time of writing,

the scheme has not yielded the desired benefits, neither for conservation nor for livelihood development. It is in this context of a failing cooperative scheme that, the study focused its investigation on the socio-economic barriers to the success of such a project by working with the two buffer zone communities to identify local factors that restricted (and could potentially help foster) the development of sustainable livelihoods. Particular attention was placed on exploring the factors that affect coffee quality as well as addressing issues about market access and tensions within the local value chain with a view to identifying potential solutions to both conservation and development issues in the area.

The information collected during the interviews was divided into four sections: economic situation of smallholder families (interview), farming practices (interview), observed and measured farm quality. The interviews and questionnaires aimed to assess the socio-economic situation of smallholder coffee producers and the challenges that stand in the way of further improvements to their income and living standards. In order to assess whether there is a direct relationship between the environmental conditions that support quality coffee growing and biodiversity, farm data were collected during the semi-structured interviews with the producers at their homes, followed by an accompanied visit to their farms where rapid-assessment techniques were used to evaluate the ecological integrity and overall management of selected coffee farms. Both the economic interview questions and the farm visit survey are presented in the Appendix.

6.2 Results

6.2.1 Study Site and Participants

Honduran montane and cloud forests are part of the Meso-American Forest Corridor hotspot, a region characterised by exceptional species richness as well as floral and faunal endemism (Conservation International, 2006). Honduras has the most mountainous terrain in Central America with 65-80% of land composed of rugged mountains from 300-2,850m above sea level (asl), and more cloud forest sites than any other country in Central America (nearly 40; Wallace Resource Library). Cloud forests are associated with high biodiversity and endemism, and the vast majority of them (86%) are found within the 'Global 200 Priority Forest Ecoregions' identified by the World Wide Fund for Nature (Wallace Resource Library).



Figure 37: Geographic location of the Cusuco National Park in Honduras. Sourced from GIS Cloud - Bing Maps © NAVTEC, © Microsoft Corporation, Maps-for-Free Relief.

Cusuco National Park (Parque Nacional Cusuco - PNC) is one of these cloud forest reserves, covered by rare high altitude primary forest spreading over 23,400 hectares (58,000 acres) of protected area in the Merendon mountains of northwest Honduras, including a buffer zone (15, 650 hectares) and a central core area (7,790 hectares) (Long, 2009). Geographically, Cusuco National Park is located within the municipalities of San Pedro Sula and Omoa in Cortes, and Quimistan in Santa Barbara. The study villages of Buenos Aires and Bañederos are located in the buffer zone of the park.

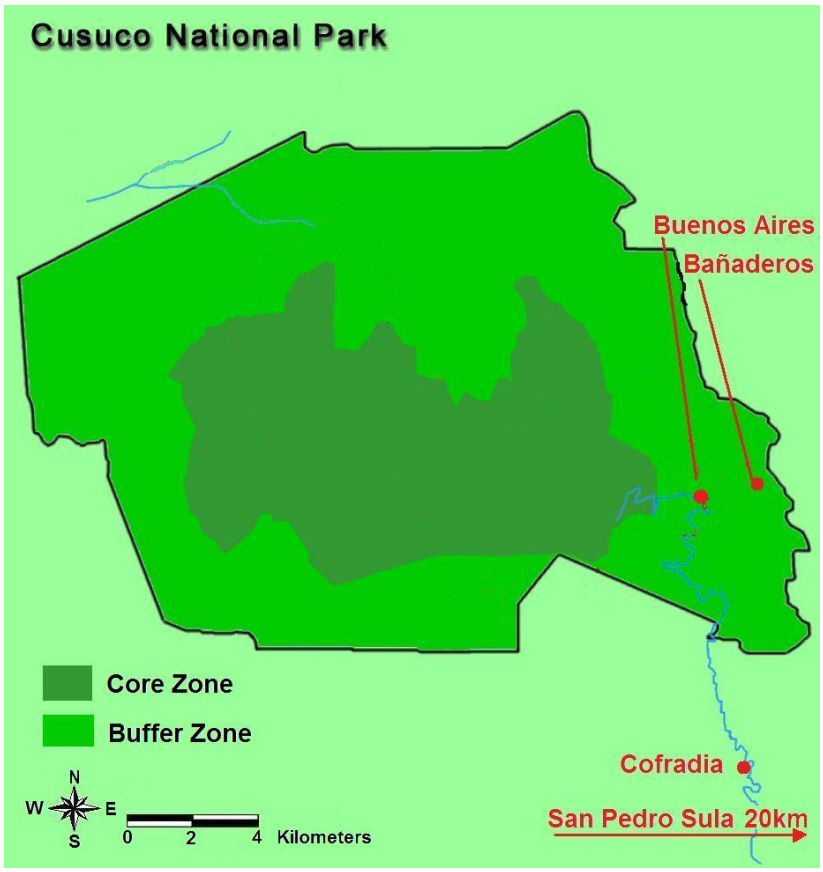


Figure 38: Map of the Cusuco National Park and the location of the study villages.

The landscape of the area is incredibly complex, incorporating a mix of broadleaf, pine and dwarf forests with zones of transition, agriculture, shade coffee plantations and recently logged areas (some of which are used for sun-grown coffee plantations, others for cattle grazing) on diverse elevations ranging from 60m to 2242m (Figure 6.1). This complex landscape gives home to a great diversity of habitat types including semi-arid pine forest, moist pine and broadleaf forest, dwarf forest, wet-deciduous forest and cloud forest at elevations above 2000m and has high beta diversity in many groups due to the large elevational gradients in the park (Slater and Long, 2010). The Cusuco National Park in North-Eastern Honduras is an important water source for the nearby city of San Pedro Sula. Its diverse forest habitat supports an exceptional range of endemic species from threatened amphibians to birds and mammals. The park has been ranked in the top 100 most irreplaceable sites, from over 173,000 protected areas and rated as the 25th most irreplaceable area for threatened amphibians alone (Le Saout *et al.*, 2013). The 233.68 square kilometre extension of Cusuco was declared a National Park by Congress in 1987. The Park was originally managed by Corporacion Hondurena de Desarollo Forestal (CODEFOR) until Instituto Conservacion Forestal (ICF) too over its management in 2008.

The Cusuco National Park is an ecologically irreplaceable protected area with unprecedented species richness and ample opportunities for pioneering ecological research. Despite legal protection, the park has been

suffering extensive deforestation in recent years, particularly around coffee growing areas on the eastern side of the Park. The biggest threat to the conservation of the Cusuco ecosystem is posed by the reliance of local communities on mostly unsustainable resource use to maintain their livelihoods. Due to a combination of adequate altitude and climate, the majority of the buffer zone land surrounding the study villages of Buenos Aires and Bañaderos provide suitable conditions for coffee cultivation. However, the pressures of falling coffee prices, in a region largely dependent on coffee as primary source of income, has pushed many smallholder producers to engage in illegal forest clearance to extend the area under coffee production – much of which encroaches into the core zone of the Park. Despite the potential for developing sustainable coffee cultivation in a biologically rich landscape, deforestation has been an ongoing issue in and around the Park and the rate at which primary forests are disappearing around agricultural farmlands (some of which are certified coffee farms) is much faster than the rate at which new farms are becoming certified or protected by any forest schemes. The following section will look at the main constraints facing smallholder coffee producers in the two study communities of the Park - Buenos Aires and Bañaderos – with a view to explore alternative opportunities for developing more sustainable livelihood strategies that are also in line with the broader conservation goals of the Park.

6.2.2 Socioeconomic conditions of smallholder coffee producers in Buenos Aires and Bañaderos

Of the total of 147 households in the two villages, 39 were interviewed; 22 in Buenos Aires, and 17 in Bañaderos. Buenos Aires consists of 102 houses, and 594 people. Close to Buenos Aires is the community of Bañaderos, which is also the location of some of the agricultural land owned by residents of Buenos Aires. Bañaderos contains 45 houses and 238 people. Over 95 percent of all the coffee farms in the researched communities can be classified as small holdings according to the IHCAFE (2008) classification (owning land <10.5 ha) and almost all of them divide their land, time and resources between cash crop (in this case coffee) production and subsistence agriculture for household consumption. All of the producers interviewed claimed that they held ownership over the land which they farmed although some of them were heavily indebted and were uncertain about whether they would be able to keep up the running of the farm in the future. During data collection particular emphasis was placed on exploring income variations during the course of the year as this can help paint a more accurate picture of the temporality of smallholder vulnerabilities throughout the year. As none of the villagers interviewed kept any kind of records regarding their annual income and expenditure, the economic status of each household was assessed using the five-point scale developed during previous Operation Wallacea-led research projects in the area (Table 6.1 - 1 being the lowest and 5 being the highest observed status category):

Table 19: Description of economic status categories

Category	Description
1	Poor quality house with a mud floor, mud, plaster or wooden walls that are poorly kept, a tin roof usually in disrepair, and very few personal possessions.
2	Low quality house: slightly better quality house with a mud floor, mud, plaster or wooden walls that are reasonably well maintained, house cleaner and better quality tin roof, and more possessions such as cooking utensils or furniture, ornaments, steel cooking pots.
3	Medium quality house: building in good condition, concrete floor and possibly concrete walls, tin roof in good condition, more possessions, furniture, ornaments, utensils, china.
4	Good quality house: concrete floor and walls, good roof, house well furnished with lots of ornaments and possessions, obvious signs of wealth e.g. electricity (solar panel, generator), television, DVD player.
5	Ownership of a vehicle in addition to criteria of category 4.

Economic status of households in the two researched communities showed great variation. There were some obviously wealthy households who own cars, generators, luxury goods like DVD players and washing machines while many of the houses showed obvious signs of poverty such as mud flood and mud walls, tin roof and few personal possessions. Via a government-led initiative, electricity was introduced in the area in 2010 and was made free of charge for three years. By the time I conducted the research in 2012, all households in the communities I visited had free electricity and almost all of them had at least a TV. However, they had no concept of how much electricity will cost once the 3 year subsidised period ceases and if they will be able to pay for it.

Since the first criteria for choosing households for the interviews was that they have at least 1 manzana of land meant that no households interviewed fell into economic status Category 1 in either village. (All data were collected in the local farm unit, manzanas and converted to hectares - 1 manzana = 0.7 ha). Setting this criterion for minimum land size allowed to focus the study on those smallholder farming units which earned the majority of their livelihood from coffee farming. In Buenos Aires 18% of households were in Category 2 (Table 6.1), indicated by a low quality house with a mud floor, mud, plaster or wooden walls that are reasonably well maintained, a good quality tin roof, and more possessions such as cooking utensils or furniture. A further 18% were in Category 3, indicated by a reasonable quality house with a concrete floor and possibly concrete walls, a roof in good condition, and more possessions. 23 per cent were in Category 4, indicated by a good quality house with concrete floor and walls, many ornaments and possessions, and obvious signs of wealth such as a solar panel, television, or DVD player. 41 per cent of households in Buenos Aires were in the highest category, 5, indicated by ownership of a vehicle in addition to all the characteristics of category 4. In total, 64% of households in Buenos Aires were in Category 4 or above. In contrast, over 47% of households in Bañaderos were

Category 4 or above, and five households (29%) were in the wealthiest category as opposed to 9 in Buenos Aires (41%) (Figure 6.4 and Figure 6.5). The proportion of lowest (Category 2) quality households in Bañaderos was much higher (29%) than in Buenos Aires (18%).

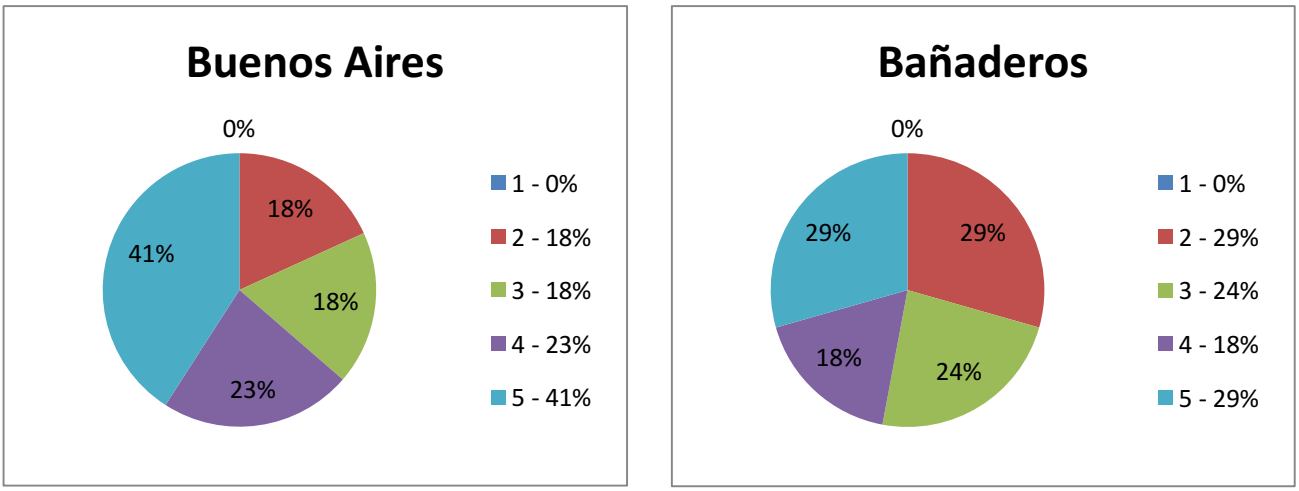


Figure 39: Economic status of residents interviewed for the study in Buenos Aires and Bañaderos. Category 1 indicates the lowest and 5 indicates the highest economic status

6.2.3. Livelihood strategies in the study villages

All interviewees stated that their primary source of income was agriculture. In addition to cash crops, each farmer cultivated a small amount of maize and beans for subsistence but in both study villages the 80-85% of household income is generated via coffee cultivation. The major cash crop for all 38 buffer zone communities in Cusuco is coffee. Interviewees with smaller plots of land reported alternative income from other employment, mainly from working on the coffee plantation of another farmer; this reinforces the strong reliance on coffee production for income in both villages. This strong economic dependence on coffee in the communities exacerbates the livelihood vulnerability of families. Maize and beans are crops grown largely for subsistence, but some farmers also earn an income by selling these crops on local markets. The income earned from these additional crops, however, is minimal and is considered very risky as local prices fluctuate greatly.

Employment levels in the two communities showed high levels of seasonality throughout the year. Between October and March, the coffee harvest provides the primary source of employment in both villages. Outside the coffee season, employment levels are much lower in both villages and are mainly linked to the harvesting of other crops as well as low levels of employment on coffee plantations involving general upkeep of the soil and caring for the coffee plants. Cattle farming is present in the area but does not make up a sizable proportion of income for any of the interviewed households. Remittances from family members abroad can also provide a significant income for some families, however, the flow of this income is highly inconsistent. Wealth distribution within and between the two studied communities appeared to be uneven and there was an obvious contrast between the richest and poorest households. The presence of Operation Wallacea during the summer months provides a significant boost to employment in Buenos Aires – and to a lesser extent, in Bañaderos as well – by creating demand for various services such as transportation to and from nearby towns, guidance around the forest during transect walks, need for accommodation and meals for the Opwall staff and research students for over 9 weeks during the research season each year.

6.2.3.1. Coffee farming in the study villages

All but one of the farms visited were of smallholder size by IHCAFE's (2012) classification (<10.5 ha); the only non-smallholder farm was in Bañaderos (31 ha). The average farm sizes were similar in the two villages; 2.82 ha in Buenos Aires and 2.65 ha for Bañaderos (z = 2.678, p=0.007). The mean size of land under coffee cultivation in the study villages is presented in Figure 6.9 below.

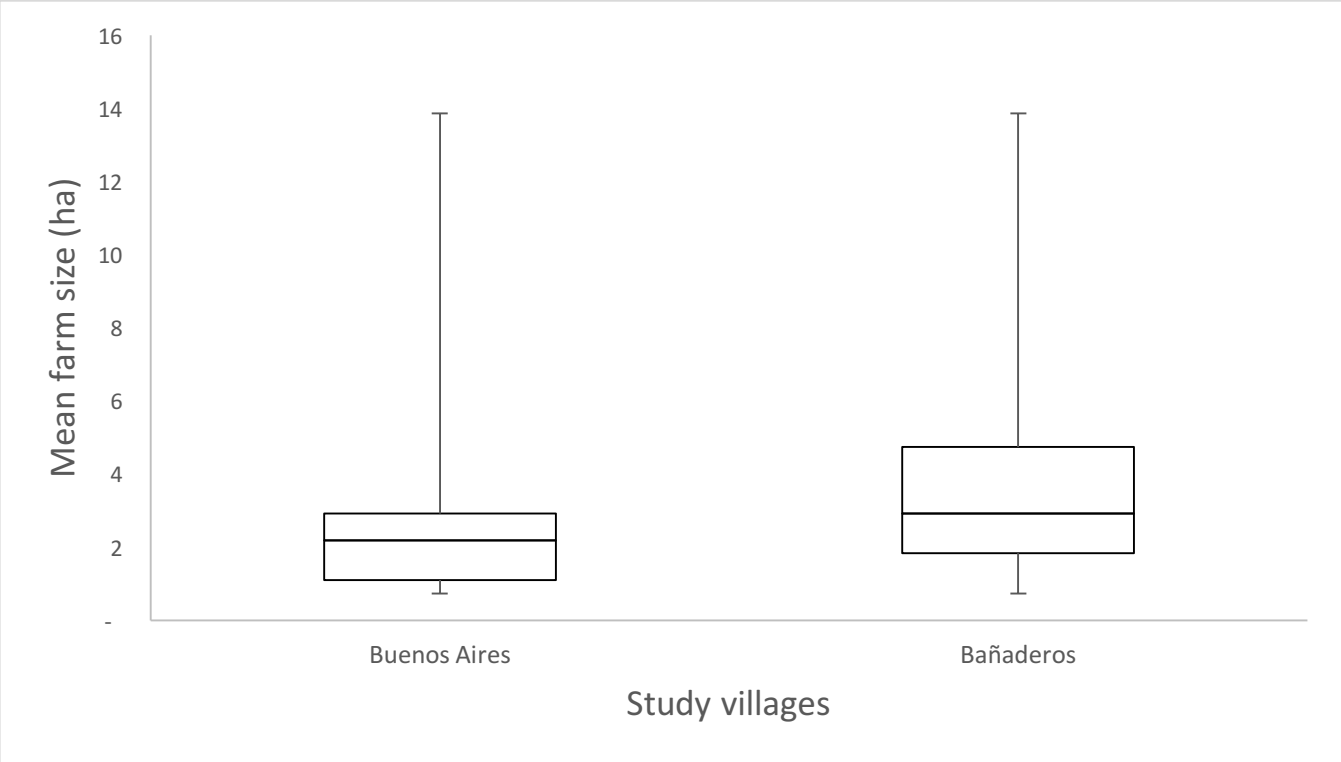


Figure 40: Boxplots showing variation in the mean farm size (in hectares) in Buenos Aires and Bañaderos, Cusuco National Park.Honduran standard unit of measurement for land is manzanas. All data were collected in manzanas and converted to hectares: 1 manzana = 0.7 ha. There is significant difference in mean farm size at 90 percent but not at the 95 percent level (Mann–Whitney U-test z= -1.86, P= 0.0629, n=41)

Due to the small scale of the coffee farms in the study communities, almost none of the farmers have access to drying tools for the coffee and all sell their coffee as wet parchment, known locally as *café húmedo*. Wet parchment is the output of an early processing stage achieved after the cherry is removed from the bean, washed and fermented for 8-16 hours (to get rid of the sticky mucilage covering the outer layer of the parchment within which the two coffee beans reside). The higher moisture level of the wet parchment means that as the drying process hasn't been completed, the beans are more unstable and prone to uncontrolled fermentation. Uncontrolled fermentation is likely to produce inconsistency in flavour – often creating overfermented taints and off notes - all of which reduce the quality and the price potential of the crop. The wet parchment therefore has to be transported to the final drying location as soon as possible (but must be within 8-24 hours) to prevent significant deterioration; this means more frequent journeys of smaller batch sizes are needed which in turn increases the production costs and reduces the profit margin of the producer. As the roads

connecting the local villages to nearby towns – where producers would be able to sell their coffee for a higher price – are of generally poor quality and often get flooded during heavy rains, the need to transport wet parchment every 24 hours puts the producers in a particularly vulnerable position.

Producers interviewed during the study did not keep records of the annual cost of labour to maintain and harvest the coffee either but some of them was able to provide an estimate of the number of permanent and seasonal labourers they employed on an annual basis and the daily wages paid to each type of labourer: 130-150 lempira (US$6-7) per day for permanent workers, 40-45 lempira per 100lb of coffee harvested by seasonal workers. Seasonal workers are able to collect up to 500lb of coffee cherries per day which generates an average of 200-225 lempira (US$9-US$10) per day income for seasonal workers. Based on these figures it was possible to produce rough estimates of annual labour costs for this subset of farmers. On average, farmers spent 20% of their gross annual income on labour costs. If the mean fertilizer cost estimate and mean labour cost estimate are applied to all farmers, then the mean net annual income for each community per ha of coffee plantation is as follows: Buenos Aires 60,467 lempira = $2868; Bañaderos 126378 lempira = $5995 at a conversion rate of 21.08 lempira/USD.

Fertiliser use was widespread among the interviewed producers, although many farmers referred to fertilisers as expensive and said they would use more if they could afford it. The majority of farmers did not keep detailed records of the type, amount and cost of fertilisers used on their farms; however, they could list the names of the fertilisers and estimate the number of bags of each type of fertiliser used per year. The main fertilisers used were: Formula Cafetalera 1846 and 1224 (the numbers indicate specific ratios of minerals), Urea and Gallinaza (poultry manure). Based on the current market value of each type of fertiliser I was able to calculate an approximate expenditure on fertilisers for those farmers who could provide this information. On average these farmers spent over 50% of their gross income on fertilisers. This result is consistent with industry data as fertiliser use is considered as one of the largest expense in smallholder coffee production at any part of the world. High fertiliser costs in Honduras are partly due to the increasingly expensive prices of fertilisers and partly because majority of producers don't test the nutritional contents and needs of their soil regularly and have limited understanding of the optimal quantity and type of fertilisers their soil requires.

With regard to pests and diseases, almost all of the producers listed 'oyo de gallo' (Roosters eye) and leaf rust as the most significant threats to their crop. Similar to the leaf rust (*Hemileia Vastatrix*), Oyo de gallo is a fungus (*Mycena citricolor*) named after the roosters' eye-like mark on the leaves which, though develops slowly, can result in severe crop loss. As explained in Chapter 3, as a result of the leaf rust outbreak in Central America, Honduras lost 25 percent of its total production with the 2012/13 crop year (ICO, 2014) and it took the country the last 4-5 years to fully recover. Many of the producers interviewed during the study, admittedly did not use any fungicide as preventative measure. Regarding pesticide use, most interviewees gave inconsistent answers

and first appeared unwilling to admit that they use any pesticides (this may have been due to the fact that they were aware of my affiliation with Opwall, a conservation research organisation). In the end, almost all of the interviewees admitted that they use a combination of a number of pesticides - including Gramoxon (weeds), Cliphosphato, Monarca, Folidol, Randol, Cobre (for 'oyo de gallos' pest), Bifolam, Perfection, Malation, Rienda, Carate, Rimosanto – however, they were again unsure as to the quantity or the price paid for each pesticide. Since high moisture and humidity levels are key factors in the development of fungal diseases, the risks of both oyo de gallo and leaf rust can be substantially reduced by adequate shade, soil and plant management techniques, the application of which amongst the interviewed producers will be discussed in subsequent sections.

6.2.3.2. Coffee sales and income

Coffee is a perennial crop, harvested mostly once a year (in the right climate, a secondary or 'mitaca' crop can also be harvested, although this is not typical in Honduras) making smallholder income from coffee highly seasonal. Coffee harvest in this part of Honduras takes place once a year from November to early March therefore income from coffee sales tend to concentrate to these months. Producer income from coffee outside the harvest season tend to drop so significantly that many smallholder households struggle to meet their basic food needs. These recurring periods of food insecurity is commonly referred to as 'los meses flacos' (thin months) around much of Central America. As the coffee harvest coincides with the harvest of most staple grains, while the income of coffee farming households is at its lowest of the year, the price of basic food staples tends to be very high.

Aside from seasonal variation, data collected in the area on the economic situation of coffee producer families showed a significant variation in the amount of money received for coffee by different households, fluctuating between 11–99c/lb with an average price of 60c/lb which compared to the Fairtrade minimum price of 140 c/lb plus 20 c/lb social premium, seems very low. This comparison, however, is misleading as the Fairtrade minimum price is set for green coffee (already dried and milled), whereas the price received by the producers in the study villages is for wet parchment which will always fetch a lower price than dry parchment or green coffee. Nevertheless, the prices received for wet parchment in the study communities are still below their potential. None of the farmers interviewed kept records of the gross or net income of their farm, but could provide an approximation of maximum coffee yield and the average price earned per lb bag of unprocessed coffee beans. These data were combined with the total area mapped out for each farm to calculate gross income per hectare for each farm and thus mean gross income per hectare for each community. At the time of the study, the average coffee output per farmer was significantly higher in Bañaderos than in Buenos Aires (29237 lbs, compared with 16513 lbs: $z = 3.743$, $p = <0.001$). Even after accounting for the different farm sizes, there were great variations in the yields produced in both villages (from 548 lb/ha to 61,644 lb/ha). Buenos Aires had a

greater number of lower yielding farms than Bañaderos (Figure 6.6). One farmer in Bañaderos produced more than twice as much as the highest yield producer in Buenos Aires (61,644 lbs/ha compared to 26,849 lbs/ha).



Figure 41: Boxplots showing variation in the yields (lb per ha) of farmers in the study villages of Buenos Aires and Bañaderos, Cusuco National Park. There is no significant difference in mean yield between the study villages (Mann–Whitney U-test z= -0.6, P= 0.548, n=41)

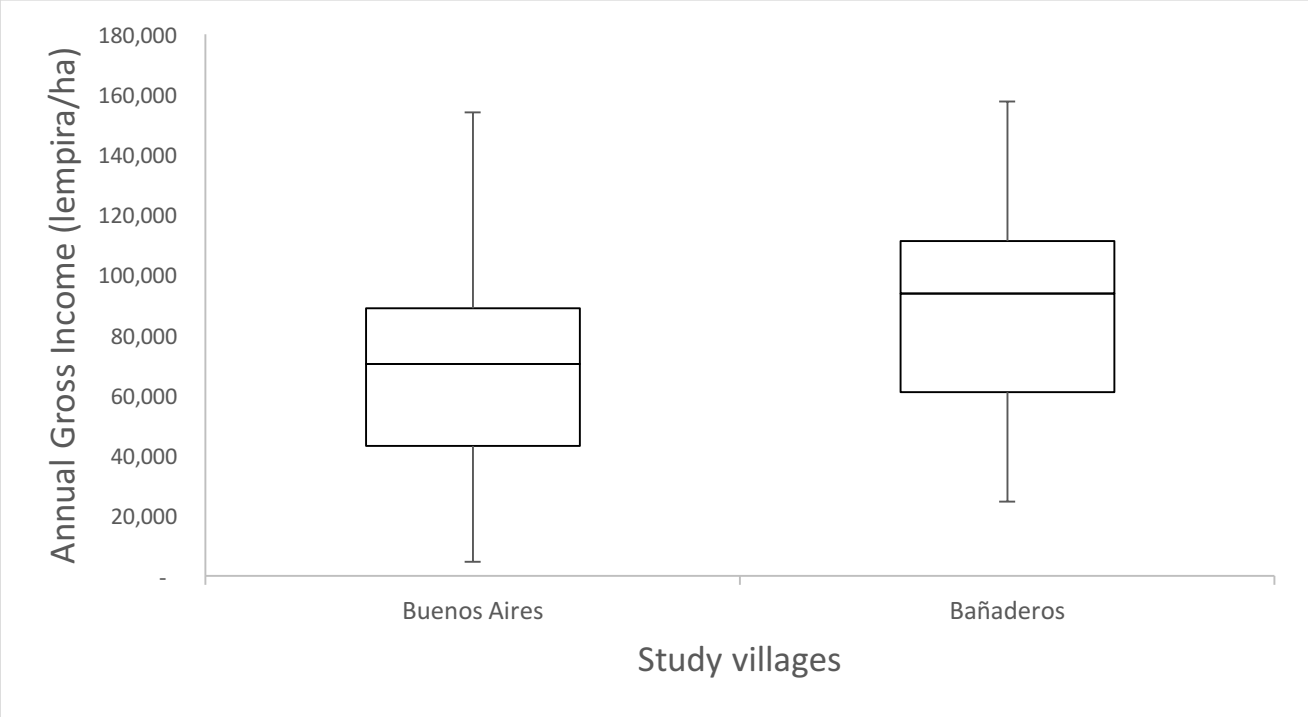


Figure 42: Boxplots showing variation in producers' annual gross income from coffee farming (lempira/hectare) in Buenos Aires and Bañaderos, Cusuco National Park. There is significant difference in mean yield per ha between the study villages (Mann–Whitney U-test z= -2.03, P= 0.041, n=41)

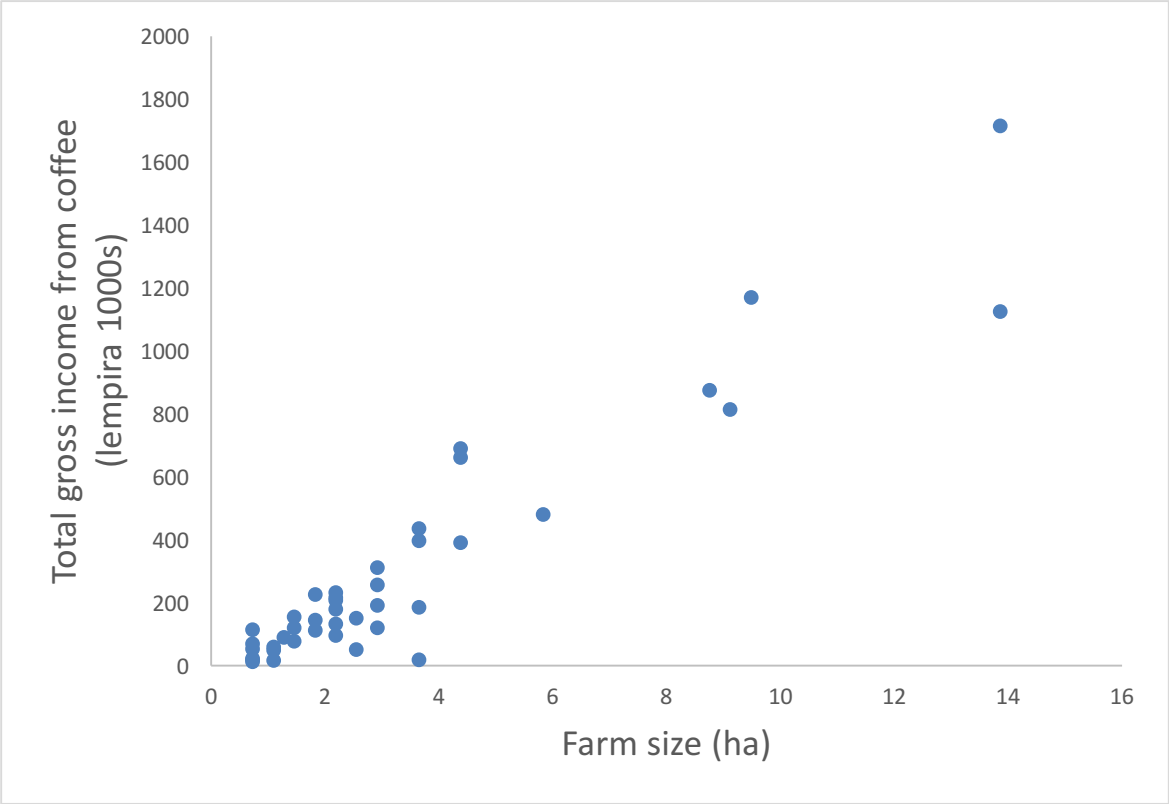


Figure 43: Scatterplot of farm size (ha) in relation to the total gross income (lempiras) earned from coffee farming in the study villages. Pearson's r=0.943, p-value=0.0000, n=41, significant at 99 percent level.

In order to maximise producers' income potential, three factors that most influence the price received at the farm level need to be examined: 1. the issue of quantity vs. quality in price negotiations; 2. the level of processing or value-added activities; and 3. the issue of the 'middleman'. First, one of the issues with prices in the study area is that the amount of money producers receive for their coffee is mainly based on quantity rather than quality. Without a reward for quality, the only way producers can increase their income is by increasing production volume. Yield can be increased by either extending the area of land under production or by intensifying the production within the existing farm boundaries. Given the proximity of a protected national park, extension of existing farmlands has limited (if any) viability. The latter option, i.e. increasing productivity and efficiency on existing farms, is dependent on producers' access to training and their ability to invest in farm improvement practices (extra farm inputs, fertilisers, renovation, weeding etc). Investment and training in quality improvement techniques would have great potential to improve the income received at producer level, provided there is sufficient access to markets that reward higher quality. Second, the level of processing or value-added activities also has a major impact on the income received for any given crop. In the case of the study villages, almost all producers sold their coffee in the wet parchment (humedo/mojado) stage which, for reasons explained above, always fetch lower prices than selling coffee in the dry parchment stage. Reducing the moisture content of parchment coffee down to a stable 12% can be difficult in areas with high rainfall levels

such as Cusuco. In such humid areas, simple structures called polytunnes (raised drying beds inside a plastic tunnel) can offer a viable solution to the challenges of drying coffee. In the two studied communities, only 2 of the 40 interviewed producers had access to drying polytunnels while the majority had to dry their coffee on open patios. Due to the highly hydroscopic nature of coffee beans, they tend to absorb the aroma of any material or substance that comes into contact with the beans, particularly during the drying stage. Drying coffee on patios (either on bare concrete or covered with plastic sheets) can introduce unwanted impurities in the flavour of the coffee and increases the risk of secondary fermentation of the bottom layer (as well as overheating of the top layer on sunny days) if the drying parchment is not layered adequately or turned regularly enough. Drying wet parchment coffee is not only a function of time (reducing the 52-55% moisture content of wet parchment to the standard 11-12% for dry parchment takes approximately 2 weeks) but also of space as every 1000kg wet parchment requires around 80 square meter drying area at 3-4 cm depth (10-12 kg wet parchment per m^2) for sufficient drying which can be a challenge for smaller producers in the study area. The lack of access to coffee drying tunnels means that the majority of farmers have to sell their coffee in the unprocessed café humedo (wet parchment) form. Café humedo starts to degrade within hours of harvesting from the plant and farmers have a 24-hour window to sell the coffee before its quality starts to degrade significantly. This time pressure leaves most producers in this situation no bargaining power with their buyers.

The prices received for the coffee varied depending on the location of the sale and the number of middlemen included in the marketing process. Generally, the closer to the export market (San Pedro Sula) the higher the price received. Those who sell their produce in Cofradia and San Pedro Sula are generally wealthier farmers who own a car or can afford to hire transportation during harvest in order to get a higher price for their coffee. Access to higher value markets was highly dependent on having access to a vehicle. In both villages 50% of the interviewees owned or had access to a car. Coffee taken to the city of San Pedro Sula fetched higher prices than those sold in the nearby town in Cofradia and significantly higher than those sold at the farm gate in Buenos Aires. All producers from Bañaderos sold their coffee in either Cofradia or San Pedro Sula.

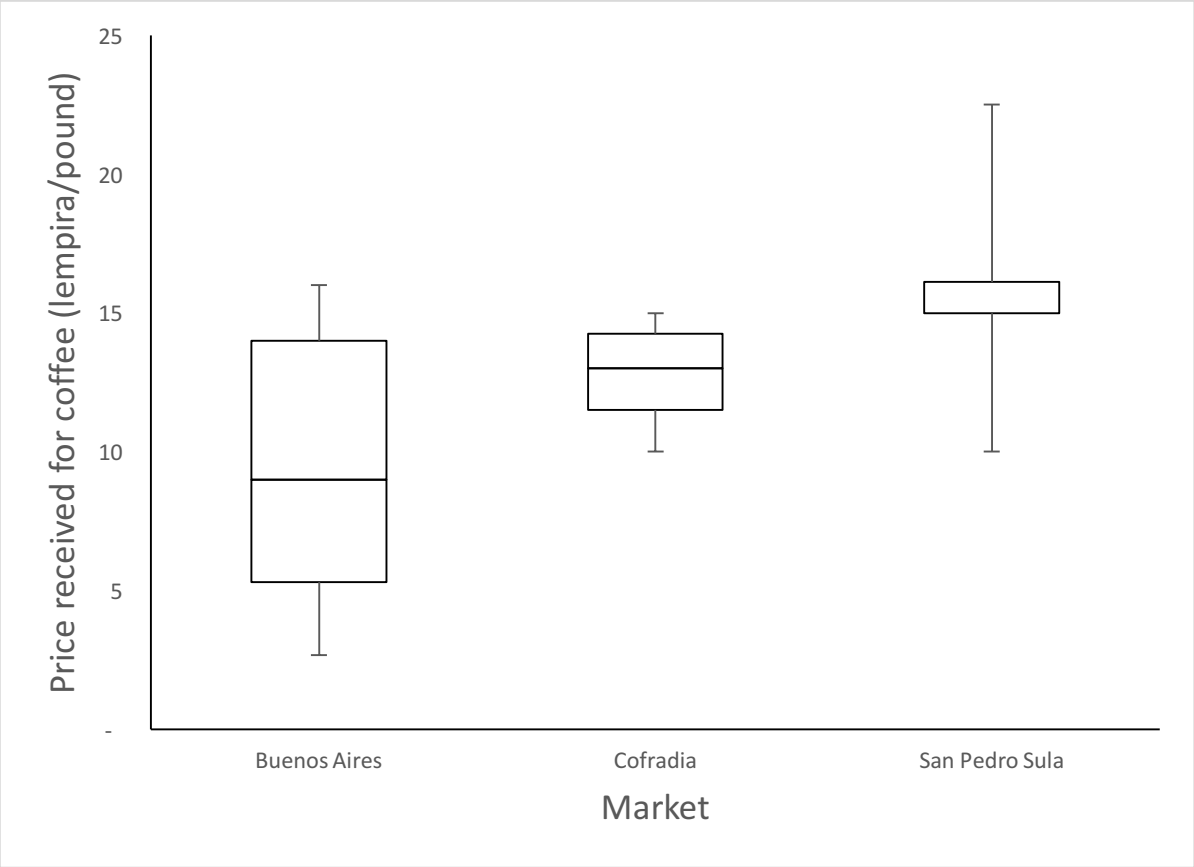


Figure 44: Boxplots showing differences in maximum price attained per pound of coffee by producers selling at the three supermarkets (Kruskal–Wallis test statistic=12.75, P=0.001, n=41)

At the time of the study, none of the producers interviewed sold their coffee directly to exporters but rather to 'middlemen' at various levels of the chain. Of the 40 producers interviewed, 9 sell their coffee to one of the wealthier producers in their village who acts as a middleman, 4 take their coffee to the nearby town, Cofradia whereas the remaining 27 sold their coffee in San Pedro Sula. Those who own a car sell their coffee in San Pedro Sula or Cofradia and those who don't own a car sell their coffee either to a middleman (who comes to the area during harvest and buys the coffee at the farm gate) or to one of the wealthier producers in the village who also own a car. In this study, those producers who own a car and offer transportation to neighbours who don't own a car, belong to the wealthiest economic status category in the study villages; they tend to be the larger scale – but still smallholder - coffee producers with coffee yields of over 6,000 lbs. The cost of transportation for those who own a vehicle (only fuel cost accounted) is 0.12 lempira/lb, and for those who sell to someone who owns a car is 0.40 lempira/lb. Although those who offer their transportation services to those without access to a vehicle make a profit of 0.28 lempira/lb per journey. This small transportation margin compared even with the low prices received on local markets (on average 14.9lempira/lb), the profit made on this transportation service is almost negligible. Those who had access to a vehicle received on average 18 percent more for their coffee than those without, however, this difference, is not statistically significant (Table 6.5). Other than the above practice, there was no other community mechanism to organise transport collectively.

Table 20: Means of yield per unit area (lb/ha) vs. access to vehicle. There is no significant statistical difference between mean price received by those with/without a car (Mann–Whitney U-test z= -1.6, P= 0.1096, n=41)

Price received (lempira/lb)	Owns a car? (Y)	Owns a car? (N)
Minimum price	10.0	2.7
Maximum price	19.0	22.5
Mean price	14.9	12.6

6.2.4. Smallholder definition of 'quality' crop and production practice

As discussed in Chapter 3, quality is an ambiguous concept and possesses different meanings to different actors in the supply chain. From the consumers' point of view, quality is measured by the perceived organoleptic characteristics of the end beverage i.e. the taste. The perception of taste, at the consumer level, is highly subjective and is likely to be influenced by a variety of factors surrounding the actual consumption of the beverage. In the mainstream commodity trade, quality of a traded commodity is purely measured on the basis of quantifiable characteristics of a sample (that must be representative of the lot in question) that includes strictly defined quantitative measurements of bean size and density (in the case of Central American origins density expectation is highlighted by an indication of the altitude range where the coffee was grown e.g. SHG – strictly high grown or SHB – strictly hard bean). From the producers' point of view, definition of the quality of a crop will depend on the form in which they are able to sell their harvest. For producers, who don't have access to any form of processing facility (i.e. wet mill) and sell their crop in an unprocessed cherry form, quality will be defined by the size and weight (related to bean density) of the harvested cherries and the percentage of ripe, overripe and unripe cherries. Those producers who are able to process their cherries either as wet or dry parchment, will measure quality not only by the weight, density and size of the beans but also by the number of defects that can be separated during the relevant processing stages (in the case of wet processing this covers floatation, depulping, fermentation and partial or full drying). The exporter then further separates the lots according to size, density and defect count. In addition to the exporter's quality criteria, the speciality trade also measures quality by the organoleptic characteristic of the coffee. This so called 'cup quality' is evaluated by qualified tasters who are trained to evaluate a coffee's sensory characteristics according to a set group of parameters and assign an overall numeric score to the lot in question. This 'cupping' technique merges both quantitative and qualitative assessment techniques thus attempting to bridge the gap between the objective quality definition of the commodity trade and the subjective experience of consumers. The need for more effective communication on quality between different stakeholders of the chain is further discussed in Chapter 8.

6.2.5 Farm management

In terms of agricultural knowledge, most producers have learnt their practices from personal experience of working on their families' or other producers' farms in the area, and 17 of the 39 producers interviewed received education from IHCAFE or other agricultural colleges. When examining the minimum, maximum and average yield per unit area between those who received additional education and those who only learnt farming by experience, there appears to be a significant difference between the figures (Table 6.2.). Although the maximum yields achieved with or without additional education is fairly equal, there is a far greater difference between the minimum and the average yields achieved, suggesting that education in best agricultural practices can make a difference in production volumes achieved per unit area.

Table 21: Yield per unit area (lb/ha) and education in farming practices. There is significant difference in mean yield between people with and without higher education (Mann–Whitney U-test z= -2.14, P= 0.0324, n=41)

Yield per unit area (lb/ha)	Received additional education in farming practices	No additional education (only learning from experience)
Minimum yield	4384	904
Maximum yield	10776	10502
Mean yield	7147	5562

The average yield across all producers interviewed was 224.1 quintales (equivalent of 22,410 lb = 10,164 kg) of 'café humedo' (wet parchment) and the average farm size was 4.59 manzana which gives an average output of 2,214kg wet parchment per manzana. Since wet parchment contains more than twice as much moisture (as well as husk) as export-ready green coffee, using the general industry conversion rates, the above output of wet parchment equals 954kg green coffee per manzana. According to the industry standard for smallholders in Central America, roughly every 25 manzana produces 1 container (20,000 kg) export grade green coffee (at 11-12 percent moisture level). Based on the collected data on wet parchment yield levels in the study communities, the average output of green coffee (23,850kg per every 25 manzana) claimed by the interviewed producers can be considered close enough to the industry standard.

In order to establish whether there are key farm management practices that significantly impact the yield and productivity of a farm, the data collected on key agricultural processes such as soil testing and agrochemical use, mulching and weed control, shade cover and overall farm quality were tested for correlation.

6.2.5.1. Soil testing and fertiliser use

Most farmers interviewed admittedly use fertiliser without testing for the actual chemical composition and nutrient requirements of their soil. This is likely to result in wasteful fertiliser use that not only damages the soil but also significantly increases the cost of production of the farm. All producers interviewed admitted to using increasing amount of fertiliser year on year in order to keep the yield and the quality of their crop at a relatively stable level (with minimal fluctuation). Although agricultural crop yields are not only a function of fertiliser use but are also highly affected by changing weather conditions - such as rainfall, temperature and hours of sunshine - using the right combination of agrochemicals can reduce cost of production and improve the efficiency and overall quality of the farm.

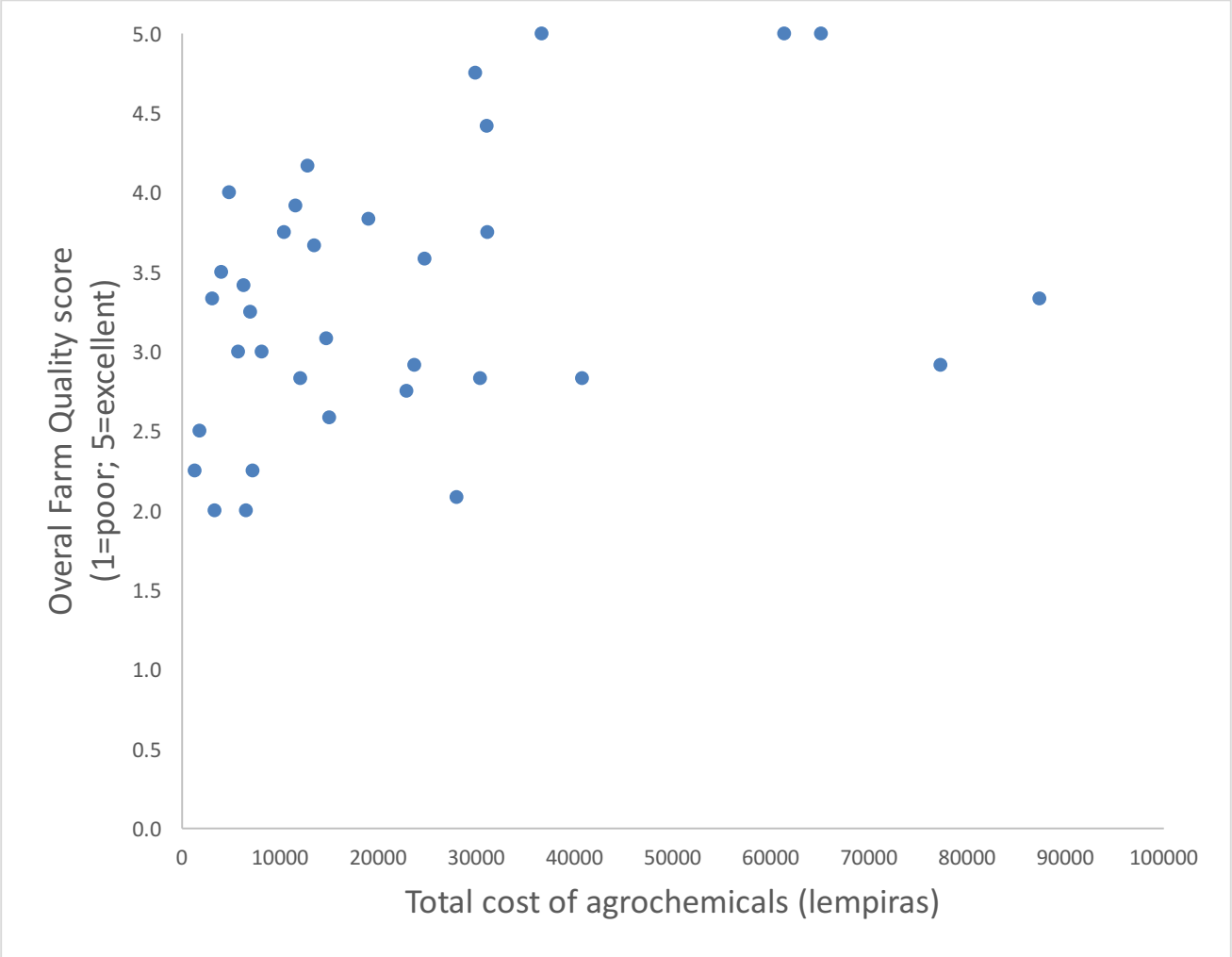


Figure 45: Scatterplot of the total cost of agrochemicals (fertilisers and pesticides in lempiras) in relation to the Overall farm quality score (1=poor; 5=excellent) - calculated from the mean of canopy score, mulching score and coffee plant quality score. Correlation between Overall farm quality and total amount spent on agrochemicals is significant at 95 percent level (Spearman's rank correlation r=0.358, p-value=0.0375, n=34)

6.2.5.2. Mulching

All of the interviewed producers practiced some form of mulching on their farm using composted coffee pulp (the by-product of wet coffee processing) and leaf litter. Mulching is an important and inexpensive agricultural technique that aims to protect the surface layer of the cultivated soil by covering it with dead vegetative material such as dry grass, banana leaves, coffee pulp and waste from livestock. Mulching preserves soil moisture and protects the top layer from overheating, prevents soil erosion, increases organic matter, enhances rain water penetration and helps control weeds (Camargo, 2010). As well as reducing the temperature of the top soil and surface air, appropriate vegetation cover encourages the development of better plant root system distribution due to the superficial roots being less affected by the high temperatures (Caramori *et al.*, 2003). This practice also increases the organic matter and water retention capacity of the soil, allowing a more tolerant cultivation, particularly in adverse climatic conditions (Caramori *et al.*, 2003). This is an inexpensive technique and even the poorest farmers should be able to afford it. When applied correctly, mulching can reduce the need for agrochemicals (by reducing need for chemical weed control and by improving the overall quality of the soil). The relationship between total spend on agrochemicals and the combination of shade control and mulching technique is demonstrated by Figure 6.11.

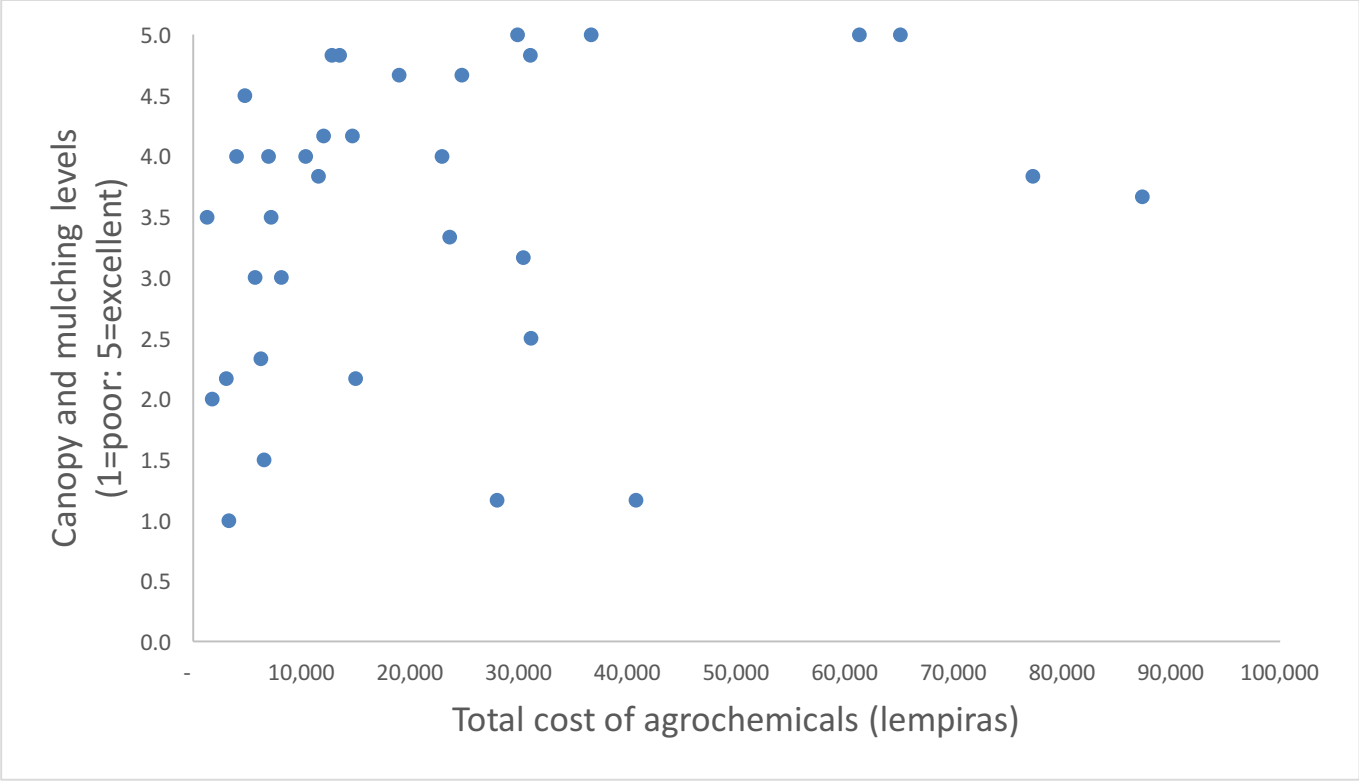


Figure 46: Scatterplot of total cost of agrochemicals (lempiras) in relation to the canopy and mulching score (1=poor; 5=excellent). Correlation between canopy and mulching levels and total amount spent on agrochemicals is significant at 95 percent level (Spearman's r= 0.362, p-value=0.04, n=34)

6.2.5.3. Age of coffee plants

While coffee plants can live up to 100 years, they are most productive between 4 and 20 years, although pruning and fertilisation can maintain and even increase their output to some degree (depending on variety). The age of coffee plants on the farms visited in the study area varied greatly between 6 months and over 30 years. The mean age of coffee trees was 11 with 50 percent of farms being over 10 years old. This data is consistent with literature on the average age of coffee farms throughout Central America (Perfecto *et al.,* 1996). Of the 34 farms visited only 4 farms had coffee trees over 20 years old (the oldest was 34 years) and the yield per hectare of those with older coffee trees were amongst the six lowest (with a 1 and 15-year-old farm producing similarly low yields). Although regular pruning can maintain the quality of the coffee trees over a long period, there was a significant negative correlation between the quality and age of the coffee plants on the visited farms (Figure 6.12), however, age of coffee plants and yield showed no significant correlation.



Figure 47: Scatterplot of age of coffee plants and quality appearance. There is a significant negative correlation between quality and age of coffee plants at 99 percent level (Spearman's test r= -0.697, p-value=0.0000, n=34)

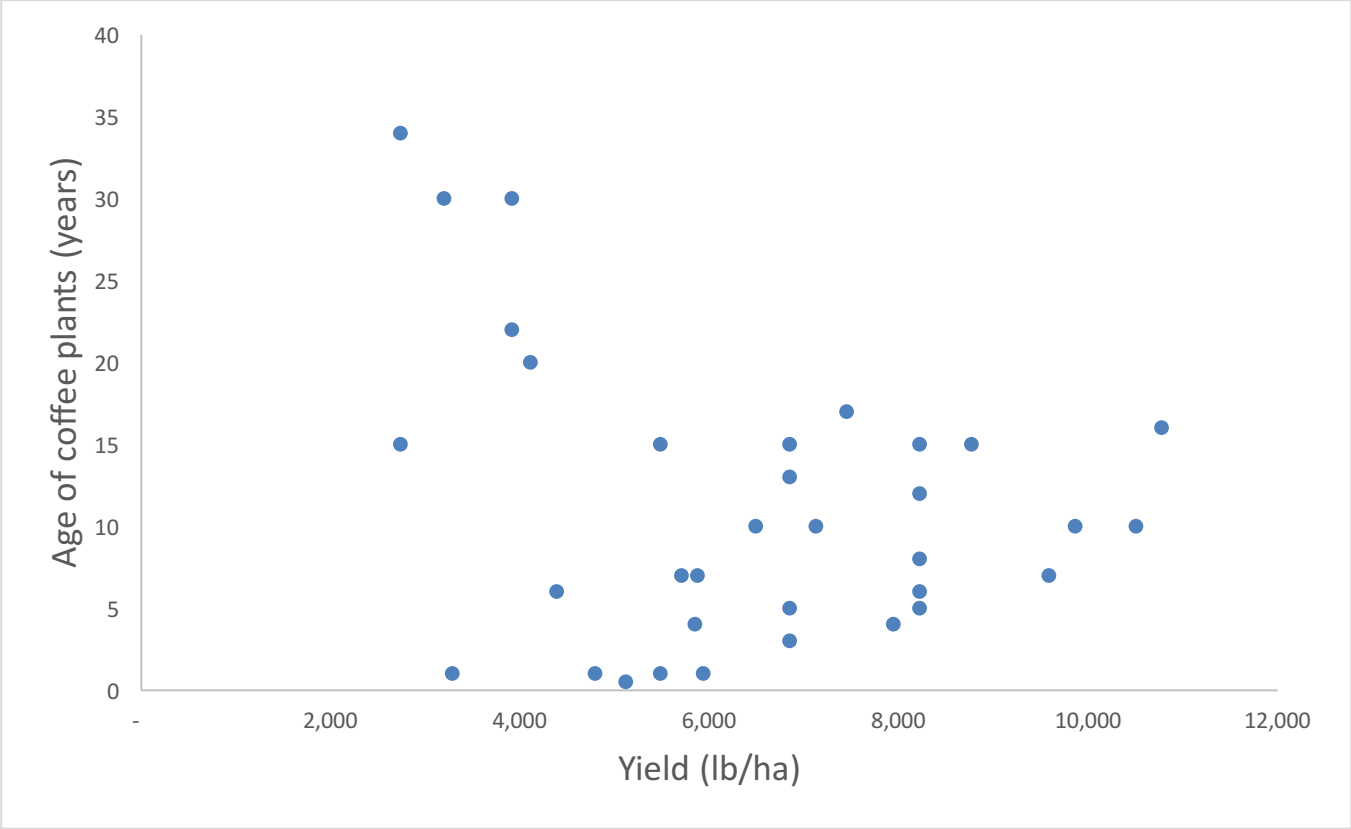


Figure 48: Scatterplot of yield (lb/ha) and age of coffee plants (years). Correlation between age of coffee plants and yield is not significant at 95 percent level (Pearson's r=-0.286, p-value=0.1011, n=34)

6.2.5.4. Shade cover

The majority of the farms visited had good level of shade cover and only two farms classed as full sun plantations. Shade grown coffee has a number of advantages as well as some limitations. A diverse shade cover can maintain several vital ecosystem functions that are important for the environmental sustainability of the farm. These services include improved pollination, pest control, erosion control, watershed management, climate regulation, nutrient cycling, carbon sequestration as well as supporting an enhanced level of biodiversity on and around the farm. The improved microclimate regulation provides better moisture retention in the soil hence lower dependence on irrigation, reduced need for fertilisers, longer lifespan of coffee trees, improved cherry development - due to slower maturation and higher sugar content in the cherry (Babbar and Zak, 1995; Donald, 2004; Soto-Pinto *et al*, 2000; Gobbi, 2000; Perfecto *et al*, 1996, 2005; Lin, 2007). Besides providing shade for the coffee, some fruit and nut trees (such as cashew and macademia nut, avocado and mango trees) can also provide livelihood diversification options and improved food security for smallholder farmers (Jha *et al.*, 2014; Siebert, 2002; Philpott *et al.*, 2008; De Beenhouwer *et al.*, 2013). Leguminous trees used as shade over coffee (such as Guamo, *Inga edulis*) also have the ability to fix nitrogen in the soil thereby improving the quality of the soil and reducing the need for expensive fertiliser input. Although yields tend to increase in the short

term following dramatic reduction of shade cover, in the long run, farms with well managed, diverse shade cover produce better quality and yields more consistently.

While significant shade cover provides many benefits to the farm and farmers livelihoods, the increased humidity of shaded farms can also make coffee plants more susceptible to certain diseases (particularly to fungal diseases such as leaf rust) which tend to spread more easily in humid environments. Fungal diseases, if untreated, can be devastating to the whole seasons crop, therefore, this trade-off between all the benefits of shade and the risk of fungal diseases was taken very seriously within the study communities. As a result, all the producers interviewed applied some form of shade control on their farms.

When examining the impact of shade cover on yield, a diminishing positive relationship can be found between shade cover (height, density and diversity) and yield per unit area, where yield increases rapidly until an optimum level of shade cover is achieved. Once this optimum level is exceeded, too much shade becomes counterproductive to both quality and productivity. This positive and significant correlation between the quality of shade cover (Canopy quality score) and the yield as well as the overall farm quality and yield achieved on the study farms is demonstrated by Figure 6.14. and Figure 6.15.

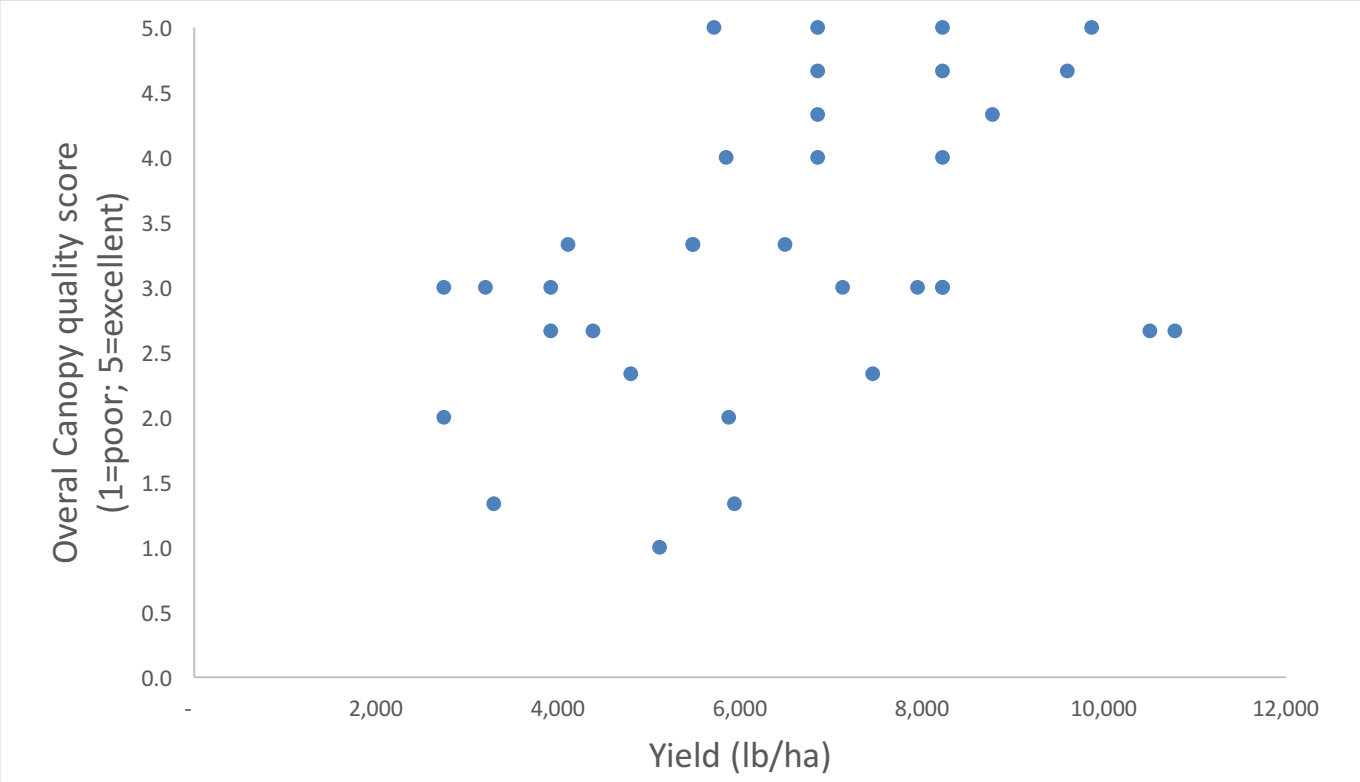


Figure 49: Scatterplot of yield (lb/ha) in relation to the canopy score (1=poor; 5=excellent). Canopy quality score was calculated from the mean of shade diversity, height and distance using a five-point Likert-scale. There is significant correlation between overall canopy quality and yield at 95 percent level (Spearman's rank correlation r=0.392, p-value=0.0220, n=34)

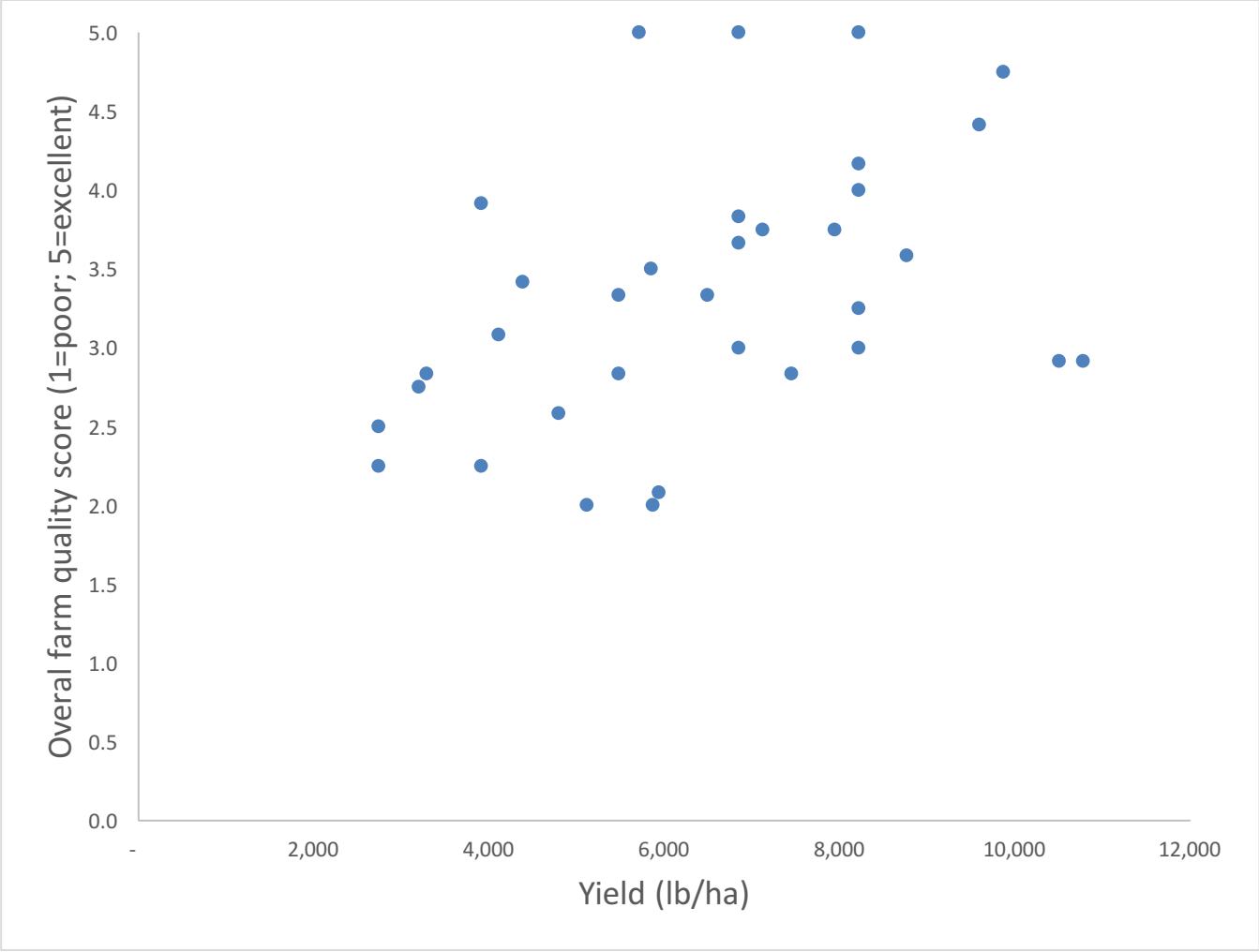


Figure 50: Scatterplot of yield (lb/ha) in relation to the overall farm quality score (1=poor; 5=excellent). Overall farm quality score was calculated from the mean of canopy score, mulching score and coffee plant quality score. Correlation between overall farm quality and yield is significant at 99 percent level (Spearman's rank correlation r=0.478, p-value=0.0042, n=34)

6.2.6 Smallholders relationship to the natural environment

Parallel to the consumer survey, the last section of the smallholder interviews aimed to evaluate producers' general attitude and views about the relationship between humans and the natural environment. In order to be able to make these results comparable with those of the relevant sections of the consumer research, I used the same New Environmental Paradigm (NEP) scale indicators which tap into "primitive beliefs about the nature of the earth and humanity's relationship with it" (Dunlap *et al*., 2000 p427). The NEP statements are presented in the table below along with corresponding results from the consumer survey in Figure 6.17.

Table 22: Number and percentage of producers and consumers agreed to the NEP statements. Total number of consumers interviewed = 365; total number of producers interviewed = 39. Neutral responses were excluded from total number of responses for each question.

'NEP' statements	Total excl. neutrals	Consumers % agree	# Consumers agree	Total excl. neutrals	Producers % agree	# Producers agree
Q1. The so-called ecological crisis facing humankind has been greatly exaggerated.	303	21.8%	66	39	87.2%	34
Q2. Humans have the right to modify the natural environment to suit their needs.	306	42.5%	130	39	97.4%	38
Q3. The balance of nature is strong enough to cope with the impacts of modern industrial societies.	322	16.1%	52	34	82.4%	28
Q4. Humans will eventually learn enough about how nature works to be able to control it.	315	42.5%	134	35	60.0%	21
Q5. The earth is like a spaceship with very limited room and resources.	335	92.5%	310	37	45.9%	17

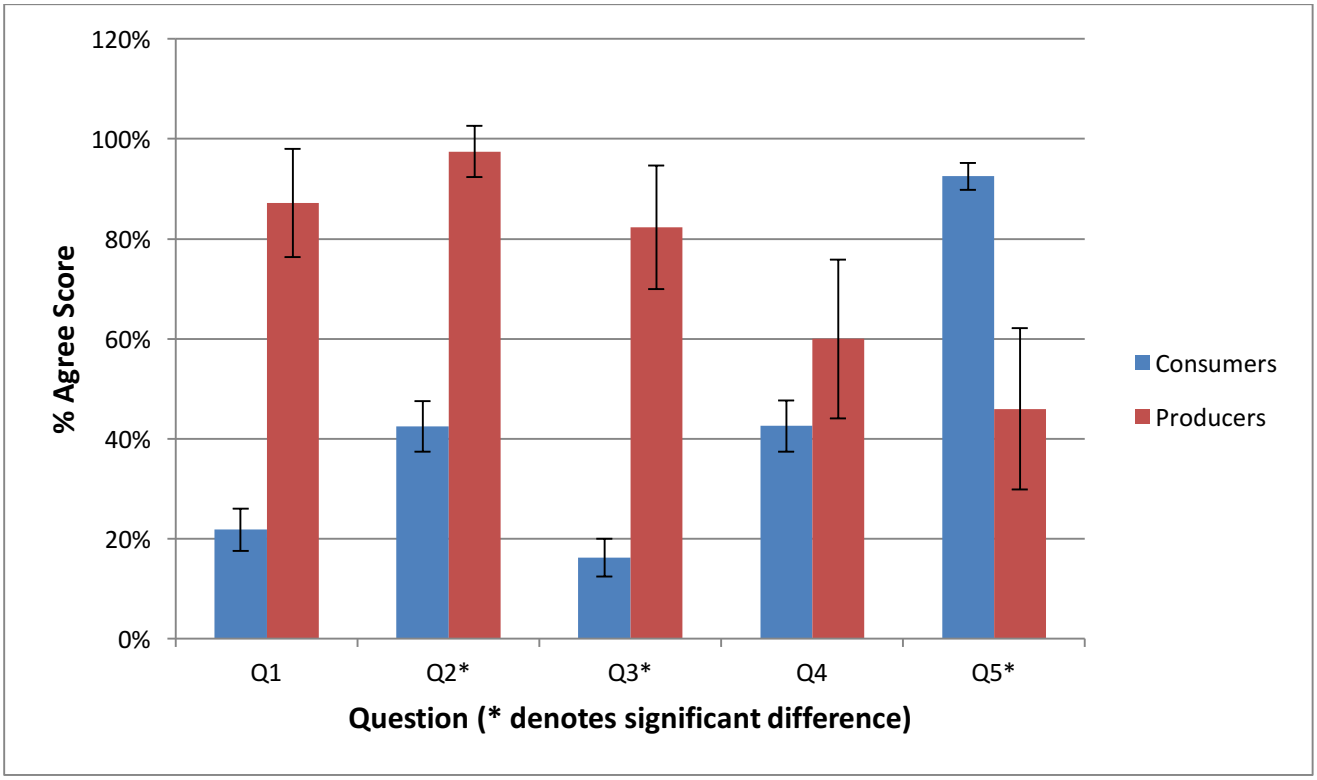


Figure 51: Producer and consumer % Agree scores about human relation to nature based on five selected items from the revised New Environmental Paradigm (NEP, Dunlap et al., 2000 p427) scale. Neutral responses were excluded from total (∑) number of responses for each question. There is significant difference between the responses given by consumers and producers to the same five questions (Z test of two-sample proportions results for each questions are presented in Table 6.5 below.)

Table 23: Z-test of producer and consumer % Agree scores about human relationship to nature. The null hypothesis is that there is no significant difference between the responses of consumers and producers to each question. The p-values below suggest that we can reject the null hypothesis at P<=0.05 level for all five questions.

	Q1			Q2			Q3			Q4			Q5		
Sample group	∑	# Agree	% Agree	∑	# Agree	% Agree	∑	# Agree	% Agree	∑	# Agree	% Agree	∑	# Agree	% Agree
Consumers	303	66	21.8%	306	130	42.5%	322	52	16.1%	315	134	42.5%	335	310	92.5%
Producers	39	34	87.2%	39	38	97.4%	34	28	82.4%	35	21	60.0%	37	17	45.9%

Results					
Z-statistic	-8.45	-6.47	-8.80	-1.97	8.25
P value (two tailed)	0.000	0.000	0.000	0.049	0.0000
P value % (two tailed)	0.0%	0.0%	0.0%	4.9%	0.00%
Significant at 5% level (P <= 0.05)	Yes	Yes	Yes	Yes	Yes

Significant at 1% confidence level (p <= 0.01)	Yes	Yes	Yes	No	Yes

T

he most prominent difference between consumer and producer responses to the NEP questions relates to the question about 'humans' right to modify nature' (Q2) where more than twice as many producers have agreed with statement than consumers. Although this does not explain all the issues around illegal logging and hunting in the Park, this difference in perceptions does provide another level of insight into the perspectives of people who live close to (and often have to fight with) the elements of nature.

The topic of illegal logging and hunting proved to be a sensitive subject during the interviews with the locals. The majority of interviewees claimed that the problem was more dominant in other villages inside the park and only a few admitted that it was a problem within the study villages as well. A small minority denied any knowledge of illegal logging and hunting in the park. It has been suggested that often those who are employed by Operation Wallacea as forest guides during the research season – helping researchers find particular species in the forest - are also the ones who, after the researchers left the park, will also work with the hunters and lead them to the animals, regardless of whether they are protected or not. With regard to the perceived reasons for illegal logging and hunting, the majority of interviewees believed that hunting and logging was only partly driven by poverty and said that local culture and tradition combined with a lack of awareness of the conservation value of endangered species and the critical levels of deforestation within the park were all part of the reasons why illegal logging and hunting reached such an alarming scale in Cusuco.

The majority of interviewees believed that in order to solve the problem of illegal logging and hunting it would be necessary to improve sustainable livelihood opportunities within the local communities. It has also been noted that hunting levels drop significantly during the summer months when Operation Wallacea is present in the area and provides much needed employment during the 'thin months'. Education about the value of conservation was also seen as an important part of the solution. Better enforcement of park rules by the government and military were also mentioned, although some people expressed concerns about the actual effectiveness of this approach.

6.3. Discussion

The field research in the study communities of Buenos Aires and Bañaderos has highlighted some key situational issues that currently pose limitations to economic development of individual farmers and community-based conservation efforts. While these situational issues create limitations as to who much smallholder farmers can be expected to care about community-based conservation agendas, smallholder farmers may also have some opportunities for improving their own livelihood development options by extending a sense of care towards the collective. The following section highlights some of these key barriers to caring and considers what opportunities smallholders may have for improving their own livelihood development options by extending a sense of care towards the collective interest of the community and that of the natural environment.

6.3.1 Creating a higher value product

Due to the high humidity level across the region drying coffee is an issue to most producers. Individual or collective investment in improved drying facilities (i.e. drying tunnels and raised beds) would also help improve the quality of the coffee produced. The small washing stations visited in the study communities were simplistic and outdated with limited capacity to handle the influx of coffee during harvest. This lack of capacity is likely to produce inconsistency in coffee quality. Many of the farmers interviewed use small hand pulping machinery, which is often in poor condition and is unable to separate cherry by density (ripe cherries are heavier while the unripe and overripe float to the surface of the water). Producers, therefore, sell all of their coffee as a single batch containing a mixture of ripe, unripe and overripe cherries. A centralised wet milling facility would help sort the coffee into different grades which would allow the producers to maximise their income. The waste materials of coffee processing (such as cherry pulp and honey water) could also be collected at a central place and used to produce organic fertiliser or bio-gas. The set-up of such a facility, however, is expensive and would require some form of external investment or the availability of a microloan scheme that groups of small farmers could access collectively.

6.3.2. Awareness of the full quality potential and access to higher value markets

Producers interviewed in the study were generally unaware of the full quality and price potential of their coffee which clearly limits their negotiating power at the point of sale. The type of market they currently sell their coffee to (middlemen either at the farm gate or in nearby towns) and their lack of direct contact with exporters or roasters also limits producers access to information about the quality of their coffee. Direct communication with exporters and/or roasters would give an opportunity for producers to learn about the quality of their crop and would provide feedback on the effectiveness of certain agricultural or processing practices aimed at improving coffee quality. As Chapter 7 will highlight, most of the coffee produced in the study villages, could be classed as speciality grade coffee (those which score 80 or above on the SCAA cupping) and could fetch prices way above the current levels. The local market producers currently sell their coffee at, gives limited reward for quality and encourages a singular focus on increasing production volume without much consideration to the

negative impact of intensive production on the environment or the longevity of the farm. Access to higher value markets – i.e. selling directly to exporters or roasters - could increase the revenue of producers and the community as a whole. Poor infrastructure is also a limiting factor. Despite the Park's close proximity to San Pedro Sula, the communities within the buffer zone of the park can be difficult to access, the roads are of poor quality, often lacking hard surface cover and often get flooded during rainy season. For this reason, infrastructure is recognised as one of the biggest hindrances to further development in the area. The villages in the park also lack adequate access to healthcare and education. The nearest hospital is over an hour's drive away (provided the roads are not flooded). With regard to education, there is one primary school in the village of Buenos Aires and the nearest secondary school is an hour's walk away from both villages.

6.3.3. Awareness of the concept and potential of voluntary certification systems

Parallel to the lack of knowledge consumers demonstrated about certification schemes (see Chapter 5) producers in the study communities had very limited understanding of the potential of voluntary certifications or options for participating in different schemes. Given the significant growth of certification schemes in recent decades, it was surprising to find that none of the interviewees had any knowledge of the possibility of using certification as a basis of negotiating higher prices for their coffee. None of the producers interviewed had ever heard of Rainforest Alliance and only a small minority recognised the term 'Fairtrade' but were unable to explain what it entails. The only production scheme producers were aware of was organic, however, it was only seen as an alternative farming practice and not as a standards system that is monitored and audited for compliance. Many of the producers recognised that organic production practices are better for the environment and result in larger, denser cherries than the non-organic counterparts. However, there was a complete lack of awareness of the premiums certified organic production would be able to achieve on the market. Improving understanding of the concept of certification and the options producers have if they wanted to engage with different schemes, would be an important first step in connecting them to higher value, differentiated markets.

6.3.4. Financial literacy and farm management capacity

The lack of record keeping and the apparent lack of knowledge of the full cost of production poses a significant limitation on producers' ability to improve the efficiency and the overall profit margin of their farms. Improving producers farm management capacity and basic financial literacy - including training on record keeping, cost of production and profit calculation – could make a significant difference in producers' ability to improve their livelihood from coffee farming. Regular soil testing could also help determine exactly what nutrients are needed for the soil and thus can prevent the overuse and overspend on fertilisers which currently accounts for over 50 percent of the total farm maintenance costs. Producers would also benefit from further training on the environmental impact of different farm management practices as many of the practices that are considered as 'environmentally conscious' are also able to improve the efficiency of the farm hence lowering producers' cost of production. Establishment of model farms would provide an invaluable opportunity to demonstrate the

benefits of good agricultural practices. As my local guide put it "*the fact is that we, Hondureños, are hard to convince; if we do not see, we do not believe*".

6.3.5. Understanding of the global coffee industry

Basic training on the way the global coffee market works (NY 'C' price, quality premiums, certification premiums, benefits of direct relationships, the role of exporters and roasters, risk management techniques, options and futures markets) could make a tremendous difference in the position of producers in the market. Unfortunately, more often than not, smallholder producers, lacking understanding of the way the system works, tend to believe that they have no power in price negotiations and in worst cases, tend to see exporters and roasters as the enemy. While there are certainly numerous examples when this may not be far from the truth, there is also an increasing pool of supply chain actors who are eager to create truly sustainable business opportunities that are mutually beneficial to both parties. Expanding producers' understanding of the roles and responsibilities as well as the costs and risks other stakeholders take in the supply chain (i.e. exporters, importers and roasters) could help producers realise not only their own rights and responsibilities but also their own power to influence the market and the prices they receive.

6.3.6. Supply chain fragmentation and the issue of the 'middlemen'

The research highlighted a potential misunderstanding about the role of local 'intermediaries'. The notion of 'cutting out the middlemen' in coffee supply chains has become one of the most celebrated concepts within 'ethical trade' and 'fair trade' discussions. Middlemen in Honduras and across Central America have developed an infamous 'coyote' reputation for paying low prices to producers with little to no consideration for quality. Traceability is often an issue as middlemen who buy coffee without any certification or traceability system at the farm gate and sell to exporters, tend to blend individual lots into larger, un-traceable bulks (often of poor quality), destined for the instant or low quality roast and ground markets. Middlemen can be any person of collective who participates in the supply chain and trade coffee between producers and roasters i.e. local traders, agents, regional processors etc. Despite the negative reputation of the concept, not all middlemen are 'bad'. As this research highlighted, sometimes middlemen can be smallholder producers who happen to have a car and thus able to transport their neighbour's coffee to a nearby market. Exporters and importers can also be classed as middlemen and the services they offer includes risk management, professionalism, volume and diversity of offerings, communication in producers' local language, financial risk management (access to hedging, options and futures account) and quality control – all of which bring tremendous value to both ends of the chain. Although the dominant buying model in Honduras is the intermediary model, exporters are increasingly seeking to establish direct relationships with the producers who supply their coffee, often offering pre-financing, training on best agricultural practices or help with the certification process. This trend is likely to be driven by the increasing demand for traceability along of the supply chains, led by the certified and speciality coffee sector. As relationships between producers, exporters and roasters become more direct, more

opportunity develops to improve the quality of the coffee and the life of the people who grow it. The rationale behind this 'relationship model' or 'direct trade' will be explored in more detail in Chapter 8.

6.3.7. The myth of the community

Enforcement of conservation measures in strictly protected areas has proven to be far less effective in practice than the intensions of those trying to implement statutory policies and regulations. To address this ineffectiveness, various forms of community-based conservation initiatives have emerged in recent decades, all aiming to build on the power of the collective to regulate and reward benevolent behaviour. The effectiveness of such community-based conservation or development initiatives, however, is also dependent on a number of factors such as the existence of local institutions (including relevant social norms), capable leadership of these institutions and mutual trust built from community cohesion (Ostrom, 1990). Since the emergence of community-based conservation programmes, it has become widely accepted that the ability of any community based conservation project to stop hunting and logging in a protected area is dependent on intra-community trust and willingness to cooperate (Agrawal and Gibson, 1999; Hackel, 1999; Kellert *et al.,* 2000; Singelton, 2000; Hulme and Murphree, 2001; Kumar, 2005). Since trust is a social mechanism embodied in structures of social relations (Granovetter, 2005) intra-community trust (Fukuyama, 1995) can be seen as an integral part of social capital (Coleman, 1988; Putnam, 1993; Adler and Kwon, 2000; Fukuyama, 1999, 2001), as well as a key aspect in the relational dimension of a community (Nahapiet and Ghoshal, 1998). In this sense, social capital within a community is closely related to motivations of community members to care about the wellbeing and development of not only their own families but also the families of other members of their community. This extension of 'care' to outside of producers' own family relations is taken for granted to such an extent that community-based projects often ignore the ambitions and motivations of individuals for development and assume that community-level benefits or sanctions will provide sufficient incentive for individuals to comply with certain pre-determined rules. As some my village guide in the study communities put it: "*Look, people here are poor and generally struggle through life. Some people here simply hate each other and don't want their neighbours to benefit equally from any project*" (pers. comm. with local village guide in Bañaderos).

Similar to the tensions highlighted earlier in the consumer context between concern, responsibility and power (Kjaernes, 2007), the field research in Honduras uncovered tensions related to community cohesion, corruption, power imbalance and unequal distribution of costs and benefits arising from conservation projects which ultimately hindered the efficient functioning of a community-based cooperative. Community cooperation is often assumed as a 'given' in rural agricultural settings, where community cooperatives are expected to function as one homogenous entity (Ettlinger, 2004). Geographic 'locality' or 'neighbourhood', however, does not necessarily make a true community (Gusfield, 1975; Hogett, 1997). Territorial and relational communities can overlap but they do not presuppose each other. According to the theory of the 'sense of community' (McMillan and Chavis, 1986) the four elements needed to create a sense of community include: membership (belonging),

influence (sense of making a difference), fulfilment of needs and shared emotional connections. Without a shared understanding that members' needs will be met by their commitment to work together for a common good (McMillan, 1976), a group of people will fail to work together as a community. Not being aware of or ignoring even the possibility of the existence of such internal conflicts can threaten the success of a village level cooperative in practice, even when formal contracts have been signed and agreed.

6.3.8. Missed opportunities?

By the time I conducted my field research in the study communities, the conservation-focused cooperative that Operation Wallacea helped set up in 2009, was no longer functional. During the interviews with previous members of the cooperative, it became clear that those who were invited to be part of the cooperative could not articulate what exactly was expected of them under the terms of the agreement. From the producers' perspective, the main reasons for the breakdown of the cooperative was its perceived poor management, lack of transparency and corruption, which ultimately undermined members' willingness and motivation to work together as a community cooperative. It was generally believed that the cooperative needed some form of independent supervision, either from Operation Wallacea or from a Honduran organisation outside of the community.

Halfway through the field research in Cusuco, I contacted the local exporter company, Molinos de Honduras, with a view to explore the potential to improve the study communities access to higher value markets. Molinos de Honduras who buys coffee from a village at the other side of the Park but had not yet been in contact with the study communities prior to my visit. Molinos de Honduras, part of the Volcafe Group – one of the leading coffee merchants in the world - is the oldest existing coffee exporter in Honduras, exporting both commercial and specialty grade coffees to the USA, UK, Europe and Japan. At the time of the study, producers in Cusuco had no knowledge of where their coffee is being sold and the coffee they produce could not be traced back to their region once exported. Molinos de Honduras has not bought coffee from the Cusuco region before but were willing to pay a visit to the area to explore potential collaboration with the local producers. Before I left Honduras, I organised a meeting between the exporters and the producers in both of the study villages. Three members of the exporter company (the lead agronomist, the commercial manager and the coffee quality manager) made a trip to the remote location of the study villages and held a two-hour talk for each community followed by in-depth discussion about the opportunities farmers could have if they wanted to work directly with Molinos. Nearly all the producers I talked to attended the meeting (20 from Banaderos and 15 from Buenos Aires) and participated in the discussion. Despite a nervous start, an inspired conversation developed between the producers and the three representatives of Molinos de Honduras. The exporters offered to visit every farm and offered to provide free technical assistance and training in agronomy and best practices that would help improve both the yield and quality of the crop. They offered to buy coffee directly from the producers with no minimum volume requirements at a price that rewarded quality and was three times the average price

producers received on the local market. Compared to the average 7-19 lempiras producers at the time received for every pound of humedo (wet parchment) they produced, Molinos de Honduras offered between 20-26 lempiras/pound without certification and between 26-42+ lempiras/pound once a producer has achieved certification. Assistance to qualify for certification was also offered to the producers, free of charge. Following their visit to one of the farms in Bañaderos, they estimated that Rainforest Alliance certification of that farm would be achievable within 1 or 2 seasons. After I left Honduras I kept in touch with the exporters to see if producers were following up on the opportunity offered. Unfortunately, only a fraction of the producers attended the follow up meetings and to my knowledge, the opportunity offered by the local exporter have not been utilised to its full potential.

This example of a missed opportunity shows that understanding the needs and the culture of producers is crucial in getting them on board with any conservation-related development project; especially one that is initiated from outside the local culture. It is not enough to 'educate' producers about better environmental practices; the way smallholder communities learn and receive information needs to be better understood first. Speaking the 'same language' goes way beyond linguistics. Understanding the way members of a community relate to each other and view external assistance is also crucial for any community-based conservation or development effort to be successful in the long-term.

6.4 Summary

The field research on producer perspectives investigated the constraints smallholder coffee growers face in remote smallholder coffee-growing villages in Honduras and explored the opportunities producers may have for improving their own livelihood development options by taking more responsibility for extending their sense of care towards the wellbeing of others within their local community and the non-human environment that surrounds them.

Similar to the consumer research, Kjaernes' (2007) concern-responsibility-power triangle was used to highlight issues surrounding the romanticised idea of smallholder communities that assume maximum willingness for cooperation and ignores the influence of internal community politics and power struggles of resource dependent smallholder communities. Illegal logging and hunting in the Cusuco National Park surrounding the study communities, have become particularly acute problems in recent years, and it is believed that many of the endemic species are now locally extinct in the area. The integrity of the local ecosystem is increasingly threatened by local human population growth and rapid changes in unsustainable land use and land management practices including the conversion of forest to unshaded coffee plantations. The way in which coffee farms are managed (including the diversity and density of shade trees used, choice of agrochemical inputs, treatment of waste water during harvest and processing) greatly determines whether or not the given farm can be classed as a 'sustainable form of land use' or not. When compared with other potential land use

options available in the study area (such as cattle grazing or intensive timber production), it appears that coffee grown under a canopy of carefully managed and mostly indigenous shade cover has the potential to provide a more sustainable form of livelihood opportunity for the local smallholder population than any of the alternative land use options. However, due to the deep rooted systemic challenges of the Honduran coffee industry, increasing numbers of people, who are unable to make a living from coffee, are now seeking alternative incomes in nearby cities, while many of them embark on dangerous journeys to the US, often illegally, in hope of a better life.

Investigation of the cupping quality (i.e. coffee taste profile) of selected producers showed great potential for high quality coffee production in the area (details are presented in Chapter 7). This potential, however, can only yield a higher income if producers can access higher value markets, trading on the basis of quality rather than quantity. Due to their relative geographical and social isolation, the coffee farmers in the study communities generally receive a low price for their coffee regardless of quality; this removes incentives to improve agricultural practice or the conservation of the environment. In addition, many of the smaller farmers carry substantial debt, which reduces producers' ability to invest in farm and processing improvement practices. There has been no outside assistance or subsidy for farm improvements. As Cusuco falls outside the six main coffee growing regions classified by IHCAFE, it is not surprising that the buffer zone villages of the Cusuco National Park also fall off the radar of any government or exporter led development initiatives. In order to investigate the potential of a scheme that would link the quality of the environment and the quality of coffee produced in the area, the data gathered on environmental quality of the smallholder farms in the study communities was compared to the quality of coffee produced on the study farms. The analysis of the potential link between coffee quality and environmental quality is presented in Chapter 8.

Improving farmers' knowledge of post-harvest coffee processing techniques and the importance and meaning of quality would be of considerable value. Collaboration with a local exporter and compliance with existing certification standards could provide the necessary incentive to improve on-farm environmental standards and advance existing processing methods. Compliance with the third party certification standards would provide a huge step forward for the local communities, but it may not necessarily resolve the off-farm illegal logging and hunting in the Park. In order for the on-farm improvements to have meaningful positive effects on the wider environmental matrix, there is a need for significant development in the socio-economic situation of the local communities/individual households as well as a strong need for direct education about the wider benefits of conservation amongst local communities.

The study found great variation in agricultural practices, with no universal coffee processing facilities (i.e. washing, sorting, drying stations) that would be available to all producers. The washing process in particular was found to be an area where a lack of facilities results in many farmers resorting to processes that can degrade

coffee quality. The lack of adequate drying facilities in the context of the local humid climate, combined with the poor infrastructure in the area, has several negative impacts on the technical capacity of producers to improve coffee quality and prices received. Evidence was found for uncontrolled chemical fertiliser and pesticide usage, excessive removal of shade trees, soil erosion and untreated water runoff from the washing process, all of which has a negative impact upon the local environment and threatens wildlife habitats. Access to markets that reward quality, training and investment in local quality improvement techniques and better infrastructure is needed in order to improve livelihood security of local smallholder families.

In addition to the technological issues, the research found evidence of issues relating to intra-community trust, community cohesion, corruption and conflicting power relations within the study communities. When individuals are driven primarily by self interest and lack a sense of care towards others in their community, it is difficult for any external initiative to encourage change. Conservation and development initiatives seeking to drive positive change on the ground must recognise that rural communities are not homogenous entities. Smallholder communities, especially in resource-poor situations, may face internal power struggles and corruption which doesn't allow collective benefits to be distributed equally amongst community members. Voluntary certification systems as well as direct relationship-based trading arrangements offer a number of benefits to individuals as well as communities. Transparency about the benefits as well as limitations of different options, however, is vital if producers are to be supported in the ways that are most appropriate to their circumstance. Given the results and learnings from this study, it may be reasonable to suggest that the future development of the area depends largely on the willingness of the people to cooperate and put energy into improving the quality and consistency of their coffee and to seize new trading opportunities that arise rather than sticking with inefficient practices only because they are familiar.

Chapter 7: Sustainability and ethics through the eyes of the speciality coffee sector

7.0 Aims and objectives

Having explored the perspectives of consumers and producers, the focus of the research turned towards those stakeholders in the value chain who play a vital role in connecting places of production and consumption: importers, roasters and speciality coffee shops. This chapter provides an overview of the perspectives of the speciality coffee sector on key sustainability issues and explores how understandings of sustainability and ethics have shifted in recent years within the industry, with particular regard to notions of caring about the wellbeing of coffee farmers and the ecological integrity of coffee farms. The interviews presented in the chapter explore the views of key stakeholders in the speciality sector on the role of certification schemes, the value of ecosystem services in quality coffee production and the added value alternative trading arrangements such as *direct trade* and *relationship approach* might bring to the sustainability agenda of the coffee sector. The chapter concludes with a discussion on some key questions that arouse from the interviews with speciality coffee professionals regarding the value and impact of direct trade and the 'relationship-based trading approach' on prosperity of producer communities.

The questions this chapter sets out to explore are:

- What matters most to the speciality coffee sector? How important are certifications in speciality buyers' purchasing decisions?
- In what way does the speciality sector express care towards coffee farmers? Could the sector take more responsibility for wider conservation and community development in coffee growing areas?

The findings presented in this chapter may challenge current understandings about the effectiveness of currently popular 'sustainability schemes' and their capacity to significantly improve the livelihoods of small scale producers in the long-term. The statements and quotes presented in this chapter on the value of certification initiatives are merely a representation of individual perspectives of the interviewees and do not necessarily reflect the opinion of the writer.

7.1 Introduction

Global coffee production amounted to a total of 148 million 60-kg bags in 2015/2016 crop year of which an estimated 10-13% is reported to be sold as 'speciality or certified' (ICO, 2016). The total UK green coffee market is estimated at 46,690 tons per year, of which the specialty coffee sector is estimated to trade 7,020 tons of green coffee with an annual value of €40 million (Allegra, 2016). With a 13 percent year-on-year growth, the UK specialty coffee segment outperforms both the total UK coffee market (10 percent annual growth) and the British economy as a whole (Allegra, 2016). Although the two segments of speciality and certified are markedly different, the two terms are often used interchangeably both by industry and academia. This study follows the definition of 'speciality coffee' as put forth by the Speciality Coffee Association of America: coffee with a distinctive character and no primary defects, scoring 80 or higher in the SCAA cupping protocol; while the term 'certified coffees' are used for coffees that comply with a set of voluntary social and environmental standards set by third party certification initiatives (such as Fairtrade, Rainforest Alliance and UTZ). The research behind this chapter has been conducted in the hope to not only bring more clarity over the differences between these two market segments, but also to highlight how these seemingly different approaches represent similar motivations to care about the sustainability of the industry and the wellbeing of producers. While proponents of either sectors tend not to shy away from openly arguing for the superiority of their approach, this chapter is intended to shine some light on the benefits as well as limitations of both approaches, from the point of view of those supply chain actors who mediate the interactions between producers and consumers: importers, roasters and speciality coffee shops.

In terms of added value, both the speciality and certified sectors aim to differentiate their products from the mainstream commodity market, often referred to as 'conventional market'. On one hand, coffee on the conventional market is traded as a bulk commodity, without any certification or any specific quality credentials. This lack of traceability makes benefit sharing and equitable value distribution between the two ends of the value chain extremely difficult. On the other hand, both the certified and the speciality market promotes the value of traceability but uses different tools to differentiate itself from the rest of the market. While the certified sector is using the 'ethical story' as the basis of differentiation, the speciality sector relies on the impact its 'quality story' at the point of consumption. Both of these stories come with some level of additional price premiums at the consumer level - either in the form of certification premiums or in the form of quality premiums. Both premiums claim to improve the lives of producers in some ways: certification premiums are meant to reward producers for their efforts to adhere to sound social and environmental production practices and showing compliance with a set of pre-defined sustainability standards; while speciality premiums are meant to reward excellence at the farm level and offset the additional costs the production of exceptionally high quality requires.

Although consumers tend to show interest both in the ethical story as well as the quality story, the attitude-behaviour gap has become a well-documented phenomenon within the ethical consumer literature (Boulstridge and Carrigan, 2000; Carrigan and Attalla, 2001; Vermeir and Verbeke, 2006; Carrington et. al, 2010, 2016; Shaw et al, 2016; Hassan et al, 2016). While limited research has been conducted on the relationship between speciality consumers' willingness to pay a higher price vs. their actual purchasing behaviour, the rapid growth of the speciality market and the noticeable rise in speciality coffee shops and home subscription services suggest that quality indeed sells. Although the well-being and prosperity of producers and workers and the sustainability of their environments are claimed to be important for both certified and speciality sector, the trading and pricing mechanisms applied by their approaches are markedly different.

Certifications have become synonymous with sustainability over the past decade. Yet, the speciality sector asserts that their quality-focused 'direct trade' model brings equal or more benefits to producers while also adding some tangible value to consumers. The more 'direct relationships' between buyers and producers of speciality coffee echo the notion of bridging the gap between production and consumption of an otherwise faceless commodity. By emphasising the tangible benefits of their model at the consumer level, the speciality sector claims to have found the 'sweet spot' of closing the attitude-behaviour gap by taking the responsibility of an 'ethical choice' off consumers' shoulders, allowing them to indulge in the experience of a great tasting coffee. Meanwhile, information about the provenance of the coffee is made available to consumers but they are not required to fully understand the ins and outs of production methods, nor they have to worry (or care) about the social or environmental challenges faced by producers and their families. The higher price for a great cup of coffee is meant to provide the solution.

By investigating the views of the industry on certifications and alternative trading methods, this chapter will uncover some common themes and patterns in the critiques of certification schemes as perceived from the perspectives of the speciality sector. To complete the exploration of the understandings of quality along various levels of the supply chain, the chapter will explore the speciality industry's definition of coffee quality and their views on level of influence environmental factors have over the final cup quality of coffee. In the second half of the chapter the attention is directed towards an assessment of the meaning of sustainability and ethics as perceived by the speciality sector. While the interview results presented in this thesis will focus on exploring the speciality sectors view of the value of certifications, the discussion will put the speciality approach into a broader perspective and highlight some key questions the speciality sector will have to answer if they are to claim their approach as morally sound and sustainable.

7.2 Results

7.2.1 The role of certification schemes in the speciality coffee sector: How important are certifications in speciality buyers' purchasing decisions? What does the speciality sector care about the most?

7.2.1.1 It's all about quality

Many of the more established speciality roasters originally traded with Fairtrade certified coffee in the early 2000s. At the time Fairtrade was one of the most sensitised markets in the world and attracted the attention of those who wished to operate outside the mainstream channels of coffee trade (Raynolds et al, 2007). Today Fairtrade is seen as a benefit to mainly commodity grade coffee and as a safety net for poor producers (Nelson and Pound, 2009) who are unable to produce speciality grade coffee (Interviewee N, pers. comm.).

> *"Certifications are great; they've done their job but we need to move further. It's all about the quality of the coffee." (Interviewee A)*

The role certification schemes have played in raising awareness of social and environmental issues is widely recognised within the speciality sector. The incentive mechanism and trading rules of certification schemes, however, is seen by the majority of the interviewees as unsupportive of what is most important for a speciality sector: the cup quality (definition of quality from the speciality sector's point of view is explained in more detail in Chapter 3.). While quality is essentially synonymous with great taste from the consumers' point of view, quality to a green coffee buyer is closely linked to consistency, of both taste profile and service of delivery. Speciality coffee shops are offering a selection of different coffees from around the world, aiming to raise awareness of different coffee varieties, taste profiles, origins and production methods and decouple the conventional consumer association of great coffee with 'Italian roast'.

> *"There are very few people in the UK with decent enough palettes to identify speciality coffee. The majority of consumers all look up to Italian coffee but if you taste it it's pretty awful, 50 percent robusta." (Interviewee A)*

Although the actual definition of quality depends greatly on whose perception of quality we are inquiring about, generally speaking commercial quality is in direct relationship with the number of defects in a given sample. Each roaster has different quality standards; a coffee that is considered 'good quality' for one roaster might be perceived inferior to another. Given this diversity of quality preferences between buyers (roasters), makes quality differentiation based on quantitative measurements (such as number of defects and bean size) a more practical tool than taste. From a mainstream roaster's point of view when it comes to assessing the quality of a coffee, consistency is just as important as the actual taste. Once a roaster develops the taste profile of a certain blend with the associated 'quality', future order from the supplier will be approved or rejected based of whether or not the given sample matches the required quality standards – regardless of what 'ethical story' might lie behind it.

For most speciality buyers, coffee first has to meet the quality criteria appropriate for the company or the individual product and only then will certification status be enquired (if at all). Some speciality importers don't necessarily reject coffee if it doesn't have certification; but they do reject certified coffee if it doesn't meet their quality standards. In this sense, even though Fairtrade guarantees a minimum price to the farmer, unless the farmers can deliver the required quality, buyers can reject the coffee regardless of Fairtrade or any other certification status:

> *"You can have the best story but if the coffee is not good enough we won't buy it." (Interviewee B)*

The logic of those roasters who have already made a public commitment to only source certified coffee, works the other way around: no matter how high the perceived and measured quality of a coffee is, unless the producer has an active certification status, their coffee cannot be used in the company's blends.

A lack of connection between the certification standards and the quality of the coffee is one of the most significant critiques of certification systems in general. According to the speciality sector, certification schemes don't work closely enough with the farmers to help them improve their production and processing practices and therefore the contribution of certification schemes to coffee quality is negligible. This lack of attention (and incentive) to quality improvement is seen as potentially making producers dependent on consumers' good will (to choose a certified product). Although altruistic motivations do play some part in consumers' purchasing decisions, as the consumer research part of this study highlighted (Chapter 5), consumers' motivation to care about distant people and places within the supply chain may be less reliable in the long-term than their preference for the perceived superior taste of their favourite cup of coffee.

> *"The charity approach of Fairtrade is dependent on people's good will rather than people buying great coffee." (Interviewee A)*

> *"They [consumers] drink fair trade products occasionally for the sake of feeling right, not necessarily regularly." (Illy, 2014).*

The speciality industry recognises that the producer has to get a fair, decent price for their coffee but they also believe that this price should be linked to the quality they produce – rather than merely on the act of producing a crop. Most interviewees in the speciality sector believes that setting artificial pricing mechanisms such as the **minimum price** of the Fairtrade system, can act as a subsidy for inefficiency that rewards producers regardless of how low quality crop they produce which may ultimately increase vulnerability of producers in the long-term:

> *"Some of the farmers started relying on the Fairtrade minimum price [to such an extent] that they won't be able to do anything better. Some people see Fairtrade minimum as a premium to be lazy. If the world changes these will be the organisations losing first." (Interviewee C)*

Fairtrade originally aimed to be 'in the market but not of it' (Taylor, 2005); intending to improve the price small producers were getting for the coffee solely on the basis of a trading agreement and without any inquiry about

the connection between price received and quality offered. Historically, therefore, Fairtrade coffee wasn't known for its quality.

> *"Originally, the quality of Fairtrade coffee was very poor, mainly because it was coming from very poor farmers. […] Rainforest Alliance wanted to run a business with people who knew how to run a business, that was the first stage. And they were not big enough. Since then Rainforest Alliance started to get noticed because the general quality of Rainforest Alliance coffee was far better than the counterpart Fairtrade coffee form the same origin and so they started to get noticed." (Interviewee C)*

> *"We don't see any coffee that is Fairtrade that scores very well. We've actually stopped doing any investigation on Fairtrade to be honest. They [Fairtrade producers] get a minimum price for their coffee but I guess there is no incentive for them to produce higher grade so they don't get more money which kind of defeats the purpose of it all." (Interviewee D)*

Despite this negative perception of the quality of certified coffees, some respondents in the speciality sector commented on some notable differences between the quality of Fairtrade and Rainforest Alliance certified coffees.

> *"All the Honduran coffee that I buy is Rainforest Alliance certified but I don't sell it all as certified. I buy it because I like the flavour. But the Fairtrade, I very rarely like the flavour of anything." (Interviewee E)*

This difference in consistency and quality between Fairtrade and Rainforest Alliance certified coffees, however, may be related to the fact that Fairtrade only certifies smallholder cooperatives (collecting coffee sometimes from hundreds of smallholder producers) where infrastructure and investment into quality improvement is much more limited than that of larger estates which can only gain Rainforest Alliance or UTZ certification.

In the eyes of the speciality industry, Fairtrade is seen as a false market mechanism and a price subsidy for coffee that is mediocre at best. Arguably, as many in the speciality sectors would say, if a producer is either unwilling or unable to produce a decent quality crop, shouldn't they be growing something else instead? This argument was put forward most strongly by a speciality roaster who said:

> *"I've got beaten up once by Fairtrade because I foolishly said in a magazine that Fairtrade holds back growers from getting paid a decent price because they create this false market for people who grow rubbish coffee whereas they should probably stop growing it. The market decides who is good and who is bad. In this false (Fairtrade) market everybody is getting a certain price, there is no incentive to do better, no incentive for them to stop growing it. What I would love Fairtrade to do is to go into places and say look, we're gonna help you grow something else, that is better for your land - I would subscribe to that, I would donate money to a project like that." (Interviewee B)*

There is no scheme, approach or business model that could satisfy every customer, but the speciality industry has made a clear and compelling commitment to focus on quality rather than certification credentials, even if that means losing some potential customers:

> *"When we started, people just asked for coffee. …. But you know our mission, what we want them to know us for quality, the quality of our products, the quality of our service, the quality of our team in our shops. And the way we answer questions about Fairtrade, some of the people are happy with our answers, some of them not." (Interviewee F)*

7.2.1.2 Certified confusion

Echoing the results of the consumer research, interviews with the speciality coffee sector revealed that even industry professionals struggle to differentiate between the benefits of different certification schemes and find their message confusing. Interviewees tended to refer mostly to Fairtrade when asked about their opinion on certification schemes in general and had to be prompted specifically to express their views on Rainforest Alliance, UTZ and other schemes. Contrary to the consumer research results, almost all interviewees in the speciality sector recognised the existence of not only Fairtrade but also Rainforest Alliance and UTZ to be a voluntary certification scheme, however, most of them found their message confusing, particularly that of Rainforest Alliance. Although most respondents have at least heard of UTZ certification, very few were able to summarize what it stands for. Parallel to producers' view, organic production is recognised as a good agricultural practice but seen as unrealistic and unnecessary in terms of global uptake. The comments below from the owners of speciality roasters demonstrate this certified confusion:

> *"The problem is, consumers are really unsure about what they all [certifications] do. I think people want coffee to be sustainable but they don't necessarily understand what they all mean." (Interviewee G)*

> *"People say they know about Fairtrade and Rainforest Alliance but they don't really know about it. RA don't shout enough about what they do. They are not communicating enough." (Interviewee A)*

> *"We have three very different systems – Fairtrade, Rainforest Alliance, UTZ – and you know, to be honest it is not even clear to me what they actually mean. Fairtrade is really complicated and I don't understand it completely. You really have to pay attention and it is quite time consuming" (Interviewee H).*

> *"Fairtrade had a massive budget from the beginning to promote themselves and it's still the case. Rainforest Alliance was always struggling to put their message across. The understanding of the meaning of Rainforest Alliance amongst general public is still not clear even among educated people." (Interviewee C)*

"Rainforest Alliance is confusing the ethical agenda. Nobody knows what Rainforest Alliance means or does. I'm not convinced I know" (Interviewee E).

"Rainforest Alliance sounds positive but I don't know much about them. It feels like they don't work on the social aspects as much. It's about the agricultural practices, protecting biodiversity, avoiding polluting the ground water. I feel like it's good. I haven't heard anything negative about them." (Interviewee I)

''What about the other certifications? I don't understand the other ones to be honest. Rainforest Alliance? They don't say what they do, it's misleading and confusing. With UTZ I don't have a clue about what they do.'' (Interviewee B)

"We don't deal with UTZ and if I'm completely honest I have far less knowledge about them. UTZ have a place for quite a few large brands who have bought into it and support it on their farms." (Interviewee J)

7.2.1.3 Who benefits really? – What value does certification creates and to whom?

"The general assumptions about Fairtrade is not what it actually means." (Interviewee F)

When discussing the benefits of certified vs. speciality marketing channels, one of the topics that often comes up is the comparison between certification and quality premiums. The price that certified coffees tend to achieve in the commodity market (including premiums) are usually about half of what speciality roasters would pay for their coffee – without any of the administrative costs or any additional licensing fees or audit costs. The Fairtrade premium system has indeed gone through some changes in recent years. Up until 2011 buyers of Fairtrade coffee had to pay 10 c/lb on top of the $1.40/lb Fairtrade minimum price for washed arabicas. Since 2011, however, this figure doubled and the Fairtrade premium currently amounts to 20 c/lb of which 5c/lb has to be invested into productivity and quality improvements at the cooperative level (Interviewee L, pers. comm.). Premiums are traceable and buyers can check how the premiums have been spent (Interviewee J, pers. comm.). While Fairtrade originally wanted to disassociate itself from the rules of the free market, Rainforest Alliance has always followed free market rules with regard to its premium system. Initially the Rainforest Alliance premiums were very high and the majority of the coffees certified as Rainforest Alliance at the time were single estate good quality coffees which were likely to fetch higher prices anyway.

"[At the beginning] when I talked to producers who have Rainforest Alliance certification they said it was great because it paid better money." (Interviewee K)

Income from certification is not only a function of premium levels but also of supply-demand balance on the market. The certification market has been in historical oversupply which ultimately encourages diminishing premiums over the long-term. Although, the Fairtrade premium has always been fixed at 20 c/lb, the premiums offered for Rainforest Alliance certification have dropped from the initial 20-25 c/lb to around 8-10 c/lb (Interviewee J pers. comm.).

"What they [Rainforest Alliance] are trying to achieve is quite different [from Fairtrade]. They have no set premium or minimum price [and] if you are selling triple certified high quality coffee, the extra money you get for Rainforest Alliance is negligible. (Interviewee L)

From the speciality industry's point of view, certifications and the Fairtrade system in particular, are not seen as adding any tangible value to the consumer and the value it creates to the producer is also questionable. As the owner of a speciality roaster business pointed out:

"That's the other thing that frustrates me about Fairtrade, nobody from the certifications is willing to add value to the consumer. It's all up to the producer to add value at their end, which is wrong. They both should get more value; the consumer should get better coffee and the producer should get better price." (Interviewee B)

"[…] by buying Fairtrade products people are doing nothing more than expressing solidarity with coffee farmers whereas in reality they pay more for a product than it is worth on the market for the sake of fighting against poverty" (Illy, 2014).

"The Fairtrade quality is charity based but the real quality of the coffee isn't covered. It isn't about adding value based on quality; it is about the urgency of helping people." (Interviewee C)

Besides offering some level of premiums to producers, all certification systems have costs associated to them. The most significant costs are incurred in the form of licensing fees, audit costs, time and resource requirements at every level of the supply chain – producers in particular. Increased costs and complicated paperwork for small producers (as well as for buyers) can hinder the uptake of these schemes by those who could potentially benefit from certification premiums the most. According to companies who trade with both certified and non-certified coffees, producers who participate in certification programmes don't necessarily understand the need for and the benefit of all the rules, regulations and paperwork that is involved in gaining and renewing their certification status. Compliance with different certification standards are often seen as a tick-box exercise rather being driven by the conviction of their necessity.

"Complying with different certifications puts increasing pressure on farmers which is an issue. And standards got increasingly complicated." (Interviewee H)

With the growing popularity of various certification schemes an increasing number of businesses aim to choose triple certified coffees in order to cover themselves for all consumer questions. Although often unrecognised by consumers, producers of certified products also have to invest in certification. Investment is certification is a risky business and producers have no guarantee that their investment will pay off over the long-term. If the certified market is based primarily on consumer demand, then the benefits producers may gain from certified sales are only as certain as the consumer trends which fuel them. Consumer trends, however, are anything but stable.

"They [Rainforest Alliance] ask producers to do a lot of things which require investment. […] a lot of the investment that Rainforest Alliance requires is very positive in terms of environmental services and also potentially productivity but it hasn't been very good in collecting evidence. […] So the evidence isn't really there but the implication is that yes you make a lot of investments but you reap the rewards through environmental services and through gain in productivity and yield. So I would say that they clearly are of benefit to producer organizations but in probably much longer term." (Interviewee L)

"Rainforest Alliance is written as a farm standard and its coffee related standards are structured around coffee production specifically. […] and producers find it easier to understand but the cost of implementation can be quite high." (Interviewee M)

Working within the Fairtrade system – or any certification system for that matter - can bear considerable costs not only on the producers but on the roasters as well. When sourcing coffee from a Fairtrade cooperative,

roasters have to pay the Fairtrade minimum price and premium regardless of whether they will sell the coffee as Fairtrade or not. If the roaster wants to use the FAIRTRADE Mark on finished products, they also have to pay a licencing fee which is calculated and invoiced as a percentage of the Fairtrade transactions the roaster is required to report to the Fairtrade Foundation. If the finished product is sold to retailers or catering outlets, the licence fee is based on the net invoice value of the sales of the Fairtrade certified products; but if the finished product is sold to the end consumer, the licence fee is based on the net purchase value of Fairtrade certified products from the supplier (Fairtrade Foundation, 2017).

Given the extensive bureaucracy, paperwork and the significant costs that participation in the Fairtrade system requires from all actors, some traders are not convinced that their efforts are generating the claimed benefits. Many in the speciality sector see certifications as out-dated structures, unable to keep up with the requirements of the speciality market due to their bureaucracy, high costs and lack of focus on quality.

> *"Fairtrade and many other ethical initiatives are great but they might have passed their sell-by date". (Interviewee N)*

> *"Fairtrade is a pain because there are too many rules [and] they change the rules. A lot of extra work. Do I need the extra work? Not really. Does it benefit the farmer? Probably, to some degree, but in a lot of places for some farms it's worse" (Interviewee O)*

Despite the fact that many of the standard criteria of various certification schemes overlap, there is no single body who would oversee the audit process of the main certifications. The growing number of different standard compliance and trading schemes therefore can put significant cost, time and resource pressure on those producers and producer groups who would need the benefits of certifications the most. In order to reduce the costs of multiple audits, certification schemes would need to align their standard setting and audit procedures, however there is limited opportunity for this due to the separate funding sources of all certification bodies.

The speciality industry is conscious of the fact that not everybody wants a moral dilemma when getting a cup of coffee in the morning, therefore they are trying to focus on the tangible qualities of the product they offer and stay away from strong ethical rhetoric in their marketing communications.

> *"There is too much selfish consumerism ultimately [and] we understand that not everybody wants the ethical message in their face all the time." (Interviewee P)*

> *"There is also a strong consumer base who really don't care [about ethics and sustainability] or it is perceived more expensive and people have different priorities. The majority of people want to get something for their money and if you give them better quality coffee it will be much more important to them than giving them so called ethical coffee which is ticking the box but I don't think they really believe in it." (Interviewee N)*

Another issue that is often left out of discussions around the value of certification is the fact that there is more certified coffee being traded than there is being sold as. Some of the importers who sell a variety of certified coffees reported that their Rainforest Alliance sales have been going up while demand for their Fairtrade sales is flat or decreasing (Interviewee J, pers. comm.). The discrepancy between Fairtrade certified coffee bought (at the producer level) and sold as such (at the consumer level) is clear even to the certifiers themselves:

> *"According to our own consumer research, 17 percent of the population belongs to a group called Connect Champions who are ethically minded and they believe that they support ethics by choosing Fairtrade over anything else. They are not only buying Fairtrade products but they are telling their friends that they should do the same. But when you overlap that 17 percent with actual purchase of Fairtrade coffee it doesn't correlate with the same amount of sales." (Interviewee Q)*

> *"Most of the organizations we source from don't sell all of their coffee as Fairtrade even if they are a Fairtrade certified organization" (Interviewee L)*

Speciality grade coffee is often bought as certified from the farmer but almost never sold as such to the consumer of speciality grade coffee. The main reason for this certification deficit is that in the speciality sector certification is not the selling point; quality is. Almost all interviewees who operate in the speciality industry reported that they feel the certification labels, and Fairtrade in particular, would confuse their message about quality. If they wanted to sell a coffee without certification, it would give the impression that the product without a logo was not produced or traded ethically which would not necessarily be the case. Certification could even put some speciality roasters off even a good quality coffee, mostly because it would make them have to have the conversation about the certification and obscure their message about the quality of the coffee:

> *"I refuse to buy certified. I've actually rejected coffee because it was certified. To me taste is most important. If something is delicious, if I fall in love with the coffee, I don't care where it comes from I'm gonna buy that coffee." (Interviewee B)*

> *"We do source from RA certified farms. It's a bonus knowing that the producers go through all the hurdle to get the certification but I wouldn't look for it." (Interviewee I)*

> *''Some of the farmers we buy from have the Rainforest Alliance certification because it gives them a chance to spread the product. Certifications give them more opportunities to place their product in higher value markets. I think they are doing a very good job but they are not the reason why we buy coffee from a farm.'' (Interviewee F)*

> *"We have been running for 38 years. We were running before the Fairtrade name appeared. We were under a lot of pressure to sustain ourselves because we didn't have the Fairtrade label. We tried to say that you know the logo provides a standard for Fairtrade certification which is great but this is not the way we want to move our business. Some of the coffees that we buy have the certification but we just*

don't use them as a basis for marketing our products. It is very difficult for our staff in the shop because they have to explain it." (Interviewee F)

One of the major concerns expressed in the literature about Fairtrade was the question of whether it will be able to transition from being a pioneer of an alternative sector to having more substantial impact on a mainstream scale and not lose its credibility amongst its own supporters in the meantime (Taylor, 2005; Locke *et al.,* 2010). While the expansion of the Fairtrade system relied primarily on support at the consumer level, demand for Rainforest Alliance has largely been driven by the commitment of multinationals. As expressed by one of the biggest Fairtrade coffee importers in the UK:

"One criticism I would have about Fairtrade is that I feel before it was the intention to create a different kind of supply chain, to buy directly from cooperatives. They were trying to change the structure and they were trying to help farmers to move up the supply chain to become more involved. But now I feel like it's the big multinational companies that have Fairtrade certified supply chains. Rainforest Alliance changed the playing field when they came in and were more favoured by the big companies so Fairtrade had to catch up." (Interviewee L)

From an economic perspective, the biggest risk in food production is farming. Those with more power have the advantage to own the majority of those aspects of production that are controllable and outsource those that are uncontrollable thus pose high levels of risk. The global nature of the commodity coffee supply chain means that even if a larger region loses a significant proportion of their crop due to unfavourable weather conditions or diseases – as happened with the rust outbreak in 2012/13 – the buyers of commodity grade coffee still have dozens more coffee growing countries to source from. Despite the price mechanisms and premiums of certification schemes, producers still carry the majority of the risks of production while the lower end of the supply chain (roasters, retailers) can afford to outsource the riskiest aspects of production:

"A major issue is risk. The retailers, roasters don't have any risk or at least they can share the risk. They benefit so much more disproportionately." (Interviewee N)

Big multinational companies having Fairtrade certified supply chains, however, is not the main concern from the industry's point of view. What Fairtrade supporters in the industry find contradictory is that originally Fairtrade gave the impression that it was aiming to fundamentally change the way coffee is traded, to shorten supply chains and empower small producers. In reality, however, supply chains of multinationals stayed just as – if not more - complicated than they were before (Interviewee L, pers. comm.).

"[A few years ago] a lot of companies were under pressure to 'become' Fairtrade. Their whole message was about relationship with someone 'on the other side' [of the supply chain]. It was about reading a story and feeling the story of that person. But because it was overdone, it started to be seen as a joke. So that initial connection that was appealing for the trade started to disappear and became diluted." (Interviewee C)

"Fairtrade flooded the market with certified products so the message about the poor farmers started to get noticed. But a lot of people started to hate Fairtrade, seeing always the same images of people living in poverty like nothing has been done. But by this time Fairtrade grew so much that it got to a point where it doesn't matter what people think; the sales of Fairtrade [certified coffee] continues to go up because big companies and universities committed their buying policies to it. (Interviewee C)

"Fairtrade has over-marketed themselves. I feel like Fairtrade became associated with mass produced and poorly audited products." (Interviewee P)

Despite the efforts of the Fairtrade movement to empower producers and create a more equitable share of resources along the supply chain, Fairtrade is often seen as a poverty trap that keeps yielding disproportionately more benefits to those who have always been in power, namely the roasters the retailers:

"It's really the retailers who are getting more money by having a Fairtrade logo on their coffee." (Interviewee R)

Certifications are mainly seen by the speciality sector as 'ethical greenwash' exercised by the mainstream players of the industry with questionable benefits to the producers themselves. Some went even as far as to say that the Fairtrade model is unethical:

"The Fairtrade model, I think, is unethical. Why should the retailers and roasters benefit a hundred times more than a small farmer for the same cup of coffee? Retailers can dictate what they need. The power of supermarkets is phenomenal. The top and the bottom of the retailer market is doing very well; the middle is suffering." (Interviewee N)

The need for minimum prices in the coffee market has divided both industry and academia for decades. On one hand, proponents of the Fairtrade system (of guaranteed minimum price and social premium) often argue that due to the volatility of the global coffee market, the depressingly low prices of the 'coffee crisis' years of the early 2000s can and likely will always re-occur as long as free market rules operate. On the other hand, the speciality sector (the majority of whom contest the Fairtrade system) insist that low prices can only occur in the mainstream commodity-grade coffee market with limited or no traceability, or 'direct' relationships between producers and roasters. In the words of the owner of a speciality roaster:

"In specialty coffee there is no coffee crisis. The coffee crisis is created by the big four [the four largest coffee roasters: Nestlé, Kraft, Procter & Gamble, and Sara Lee] messing around, playing silly games and they are the ones benefiting from Fairtrade. Producers don't benefit from it, what you manage to do is maintain a level of poverty with it." (Interviewee B)

The strong marketing strategy of Fairtrade, although it has succeeded in raising awareness of the issues at producer level, has reached a point where despite the continued efforts of its supporters, the inherent socioeconomic issues at coffee origins are still just as severe as they were before:

"Another issue I have about Fairtrade is that what they do is like offering somebody a meal every day rather than teaching them a way of growing their own food. Nobody has ever been through Fairtrade and come out better off, more educated and no longer needing it. Actually what it does is it traps people into the system. And it is not a system that they can grow out of." (Interviewee E)

Contrary to most consumers, coffee buyers and traders have the opportunity to visit coffee origins and get first-hand experience of the impacts certifications may have had on a coffee growing community. From the speciality sector's point of view, consumers' limited power to check credibility of the source of any 'ethical' claim combined with the often strong emotional content of 'ethical subjects' in question, consumers' confidence in certifications resembles aspects of some sort of religious faith rather than rational evaluation of available information. Given that the first supporters of the Fairtrade movement were also associated with religious church groups; it is not surprising that some of the interviewees compared the Fairtrade rhetoric to that of a religion:

''Fairtrade is like a religion. It [Fairtrade] counts on faith because they [consumers] have to believe in it unquestioningly.''(Interviewee E)

For that reason, some buyers in the speciality sector have limited confidence in certifications achieving their claims about improving after having visited certified cooperatives and not seeing the benefits the system would provide to the locals:

"[…] you look around in that coffee growing region and the villages and I thought 'where is this Fairtrade? People are still living in 'from hands to mouth' way […], people are still struggling to send their kids to school. If you want to put something into a community, it's not just about money. Give them the ability to earn more money give them a plan and manage it." (Interviewee R)

The majority of interviewees in the industry expressed that they see Fairtrade as a branding agency that spends too many resources on raising the profile of a marketing scheme rather than helping the people it was created for:

"Fairtrade is not supposed to be but it has evolved into a brand." (Interviewee J)

The implication of Fairtrade - as well as other certification labels - being seen as a 'brand' of their own right is that licensed users of certification logos could find themselves in a position where the certification 'brands' start to compete with their own brands. This critique is more relevant to the Fairtrade system which stipulate that the Fairtrade logo has to be placed on the front of a retail coffee bag while Rainforest Alliance, UTZ or organic certification logos can be placed on the side or the back of the pack:

"Some of that [the Fairtrade strategy] you can call bully attitudes. I remember a lot of customers calling me about Fairtrade […] and I said I don't want do Fairtrade; I want to do my own business." (Interviewee C)

Currently there are over 400 certified cooperatives within the Fairtrade system (Interviewee Q, pers. comm.). The main reason that Fairtrade as a system has a strong preference towards cooperatives is not only practical. As the Fairtrade originally started out as a "*movement based on solidarity and changing things together*" (Interviewee H, pers. comm.) and the idea of collaboration lies at the basis of its philosophy. A well functioning cooperative structure arguably has many benefits which individual smallholder producers would struggle to access on their own (e.g. pre-financing and collective bargaining power). Cooperatives also helps access larger volume markets and allow groups of small producers develop more direct business relationships with roasters and traders.

The cooperative system, however, brings with it some considerable challenges.
The idea behind cooperative production is collaboration, equity and trust. In order to function successfully, it is essential that members of a cooperative are willing to invest in and share the benefits gained from trading via a cooperative structure. Members of a cooperative have to see the value in helping each other in order to help themselves in the long-term. Without this understanding cooperatives are prone to abuse, distrust and corruption. Cultures with relatively low differences in economic status – i.e. where everyone is equally poor or well-off – tend to be more successful in collaborative approaches than those with substantial inequality and power imbalance. The impact of the internal politics and power imbalance within a cooperative is not to be underestimated. The failure of a cooperative is often associated to internal power struggles and unhealthy competition between its members.

> *"Cooperatives fundamentally fail because you have a small group of people in the cooperative who are competing with each other. Coops fail because the members were fighting each other, it's political, and the managers were pocketing money from the coop as well." (Interviewee R)*

> *"Some just don't want to work together. They just don't believe in working together." (Interviewee C).*

When cooperatives work well, they can create a much needed support for the local community. As the head buyer of a speciality roaster in London argued:

> *"When people go to the cooperative […] they might see it as a social structure that gives them opportunity to progress in their personal lives. […] Every cooperative is like a little government. The effectiveness of the cooperative very much depends on the leadership. I know cooperatives that are doing an amazing job and I know cooperatives which instead of using the premiums to support the farmers (e.g. saving up emergency funds) they actually use the premiums to build luxury accommodation or buy really expensive cars. So it depends very much of the leader of that cooperative. These issues are extremely difficult for any organizations to control." (Interviewee F)*

> *"The problems that you see, not just necessarily related to coffee, but just generally, come when people don't respect things. Period. Be it the land, people, the sea. If the president of a country steals, then it*

becomes acceptable for everyone in that country to steal. There is no moral guidance where it says that taking is wrong." (Interviewee O)

Corruption at the cooperative level is often suspected when the management of a cooperative shows clear signs of wealth disproportionate to the wealth of the cooperative and the local community. Within the Fairtrade system, the use of the 20 c/lb social premium paid by roasters on top of the Fairtrade minimum price (140 c/lb for washed arabicas) is subject to democratic decision making between the members of the cooperative. In societies where corruption level is high, the effectiveness of this democratic decision making system can be problematic.

"In Peru you turn up to a cooperative and the head of the coop turns up in a 30000 pound Toyota pick up truck. […] Where are the premiums going?" (Interviewee R)

Certification schemes can and often do create the illusion that child labour and less than ideal working conditions are a mere memory of the past. Seeing visible signs of wealth at the cooperative leadership level that are not being reflected in the living conditions of the rest of the community creates considerable distrust in the cooperative structure and the associated Fairtrade system among many industry professionals.
As one of the buyers of a small speciality importer put it:

"[...] And so we went up to this place, you got in the gate and here's the UTZ Kapeh, Fairtrade, Rainforest signs, their big logos. And went through the business stuff, talking about the roasters and then asked them if they could take us through the roaster and they said "No cameras! No cameras!", and here were these kids. And this place did 3 million pounds of coffee. 13-15-17-year-old kids loading two bags of coffee, one (60kg) bag on each shoulder and they walk up into a container. They had no bucket elevators, no conveyor belts, no nothing; and it was all Fairtrade." (Interviewee R)

When working with cooperatives via the Fairtrade system or otherwise, coffee buyers can struggle to judge whether or not the premiums they paid to the cooperative actually benefitted the individual farmers. Even though certifications aim to serve as assurance systems for standardised production and trading practices, there is an apparent lack of trust amongst the industry in the way their price mechanism translates to measurable benefits at the producers' level.

"[…] when the extra money goes to cooperatives I'm not sure what the farmers are actually paid. I'm not sure how much it filters down to the individual farmers' level and I don't know anything about their environmental impact." (Interviewee K)

The cooperative structure may also have an impact in the overall quality of its output. Since in the Fairtrade system only cooperatives can achieve Fairtrade status, producers have to sell their coffee to the cooperative if they want to be part of the system. Selling to a cooperative, however, means that higher and lower quality produce are mixed together without any traceability to the individual farms. Therefore, producers of higher quality coffee have less incentive to sell their coffee within the Fairtrade system. In reality, smallholder

producers don't always have access to an alternative 'speciality' market and membership of a Fairtrade certified cooperative can often be a more viable option than selling to a local middleman (who is likely to pay even less than the Fairtrade minimum price).

With regard to certification schemes, most people associate cooperatives only with Fairtrade. There are, however, a growing number of cooperatives (mostly the larger coops) who prefer to comply with Rainforest Alliance or UTZ certification standards instead:

> *"The rules of Fairtrade don't necessarily fit with every coop culture so they go for Rainforest Alliance instead." (Interviewee C)*

For some in the speciality sector, the Fairtrade system is not only seen as ineffective in creating significant change in smallholder livelihoods, but is also regarded as having caused considerable negative impacts on the livelihoods of those who fall outside its narrowly defined participation criteria:

> *"The difference between the Fairtrade message and the message of the speciality industry - although neither of them are totally right - is that while the specialty industry's strong focus on quality doesn't do any harm, the Fairtrade strategy does. […] Fairtrade is making people believe that they are making a difference when the truth is: they are not." (Interviewee E)*

While the Fairtrade systems narrow focus on smallholder cooperatives paint a simplified picture of smallholder communities in desperate need of first world help, Rainforest Alliance has opened up a new market for those who fall outside the narrow criteria of the Fairtrade system (individual smallholders and large estates) but are capable and willing to add value to their product by complying with rigorous production, environmental and social standards. As a coffee trader from a speciality importer argued:

> *"We were the first importers of Rainforest Alliance certified coffee. But at the time their approach was to market single estates. Rainforest Alliance certification was the alternative way of adding value to single estate coffees as they couldn't become part of the Fairtrade system." (Interviewee C)*

Despite the recognition amongst industry that neither certification scheme is perfect, mid-size roasters and importers, tend to choose Rainforest Alliance over Fairtrade as a tool to help their suppliers develop:

> *"I was trained as a social auditor and I could see that there were times when we were giving the farmer great money but that wasn't cascading down to the people who needed it most, the workers, who in some cases were treated terribly; they were paid under the minimum wage, their living and working conditions were dreadful. […] We searched for Rainforest Alliance farms because it is a good system." (Interviewee P)*

7.2.1.4 Minimum price and costs of production

When it comes to fairness and ethics in trade, an important decision businesses have to make is how much they are willing and able to pay for their raw materials. In most 'normal' markets this price depends on the quality of the product or service provided, the reputation of the company or the history of the relationships established between seller and buyer. In the coffee industry (and many other agricultural commodity industries), however, the question of what is a 'fair' price is not so easily answered. Economic sustainability is based on the ability to cover basic costs of production. Economic prosperity requires price stability and the ability to accumulate some level, even if modest, profits. Producers of any size can only invest in education of their children, health care, wellbeing of their workers (if they have any) and protection of the environment etc. when their basic production and living costs are covered and are able to accumulate some level of profit at the end of the harvest. One could assume that, provided the quality of the offered product meets the buyer's expectation, a 'fair' price should at least cover the cost of production as well as include an acceptable profit margin for the supplier. What counts as an acceptable profit margin, however, is an even more difficult and morally charged question.

In the conventional coffee market, the profit margin of the seller often isn't considered in price negotiations and businesses to this day are still having discussions about whether or not they want to cover - or care to find out - the basic cost of production of the raw materials they buy (Interviewee S, pers. comm.). Cost of production is also related to productivity and the disparity between smallholder yields and larger farms can be enormous. Yields amongst smallholder producers are approximately 0.5 tonne per hectare while yields of large, highly mechanised and efficient farms can be over 3-5 tonnes per hectare (Interviewee S, pers. comm.). Yield, scale, efficiency and level of mechanisation have a major influence on the actual cost of production. Lacking the advantage of economies of scale, it is much harder for smaller farmers to break even at low market prices (i.e. to cover their inherently higher costs of production per unit). In addition, cost of production also depends on the level of investments dedicated to environmental sustainability and human wellbeing on and around the farm. The situation is further complicated by the lack of reliable and comparable data about the true costs of production on individual farms, especially smallholder farms. The fact that smallholder producers often fail to keep sufficient records of their production costs and their potential reluctance to share this – otherwise understandably sensitive - information with them, makes the subject even more problematic. Given the diversity of the coffee industry, there is no single cost of production that would apply to all production circumstances and to date, there is no agreement within the industry on what cost should be calculated within the total cost of production of a farm.

"Minimum price is a decent price but it should be based on costs of production." (Interviewee C)

When discussing the ethics of certification schemes and the sustainability of the coffee industry as a whole, an often misunderstood topic is that of a minimum price and its relationship to cost of production. One of the most common critiques against all certification schemes - including Fairtrade - is the lack or the inadequate level of a

minimum price. The purpose of a minimum price is to protect the most vulnerable stakeholders in the supply chain (typically smallholder producers and workers) from extreme price drops in the market. Without much information about the realities of the industry itself, one could assume that the Fairtrade minimum price is the 'fairest' most ethical deal smallholder coffee producers can get in the market today. Few ever care to ask whether or not this minimum price is 'fair' at all? What does a 'fair' price mean anyway and how did Fairtrade come to this price?

> *"Fairtrade is better than nothing […] but it implies more than it gives. It's quite a funny word: fair; it's like the weather; neither good nor bad. The minimum price is definitely a good step but […] what is a fair price?" (Interviewee R)*

Even fewer would question the 'fairness' of providing one single uniform minimum price for all 60 countries where coffee is grown commercially, considering that labour, input and transportation costs (basic production costs) differ greatly from country to country, region to region and farm to farm. Given the great differences in yield, scale, efficiency of each farm and the large differences in labour, input and rent costs across all (over 60) coffee growing countries, the 'fairness' of employing one minimum price applicable to all coffee producing country around the world – such as the Fairtrade minimum price - is questionable.

> *"The Fairtrade minimum price probably, in terms of countries, doesn't reflect a cost of sustainable production." (Interviewee C)*

> *"In Costa Rica, the cost of living is so much higher than in Guatemala and therefore there should be country specific protocol for the minimum price." (Interviewee P)*

The Fairtrade minimum price is currently at $1.40/lb for washed arabica coffee - for a full list of minimum prices see Chapter 3 - has come under considerable criticism in recent years. Since the international coffee price has recovered from the crises years of the early 2000s many questioned the rationale and necessity of having a minimum price at all. Up to 2009 the Fairtrade minimum price was fixed at $1.20 per lb then was increased to $1.40/lb in April 2011 (Fairtrade, 2012). However, true to the nature of commodity prices the international coffee price started to increase and by mid-2011 it rallied to 312.95 c/lb equivalent of $6.9/kg, reaching a 34-year high (ICO, 2014) whereas the Fairtrade price was still fixed at $1.40/lb, equivalent of $3.1/kg. After having received significant criticism from both the industry and academia, Fairtrade changed the guaranteed fixed price to minimum price which meant that since 2010 in order to buy Fairtrade certified coffee as such, buyers have to pay at least $1.40/lb or the relevant market price, whichever is higher, plus 20c/lb social premium, plus 10 c/lb organic premium, if applicable. The structure of the Fairtrade pricing system can be summarised with the following equation: Final Fairtrade price = global coffee market price (NY 'C' price) or the Fairtrade minimum (whichever is higher) +/- quality differential + 20 c/b FT premium + 10 c/lb if organic. The quality differential in this equation is a crucial component of the final price which often goes unnoticed. Some countries such as Colombia attract a positive quality differential due to their historic reputation for consistently high quality

production and reliability of delivery. Countries like Honduras, however, have suffered from a reputation for low quality and inconsistency which resulted in a negative quality differential being applied to all coffees coming from Honduras for many decades.

Due to the cooperative system that Fairtrade insists on, in order for the buyers to be able to buy Fairtrade coffee from a cooperative, the cooperative would have already had to buy the coffee from the farmers and paid them at the point when they deliver the coffee (usually in cherry form) to the cooperative. If the coop guarantees only the minimum price then at the time when the market price is high, the logical decision of producers will be to sell their coffee to those buyers (coops, middlemen, spot buyers etc.) who offer the most money for their crop. This can put the Fairtrade coops in a difficult position and could potentially threaten their financial stability:

> *"When the prices rise the challenge for the coops is to buy the coffee off the farmers. And I don't think Fairtrade was really able to react to that. […] Cooperatives end up competing for the coffee and trying to win over the farmers and get them to sell their coffee to them. And the ones who can offer more money will win. (Interviewee L)*

Many in the industry find the minimum price system restricting, rigid, and outdated which goes against the free market ideals of capitalist societies. According to a coffee trader in London the minimum price is:

> *"[..] good for some but they restrict a lot of the trade, difficult to manage and a lot of unnecessary options needed. We are trying to adjust the tools of the free market to the Fairtrade [ethos] and that's why we have so many problems" (Interviewee C).*

Despite this agreement amongst industry professionals on the inaccuracy of the Fairtrade minimum price in reflecting cost of production for all coffee producing countries around the world, most would also agree that collecting accurate, country specific calculations would be unrealistic.

> *"You could argue that $1.40/lb for fully washed arabicas is very low for some Central American producers. But then creating different costs of production for each country would require an army of people to work on and update year on year and then the next issue would be the varying efficiency of individual farms within each country as cost of production is dependent on land size and productivity and efficiency." (Interviewee S)*

Securing quality supplies and becoming the buyer of choice is in the long-term interest of any coffee business. Due to the extreme volatility of the coffee commodity market, historic power and information imbalance between the two ends of the supply chain as well as the risk of extreme weather conditions, pest and diseases; paying the market price does not necessarily cover the basic production costs of the producer. The international coffee price shows surprising volatility over long periods and prices can drop or increase without warning in a

matter of hours and days. Those having worked in the industry for decades tend recognise this volatility and tend to warn against the rejection of the Fairtrade minimum price – despite its imperfection:

> *"Over the long-term, the price will almost certainly fall below the Fairtrade minimum price so I think there is a value in the minimum price. As a structure it's a great one." (Interviewee L)*

Coffee businesses in the speciality sector are proudly paying two or three times of the market price (or more), provided they receive the quality they are looking for.

> *"Cost of production of most smallholder farms is between $1.50-2/lb. Speciality roasters generally pay at least $3/lb for speciality grade coffee as a starting point as opposed to the Fairtrade minimum price of $1.40/lb" (Interviewee I)*

Although the prices paid for speciality grade coffee is indeed significantly higher than the commodity market price or the Fairtrade minimum price, it is important to note that the production of exceptionally high quality coffee also requires considerable investment in time and resources from the producers' point of view which inevitable pushes production costs higher than production of conventional or low quality coffee.

One of the primary goals of certifications is to try and transfer more value back to the producer. Although the certification premiums do help improve the price level, the intrinsic quality of the coffee is ultimately the most important factor in any given price negotiation. Without quality, producers have to compete purely on price (certified or non-certified) which in the long run creates a race to the bottom approach to reduce costs. When producers are forced to lower their production costs in order to stay competitive in the short term, less resources will be available for farm improvements. In turn, lack of investment can exacerbate quality issues and keep producers in a poverty trap.

> *"Cooperatives sometimes decide to go for certification because they may feel that is the only way they can add value rather than going for quality. There are some certifications out there which are very important but eventually the intrinsic quality of the product is the main thing. If you don't have quality, you will need to compete on price. If you don't have quality and are only competing with certification, then your costs are going to be too high to compete with someone who only does the bare minimum." (Interviewee C)*

7.2.2 The role of ecosystem services in quality coffee production

7.2.2.1 Link between environmental quality and coffee quality - an industry perspective

While there is limited scientific evidence for a direct link between environmental quality and coffee quality, aspects of the environment (such as altitude and shade cover) are thought to have some impact on final cup quality of coffee (Chapter 8 will present a test of this link). There is widespread agreement within the industry that processing methods play an equivalent, if not even larger role in determining coffees' quality potential than

the environment. The quality of the coffee depends on altitude, environmental conditions, infrastructure, state and calibration of machinery, the producer's knowledge and the variety of the coffee plant. Environmentally conscious farm management will only result in great quality coffee when the appropriate production processes are in place as well and *vice versa*. Producer knowledge about plant maintenance, harvesting techniques, processing and drying are all considered crucial in producing a quality crop. Ultimately, a healthy ecosystem on and around the farm will only keep the potential for good quality crop but the realisation of that potential is dependent on the producers' cultivation and processing practices:

> *"It is the understanding of processing that will impact quality in the end. In order to have a good quality coffee at least five variables have to be in place: soil, altitude, climate, variety and management. Having a farm full of shade doesn't mean anything if you don't know how to manage it." (Interviewee F)*

Echoing the literature on geographies of care (Goodman, 2004) the importance of care and attention given to producing a quality product was a reoccurring theme during the industry interviews. The speciality sector prides themselves on dedicating tremendous attention to product quality and supplier relationships while recognising the importance of caring for the land and the surrounding ecosystem in providing a quality crop:

> *"Monoculture and intensive production already failed. If someone is taking care of the land, it is more likely that they will produce a better quality in the long-term because its more about caring for something." (Interviewee C)*

The role of shade in coffee management systems is a complex topic. The industry recognises the value of shade trees on coffee farms in a variety of ways: it can affect crop quality, provide income diversification, carbon credit, soil erosion control, habitat for biodiversity, air moisture regulation and it can help reduce agricultural inputs. Shade grown coffee is recognised to improve the quality of the soil and slow the maturation process of the coffee beans which in turn has a better chance to ripen and develop more favourable flavours.

> *"Oh yes! I reckon you can taste it! Coffee from shaded farms generally taste better – depending on altitude." (Interviewee I)*

> *"From experience, a lot of shade grown coffee comes from Central America, El Salvador, and nearly all of these coffees are grown under a diverse shade, and they produce some incredible coffees. […] Under shade, the coffee grows more slowly and it absorbs more nutrients." (Falcon Speciality)*

> *"Shade, and the associated slow maturation, contributes to the good taste and high acidity and it looks a lot healthier as well." (Interviewee R)*

Most agreed that a well-managed farm will produce decent coffee, however, the management, harvest, machinery, knowledge, shade maintenance will all be different from country to country depending on the local climate, temperature and geography. In the long run the farm that is managed with better environmental

standards is likely to produce more consistent quality coffee (compared to a farm with similar geographical conditions, such as altitude etc.) while the farm and the coffee plants will remain productive for a longer period. The link between the quality of the environment and the long-term sustainability of the farm is often recognised by the producers themselves:

> *"I think a lot of them [the producers] understand that they have to maintain the rainforest and the quality of the environment for their livelihood and for other generations. I think most people we buy from are quite conscious about that. If farmers produce good quality and have rainforest around their farms, they don't want that rainforest to go because they are scared that if that goes it will affect the climate and then their coffee quality will probably go down." (Interviewee D)*

7.2.2.2 Environmental standards of certification schemes

According to the Fairtrade Foundation, their environmental standards were written as a starting point as not every producer is 'ready' for implementing climate smart agricultural techniques. Producers therefore are encouraged but not required by the Fairtrade system to decide when they want to move onto compliance with more stringent environmental standards (Interviewee Q, pers. comm.) but there are no requirements for any performance measures or commitments for further progress:

> *"Our standards do include environmental standards but it is up to the producer to be ready to think about climate change and adaptation." (Interviewee Q)*

Fairtrade International gave a similar comment on the value of their environmental standards in contrast to those of Rainforest Alliance:

> *"Well, we are good on environmental standards. We took whatever we could from Rainforest Alliance and UTZ and everybody else but we didn't want to make it [the Fairtrade environmental standards] too demanding because we are not an environmental NGO. […] There is no point for us setting higher environmental standards than Rainforest Alliance. Our standards are pretty rigorous in terms of environmental 'stuff'. 50 percent of the Fairtrade guys are all Organic anyway." (Interviewee T)*

The industry, however, has a different opinion about the environmental credentials of Fairtrade and Rainforest Alliance standards. Despite the limited knowledge the industry claimed to have about the differences between certification, almost all interviewees recognised the environmental and production benefits of Rainforest Alliance's rigorous environmental standards and highlighted that they don't regard the Fairtrade environmental criteria very highly:

> *"When the first ascendants of Rainforest Alliance came out in the country then Fairtrade turned around and said oh yeah we got a paragraph somewhere in our foundation that says that we care about sustainability too which is complete ***; it is just pulling a paragraph out and making it extra bold." (Interviewee J)*

"They [Fairtrade] try to do something [about the environment] but it's very very weak. They have some key things around chemicals and they do have things around farm management but it's definitely not as strong as Rainforest Alliance. They [Fairtrade] are quite weak around water for example." (Interviewee L)

"It's great to have showers for the workers on the farm but if you don't have water running through it, what's the point?'' (Interviewee R)

Of all certification schemes on the market, Rainforest Alliance is seen as having the most positive impact on the quality of the environment, promoting better farming practices, soil protection. In the words of a speciality importer:

"[Rainforest Alliance] is just a good thing to do. If you are looking after the environment, if farmers learn to appreciate the importance of the environment […] it makes the whole thing sustainable. We really market those (environmental) stories, it is so important." (Interviewee P)

"I would say Rainforest Alliance is more environmentally focused and to me that means better farming practices, better soil structure." (Interviewee K)

"Rainforest Alliance seems to make a lot more sense because it's not just about paying a higher price but it is also about certifying that this is definitely not impacting the environment [negatively]." (Interviewee N)

7.2.3 Alternative to the alternative - Direct trade and the 'relationship model' vs. certification

As discussed earlier, speciality roasters tend not to buy coffee based on certification mainly because there is no direct connection between certification and coffee quality. For the majority of businesses in the specialty sector building and maintaining close relationships with producers is regarded as one of the most important factors in ensuring the long-term supply of high quality coffee. These speciality roasters emphasise the high quality of and their ability to develop 'direct' relationships with their producers based on trust and commitment rather than standard compliance and audits. This quality-focused and relationship-based sourcing strategy employed by many in the speciality sector are commonly referred to as 'direct trade' and more recently as 'the relationship model'.

Spending time with the farmers and listening to their needs and challenges has been an essential part of the practice of businesses with strong ethical values. Direct trade is based on trusted partnerships (Interviewee N, pers. comm.) and this trust symbolises the building block of long-term sustainability for many in the speciality sector. Due to the lack of third party verification and regulation, however, direct trade requires a more genuine trust between the participants of the trade than any certification scheme. The speciality sector believes that adding any level of regulation would only increase the cost both for the buyer and the producer and would not

necessarily bring the desired benefits. According to businesses operating in the specialty coffee industry, from the farmers' point of view the rewards for a great quality product are often much higher than the rewards given by any certification - given that the producer has access to markets (e.g. specialty coffee market) which is willing to pay a price that reflects the exceptional product quality. The essence of the speciality approach is based on building long-term relationships with the producers – either directly or via importers – provide continuous feedback on the quality required. A strong two-way communication not only serves the interests of the producers but also allows businesses (roasters) to communicate their (and their customers') needs to the producers so that they can concentrate their efforts into creating bespoke products.

Quality and 'direct relationships' take such a central place in the speciality sector that they have become almost synonymous with sustainability. The speciality industry believes in the value of long-term relationships and base their trust in personal connection rather than a third party verified certification label. Speciality roasters believe that only those producers are able to produce consistently high quality coffee who understand that treating their workers well and looking after the environment are the basis of long-term sustainability of their operation.

> *"We specifically decided not to go with certifications, just because we think there are other ways of purchasing coffee ethically, like direct. Sourcing coffee as directly as you can is a more sustainable way because you have transparency, actual communication with people through the chain as opposed to buying coffee with a logo on a bag." (Interviewee I)*

In terms of ethical considerations, any form of direct trade (even those via importers) that pays attention to and rewards producers for high quality production, is seen as a more effective way of 'ethical trading' than via certification schemes. This is mainly due to the significantly higher prices paid to the producer and the fact that there is no need for complicated paperwork, audits and certification fees. The paperwork is substituted by trust and reputation; audits are substituted by the buyers' visits to farms and time spent getting to know the producers and working with them on a more personal basis. Due to the personal investment in their trading relationships, if both parties are satisfied with the trading relationship, both producers and roasters tend to be more willing to commit to working together in the long-term.

> *"Sustainability for us means working with our suppliers in the long-term." (Interviewee S)*

Direct trade, however, is not a certification system and there is no third party verification that would regulate the use of the term. Direct trade is understood mainly as a trading model and a purchasing strategy but the definition of the term is subject to individual interpretation. The direct trade model is about developing long-term relationships, paying sustainable prices (negotiated via open communication about cost of production), and sourcing quality coffee. Direct trade, however, doesn't necessarily mean buying 'directly' from the farm. High quality coffees sourced via speciality importers are also referred to as 'directly traded', although it may be technically incorrect. Direct trade in the traditional sense - i.e. a roaster buys coffee directly from the farmer -

not only requires considerable resources at the roaster's side (time and liquidity) but also includes significant risks for both buyer and producer. Sourcing directly from smallholder farms is affordable only beyond a certain size (from the roasting operations point of view). Direct sourcing from a coffee origin requires the resources to fill a container with around 320 x 60 kg bags of coffee worth around of £120.000 (Square Mile, pers. comm) – for a speciality grade coffee. Most smaller speciality roasters, therefore, use a variety of trading models and only the more established ones are able to play the role of the importer too and source truly directly from producers:

> *"There are very good importers in the industry who can guarantee that […] who have been working with those farms for years, they have done the research etc. What we are trying to do is different. We are investing into the individual farmers and we go and check the conditions ourselves. You have to understand the whole product, not just your own raw materials." (Interviewee F)*

Even though direct trade is not very well defined, some common characteristics include a desire for transparency; long-term relationships; engagement with the producers; understanding their issues and finding solutions to those issues through a two-way dialogue.

> *"True direct trade is about representing the producers." (Interviewee U)*

Some of the Fairtrade principles are similar to direct trade as they both aim to shorten the supply chain as much as possible. In reality, however, not everyone wants to have or has the ability to invest in a direct relationship with mostly smallholder producers. Direct trade requires significant time and commitment to try and resolve any issues via communication rather than legislation or enforcement.

> *"Direct trade is painful. I spend more time on emails and skype than roasting coffee now. It's a full time job. I'm the head green buyer, I'm also managing director, I'm also head roaster, I'm also head of marketing, I'm also head of cleaning the toilets, I'm also head of making cups of tea for the staff." (Interviewee B)*

Using additional links in the supply chain (such as exporters, importers, traders etc.) can add value to both ends of the chain. Conscientious roasters also recommend their producers to use a variety of sourcing models and combine direct trade relationships (i.e. selling directly to a roaster) with larger importer assisted trading models in order to manage their risk (Has Bean, pers. comm).

> *"Relationships are much more important than the buying model. To buy with only one buying model I think is very dangerous and very stupid. […] It's really important to embrace all buying models" (Interviewee B)*

Direct trade is certainly not the quickest and easiest way to market coffee, but for many in the industry it is regarded as one of the most sustainable ways of trading as it is based on valuing personal connection, respect, transparency, a long-term view on building a business. The speciality coffee industry regards these values as the

basis of long-term sustainability and values commitment, trust and relationships higher than compliance to standards and audits.

> *"The basis of sustainability is relationships. The better and closer the relationship we have with our supply chain, the more protected we are from the things that happen in the market place and the environment. If one of our supplier's production halves one year, for example, I am not going to turn away just because of a drop in quantity and the reason I can do this is because I am not working with a magic recipe or against a hard price point." (Interviewee I)*

Many of the interviewees referred to their suppliers not only as business partners but as 'friends' and the role of a buyer as a 'manager of relationships':

> *"I would go as far as to say Alejandro is my best friend. I see my role very much like a manager of relationships with the producer and the customer and educator of both too. Anyone can buy coffee – long-term success and sustainability is about adding value to it." (Interviewee B)*

A growing expectation towards coffee roasters to source their raw materials from 100 percent certified origins can put producers without certification into a difficult position since for roasters it can be cheaper to find new suppliers who have 'ticked the certification box' than to help producers achieve certification. Those roasters, however, who built their ethical purchasing policy on the value of building long-term relationships with their suppliers, rather than on merely 'ticking the certification box', usually try and support their long-term suppliers through the certification process.

> *"100 percent certification is an important step that we recognise and celebrate, but there's a lot more to do. […] We had to decide whether to turn our backs on them [uncertified suppliers at the time], or to work with them to achieve certification. It was a long journey and it would have been easier and cheaper to find new suppliers, [...] but we stuck with them." (Interviewee S).*

Securing long-term supply of quality coffee requires investments in building strong relationships with producers and suppliers. Certifications can have an important role in this journey but they are not necessarily seen as the cornerstones of ethical supplier relationship management. Unless certifications are able to provide a more substantial added value, not only to producers but also to businesses in the middle of the supply chain, they might 'organically disappear' from the supermarket shelves:

> *"Certification has always been secondary to us. First is quality of product and supplier relationships. Our Fairtrade sales are declining and our Fairtrade priority is low. […] Fairtrade is organically disappearing from our range mainly because our focus is and has always been on quality and supplier relationships and not necessarily on certification itself." (Interviewee S)*

Given that all certifications have particular criteria and barriers for entry (cost, organizational structure etc.), not all producers can afford certification.

"Un-certified coffee could come from a cooperative which have Fairtrade, Rainforest Alliance, UTZ or 4C accreditation and that cooperative can also choose to sell conventional coffee because the reality is that we do not have one particular grade of coffee being produced, there is a variation and if you want to sustain something there has to be a channel for everybody to be able to sell that coffee. Therefore, there is no reason why you couldn't have something that was sustainably put in place by the farmer, even without certification." (Interviewee J)

From the speciality sector's point of view, the certification system is seen as suitable mainly for commodity producers while coffee that possesses the quality required by speciality buyers is more likely to come from producers who not only rely on certification premiums to increase their income but who seek out – or are fortunate enough to be found by – speciality marketing channels. Provided the producer has access to the speciality market, the financial rewards for a high quality product are often much higher than the rewards given by any certification premium.

"By buying specialty grade coffee and paying the highest price for the pick of the crop, what speciality buyers do is they are incentivising growers to produce more of that quality because that's where the higher price will come from." (Interviewee K)

Those in the speciality sector who see 'quality' as the 'certifier' of sustainable production believe that the producers who are willing to invest in their farms and take great care in producing consistently high quality coffee, will also likely to exercise the same attitude of care when it comes to social welfare or environmental conservation on the farms.

''My point is that if you pay for quality you pay a higher price. And all the things that go into producing quality will result in higher social welfare, higher environmental awareness as well as better living standards for people. I think it's about that three front of environmental, economic, social impact and it's actually why I don't necessarily buy coffee based on certification scheme like Rainforest Alliance, Fairtrade etc. because I don't think that necessarily they do enough to work with growers to produce the quality that has an impact on these areas. That's why we decided to work directly with a couple of companies […] who are committed to source coffee from direct trade channels which is all about environmental, social, economic sustainability.'' (Interviewee K)

7.2.4 Sustainability challenges and opportunities

7.2.4.1 Climate change

The coffee sector as a whole faces a number of challenges at both production and consumption levels. Given the global nature of the way coffee is traded, regardless of where the challenges materialise, every part of the value chain will be affected. Of all the industry challenges highlighted in Chapter 3, climate change and the supply of high quality arabica was perceived as the single biggest threat to the long-term sustainability of the industry.

"I think supply of quality coffees is going to be one of the biggest issues in coming years. […] Yes the market is low now but sustainability isn't just something you can be trendy to worry about it's actually good business practice! We have to worry about where our supplies are coming from, we have to worry now about what happens to our business in 5 years 10 years' time when good quality arabicas might be twice the price of Brazils and you know explaining that and taking our customers along that journey is gonna be hard work for us and that is a consequence of people not paying attention to sustainable production now. [However] individually we'll change nothing anyway, everybody has to think this way." (Interviewee J)

In the quest to combat the impacts of climate change, many producers have started to replace their higher quality, but sensitive varieties, with more resistant varieties in order to keep production levels constant. The challenge with disease resistant varieties is that they tend to have slightly less desirable taste profiles and lower overall cup quality. In addition to the spread of lower quality arabica varieties, the percentage of robusta varieties (which are even more resistant to pest and diseases) are also on the rise in conventional blends. In 2010-2011 when arabica prices rallied, many mainstream brands increased the percentage of the cheaper robusta in their blends. Consumers accepted (or likely didn't notice) the slight change in the flavour of their cup (robusta tends to taste bitter due to its higher caffeine content) therefore even though the arabica prices have come down since, the brands have no incentive to switch back to the more expensive arabica coffees.

"There is a bit of a scene change going on in terms of the components of blends. The overall composition of blends are changing, more robustas going into blends." (Interviewee L)

The speciality market's constant thirst for new flavours is threatened by the fact that there is limited supply of high quality coffee on the market and speciality roasters often end up buying coffees from the same farms as their competitors.

"Right now, it is a luxury problem though, we have more options (in terms of importers) but they all tend to offer the same coffees so you end up having the same coffees that the other roasters do. Finding new farms is the real challenge for importers and the specialty industry." (Interviewee I)

7.2.4.2. Volatility and quality based pricing

Another key challenge recognised by the speciality industry is the extreme volatility of market price for commodity grade coffees. Volatility makes long-term planning difficult, both for producers as well as buyers. The quality based pricing mechanism within the speciality industry has the potential to buffer some of the volatility within the industry, however, their effective working relies on the strength of the relationship between producer and buyer and their mutual commitment to longer term contracts (with pre-negotiated prices). The speciality industry's effort to distance itself from the commodity market can be hindered by the difficulties in gaining producers' commitment to long-term contracts. Given the history of power relations within the coffee

industry it is not surprising that producers of any origin would be extremely cautious when it comes to trusting their buyers to stick with them when problems arise:

> *''For a farmer, some money today is better than the promise of a little bit more money tomorrow. This is where I come back to the long-term relationship of trust. Farmers have been lied to 130 years, they have never learnt to trust us." (Interviewee U)*

Differentiation based on quality, bespoke production and traceability are the driving forces of sustainability in the speciality sector. For many in the speciality sector, the singular focus on coffee quality seem to have taken the role of certification, acting as a mediator of ethics and sustainability.

> *"Quality is very much the best way forward in terms of sustainability." (Interviewee C)*

The growing but arguably still limited consumer interest in the intangible aspects of trade and ethics has started showing signs of transforming into a growing interest in the tangible qualities of the final beverage. As ethical and sustainability credentials of certified products are, by their nature, intangible and immeasurable from the consumers' point of view, it is more difficult to maintain long-term commitment towards them. Empirical evidence of the speciality industry suggests that contrary to the expectations of the certification agenda, consumers are more likely to build loyalty when presented with a product that satisfies both their short term self-enhancing needs (i.e. great tasting coffee) as well as adhere to the longer term self-transcending aspirations of helping distant people and places. In other words, ethical 'stories' without tangible product quality are less likely to develop the initial interest into sustained purchasing habit than those products which embody high standards for both tangible and intangible qualities. Those passionate about certain aspects of the production, consumption or trade of this versatile commodity, have to accept the reality that ethics and sustainability are not always of interest to the consumer.

> *"Occasionally we get one or two customers asking about Fairtrade these days. But when we started in 2006 we had people sticking their heads through the door and asking is the coffee Fairtrade and if you hesitated in any way they would just walk away straight away. But this doesn't happen anymore. There is an expectation that the coffee is ethically traded but people don't want to know more. If you say it is ethically traded it is enough. We explain that direct trade is better than Fairtrade. But they don't want to know more, they just want their product and leave." (Interviewee K)*

While the 'ethical story' of a coffee product may only spark occasional interest in a smaller consumer segment, the speciality sector believes that an incremental increase in the perceived quality of the coffee is more likely to grab the attention of a wider range of consumers:

> *"People are driven initially by the desire to drink great coffee – it drives consumer behaviour more than any ethical approach." (Interviewee K)*

7.2.4.3. Traceability and transparency

Besides quality, another cornerstone of sustainability in the speciality sector is traceability and transparency. Transparency and traceability are crucial in encouraging continuous improvement both in product quality as well as social and environmental standards of farming, trading and processing of coffee. Transparency is often confused with traceability, and although the two concepts are interlinked, they are not the same. Traceability refers to the detailed information available about the entire journey the coffee makes through the supply chain, from producers to final consumer. Transparency, on the other hand, is about making information available on all aspects of the trade from purchase prices for green coffee, the number of years a roaster has had a relationship with a particular farm or the salaries it pays for its baristas (Neuschwander, 2013).

Modern food production systems have a tendency to distance consumers from producers and the environment in which their food is produced and this detachment makes the information acquirement of the circumstances of production more costly and time consuming (Whatmore and Thorne, 1997; Winter, 2003). The global supply chain of coffee, however, doesn't only cover long distances. It is also complex and where coffee changes hands, information can (and often does) become altered or get lost altogether. Coffee growers, in particular, tend to be "left out of conversations about where their coffee goes after it leaves their farm" (Neuschwander, 2013). While the 'ethical stories' behind certification labels and the 'quality story' delivered by the speciality sector both help bring the stories of production closer to consumers, there is still a notable lack of understanding at the producer level of the circumstances of consumption. Creating more awareness of the stories of consumption at the producer level could help producers focus on the things that create most value to consumers.

> *"Often they have never even tasted their own coffee. It's remarkable the level of ignorance, it's almost scary. Farmers didn't really know what happened to their coffee – sometimes they thought it was used to make bombs or weapons. The misinformation was scary; they didn't know coffee was for drinking. It was only when they came here and saw cafes with their own eyes. They didn't believe us before." (Interviewee U)*

In the speciality sector's point of view, the best way to engage consumers in any discussions about the origins of coffee and the story of the people and places that produce the beans, is through their engagement with the versatility of flavours and processing methods (strongly influenced by the local environmental factors) that make each coffee unique and the story behind them worthy of interest.

> *"People now are asking what sort of varieties do we have, or do we have any naturals. And we are trying to deconstruct the name 'coffee' to different flavours and products. The specialty coffee has more similarities with the specialty fruit in general because the aim is to differentiate the flavours and to make decisions on the basis of flavour." (Interviewee F)*

The majority of coffee in the world is sold in bulk and it is not always possible to identify where exactly the coffee came from. While the country of origin is almost always known at the point of sale (due to the fact that the origin country has a great impact on the taste profile of the coffee), the region or the exact producer (group) isn't necessary specified in the contract. Traceability of coffee depends on a number of factors including the strength of local institutions, cooperative structures, the length of the supply chain and the strength of the relationship between producers and buyers. In certain origins the coffee marketing system is filled with corruption and the speciality buyers who operate outside the certification systems can't always determine what percentage of the prices they paid actually reached the coffee producer. For example, in Brazil the marketing system is very liberal and direct but in East Africa it is highly fragmented and extremely difficult to trace (Interviewee S, pers. comm).

> *"In Kenya the auction price goes to the cooperative society. […] There's a fair bit of corruption going on. Again, what you are paying for, you just kind of hoping and praying that it went to the right people. […] Choose your partners wisely and hope that everyone is honest down the chain." (Interviewee I)*

Marketing systems at origin often define quality, price and visibility of the farmers (who have a much smaller percentage of the final sale price). In situations when farm traceability is not possible due to the monopolistic power of cooperatives, Fairtrade can increase traceability at least to the cooperative level:

> *"The truth is, I do admit, that at some point you do not actually have information [about the farm you are sourcing from], you are not actually aware, you haven't been on the ground, you use third party or beyond third party information; therefore, we actually have a disfranchise and a very disintegrated link and the only thing that is linking us is Fairtrade. "(Interviewee J)*

Traceability all the way to the farm level is only possible when individual farms can gain certification. Within the Fairtrade system, however, individual farms cannot be certified, only cooperatives can achieve certified status. Traceability in the Fairtrade system, therefore, can only ever reach to the cooperative level which could include hundreds of small farms. This system of sourcing coffee from cooperatives (certified or not) doesn't allow traceability to the farm level. As a result, providing any support for or quality improvement programme for the individual producer becomes impossible from the buyers' point of view. Given that certifications are expected to close the gap between production and consumption of otherwise faceless commodities, Fairtrade, often regarded as 'the' ethical certification, is actually the least effective in delivering this expected level of traceability. Those who want farm level traceability tend to opt either for Rainforest Alliance, UTZ or a direct trade model:

> *"[…] we actually use Rainforest Alliance because we have traceability there and it is a benefit Rainforest Alliance has" (Interviewee J).*

A critical element of the specialty coffee industry stems from its ability to shorten the supply chain in ways that arguably benefit both ends of the chain, producers and consumers alike. Having meticulous granular data about

the origin of the coffee (traceability), however, does not necessarily mean transparency of costs, expectations or information involved. While certification schemes have sparked (or arguably responded to) an insatiable thirst for traceability in the coffee industry, producers and conscientious roasters have now started to look for transparency and better overall understanding of each other's true costs of production as without this information, it is difficult to claim the 'fairness' of any given price.

> *"Traceability is not just about sharing stories. While the coffee industry has an insatiable appetite for traceability at the moment, farmers are looking for transparency and better overall communication" (Neuschwander, 2013).*

The final contract price can depend on many factors, including the quantity purchased, the growing season, whether it's certified, and at what point of the year the market price and the differential were fixed (if the coffee was traded on the futures market). Due to the wider availability of information and resources (time and education) to translate that information, large roasters often have more power to influence the final price and the terms and conditions of the contracts. Understanding the cost of production and committing to paying a sustainable price is an essential part of transparency and it is becoming especially important for roasters interested in developing long-term trading relationships with producers under the direct or relationship model.

> *"Transparency within a direct trade model is not only about negotiating the price but also about being open about the challenges and cost of production of the farm." (Interviewee U)*

While some key stakeholders in the speciality sector firmly believe that seeking high quality and paying a high price is enough to ensure ethical and sustainable practices at production level, others are beginning to recognise that there might be space for standards compliance in quality driven trading relationships as well. Although many operating in the speciality coffee sector have experienced considerable resistance and unjust accusations of not following an ethical approach due to their lack of interest in certification labels, some still see certifications as having the potential to play a positive part in the industry - provided their proponents leave space for new approaches to sustainability and ethics:

> *"There is space for everybody. We shouldn't work against each other we should work together. Everything in coffee affects the world. The specialty industry is like a leading flag in the pyramid of coffee. And that's why certifications sometimes are sort of competing with each other because it is such a small part of the coffee industry and they feel that they need to compete on the ground but it is not like that. I wish they could understand that they are not competing with each other, what they are competing with is ignorance and the lack of information of the consumer and the lack of information of the farmer. And when you supply them with that information then they can make a decision on which product they want to buy and to supply that information is our challenge as an industry. That's the way I see it." (Interviewee F)*

The speciality industry aims to move coffee and its millions of producers out of the facelessness of commodity production by shifting consumer attention to the tangible characteristics of quality coffee; while certification systems aim to achieve similar goals by emphasising the unseen, intangible aspects of trade and production such as labour conditions, living standards and environmental quality. Neither approach, however, can deliver the ultimate solution to all producers and circumstances:

> *"There isn't one overarching strategy for development. Climate change is going to become one of those pockets of great work but who is helping to bring all that work together? Other industries have done better. For example, in tea the Forum for the Future has brought together the tea industry to a roundtable structure where most of the big tea companies globally at the table. I think in coffee that's the next step for us and it's not about it being a Fairtrade strategy, it's more about it being a coffee development strategy of which we are part of. Industry collaboration is the solution for a sustainable future not only for farmers but for the coffee industry." (Interviewee Q)*

7.3 Discussion

Over the last few decades, differentiation based on added value has become synonymous with certification. Voluntary standard systems and their associated 'ethical' certification initiatives have arguably monopolised the sustainability agenda. There is, however, another segment in the market that claims to deliver beyond the promises of any certification scheme: speciality coffee. The speciality sector is growing more rapidly than the certification market ever did. As of 2016, there are an estimated 1,400 independent specialty coffee shops in the UK, and the number is estimated to double by 2020 with an annual growth rate of 12 percent (Allegra, 2016). But what is driving this astonishing growth rate?

The speciality sector speaks the language of quality and traceability and the steady growth of its market share illustrates that these concepts create value to consumers. Empirical evidence shows that consumers in the speciality sector are interested and willing to pay more for coffee that tastes better on the basis that the quality premium is necessary to cover the increased costs of producing an exceptional quality product. These quality premiums are sometimes referred to as the 'cost of quality', or the 'cost of direct relationships'. Regardless of terminology, the speciality sector is willing to pay more for coffee that tastes better because they trust that their customers will also pay more for 'excellence in a cup'. Speciality consumers are told that the price premiums of exceptional quality products are rewards for excellence and incentives for the growers to invest more time, money and energy into continuously improving the quality of their coffee. The speciality sector claims and sometimes flat out declares that the higher prices paid for quality coffee are improving the growers' lives, even more than certification premiums would be able do. But how are benefits to the producers defined? Are the 'speciality producers' really better off than producers of conventional or certified markets?

Similar to the debate about certifications, no one knows the extent to which the benefits of speciality coffee are scalable. How do the quality premiums fair with the increased production costs of exceptional quality crop? Producers of speciality grade coffee may be getting significantly higher prices for their crop one year, but the same farm or region may not be able to achieve speciality quality every year. Although there are some guidelines as to how to maximise the likelihood of producing high quality crop, in the face of climate change, even achieving a consistent and decent quality crop can be a challenge for most smallholders. If the premiums are truly contributing to create better quality coffee, then shouldn't we see that reflected in increasing supply of speciality coffee? The speciality industry faces a volume issue. Neither the average quality scores, nor the overall volume of speciality grade coffee seem to be increasing over time from the same speciality growers. Producers tend to be able to sell between 10-40 percent of their total production at premium prices while the rest is sold on the conventional or certified market - provided the producer was able to invest into certification. At these volumes, even the high speciality premiums have little chance to change producers' lives.

Contrary to assumptions, producers who are able to produce speciality grade coffee, tend to use their high quality speciality coffees as a way to build their reputation with buyers in the hope that the positive reputation for quality and consistency will bring higher volume business in the future. The truly exceptional prices paid by speciality roasters are often linked to bespoke quality requirements unique to the roasting company who develops them. What is deemed to be a unique and premium level coffee for one roasting company, may not suit the needs of another. This can lead to different interpretations about 'how special' a speciality grade coffee is and how much it may be worth on the market. It may, therefore, be worth asking if the grower would perhaps be better off producing a quality that satisfies a slightly broader spectrum of potential buyers? While the speciality premiums may benefit one single producer, few in the speciality community have so far cared to investigate the impact speciality premiums have on the rest of the community. Do the higher prices received by some producers inspire the rest of the community to follow suit or do they exacerbate existing inequality and intra-community power struggles? The answer to these questions may indeed be very positive but how this strategy impacts the wider community and what long-term value this strategy might bring to the entire supply chain, is yet to be verified.

Many in the speciality sector believes in the power of quality premiums just as blindly as Fairtrade evangelists believe in the power of the Fairtrade system to eradicate poverty from commodity supply chains. Although the industry and academia are still debating the best ways to measure the impact of certification standards, there is even less clarity over the impacts of 'direct trade' and speciality premiums on human welfare and environmental conservation. Those involved with the supply chain know what the extra premium is meant for but there remains uncertainty about its long-term impact on producer livelihoods, the community or the broader environmental matrix. Can we assume that production of exceptional coffee quality will always ensure environmentally sustainable and ethically sound production practices? Should we assume that producers of high

quality coffees always apply the highest standards for the protection of waterways, soil, biodiversity and wellbeing of farm workers? These are only some of the questions that born as a result of this study and would require further research to answer them in full.

7.4 Summary

This chapter presented the findings of interviews conducted with those key stakeholders in the value chain who enable the flow of goods, information and resources between geographically distant places of production and consumption: importers, roasters and speciality coffee shops. Given the rapid rise of the speciality coffee sector in the UK market and their apparent lack of support for voluntary certification initiatives, the study aimed to explore what matters most to key players of the sector; how they view the role and significance of certifications in their own purchasing decisions and what alternative trading arrangements such as 'direct trade' and 'relationship approach' might bring to the sustainability agenda of the coffee sector. The interviews highlighted how understandings of sustainability and ethics have shifted within the speciality sector in recent years and how their key motivations to care about the wellbeing of producers and their environments within the supply chain may complement what matters most for consumers and producers.

Both the certified and the speciality sector set out to increase the value retained at the producer end of the chain by choosing differentiation, traceability and premiums as their main marketing mechanism. While certifications enable producers to differentiate their products on the market based on the social and environmental credentials of their production practices, the speciality sector focuses on paying exceptional prices for exceptional quality coffees. Certified coffee does not necessarily translate into high quality coffee and therefore the certification model does not work for the speciality sector. From the speciality industry's point of view, certifications are not seen as adding any tangible value (great tasting coffee) to the consumer and even the value created at the producer level is seen as questionable. Certifications incur substantial additional costs both at the producer as well as the buyers' level which can hinder the uptake of these schemes by those who could potentially benefit from certification premiums the most. Despite the substantial increase in certified coffee on the market in recent decades, supply still outperforms demand. The majority of demand has been created by multinationals and retailers who are seen as benefitting more from the 'ethical agenda' of certification schemes than the producers themselves. Given the inherent risk of corruption in most coffee producing countries, the speciality sector has also raised some questions regarding the effectiveness of cooperative based premium mechanisms.

Paying sustainable prices is a fundamental policy sustainability conscious businesses are showing increasing commitment towards. Determining what price level is sustainable for the producer, however, can be a daunting challenge for any business. While the fixed minimum price within the Fairtrade system has certainly been an important step towards addressing extreme volatility within the market, due to the great variation in labour and input costs between different producing regions, a globally uniform minimum price cannot be sufficient in all smallholder context. On the other hand, while the speciality premiums often clearly outperform the premiums of any certification scheme (including minimum price arrangements), it is important to note that the production of speciality grade coffee also requires considerable investment in time and resources which inevitably pushes

production costs higher than those of conventional coffees. Sustainability conscious businesses are putting increasing efforts into understanding the production costs of their producers. They do it because 'caring' about the profitability and prosperity of their suppliers and producers, makes business sense for them. Information about cost of production, however, can be a sensitive question which producers may, or may not feel comfortable sharing with their buyers. The ability to share such sensitive information requires strong trading relationships built on trust, transparency and communication – values often emphasised by the speciality sector.

Cost of production is also closely related to farming practices. Sustainable agricultural practices not only help maintain the ecological integrity of a farm but they also help increase efficiency thus reduce overall production costs. Echoing the literature on geographies of care and responsibility the importance of care and attention given to producing a quality product was a recurring theme during the industry interviews. The speciality sector prides themselves on dedicating tremendous attention to product quality and supplier relationships while recognising the importance of caring for the land and the surrounding ecosystem in providing a quality crop. Although the existence of a link between environmental quality and coffee quality is widely acknowledged within the industry, processing methods play an equivalent, if not even larger role in determining the quality potential of a crop. Environmentally conscious farm management will only result in great quality coffee when the appropriate production processes are in place. Investments into conservation programmes on and around agricultural farmlands, therefore, are most effective when they are able to show a positive impact on productivity, efficiency and quality of the farm.

The speciality sector believes that in order to inspire long-term commitment to 'ethical choices', the intangible credentials of the product have to be in alignment with its tangible sensory qualities too. In this sense, coffee quality for the speciality sector has become the mediator of ethics and the main indicator of sustainability. While the concept of buying 'directly' from growers and paying them premium prices for premium quality coffees sounds like the fairest option of all, when it comes to the overall sustainability of the industry and the long-term prosperity of it smallholder farmers, the speciality model still leaves a number of questions unanswered. Speciality buyers can pay exceptionally high prices for high quality coffees, but unless growers are able to produce significant volumes of this high quality, the 'speciality premiums' are not going create long-term prosperity and security in smallholder livelihoods. Quality premiums are a great way to identify growers who are willing to go the extra mile for producing a high quality crop, recognise their hard work, and establish strong relationships built on transparency and trust. However, in order to tackle some of the bigger challenges the industry faces, premiums alone cannot be used as a mechanism to improve the sustainability of the industry and the quality of life of producers. Premiums should only be a starting point for a conversation about a broader understanding of quality and sustainability, including the quality of life of not only the producers but their seasonal workforce and the sustainability of the environment on and around the farms.

Chapter 8: Empirical test of the link between environmental quality and coffee quality

8.0 Aims and objectives

Given the importance of coffee quality to the speciality coffee sector and the focus of environmental standards of certifications, investigating the potential link between environmental quality measures and coffee quality could bring valuable insight for the speciality sector as well as the certification industry. The sustainability agenda of the speciality sector works on the assumption that the ability to produce exceptional coffee quality presupposes the existence of a number of sound environmental conditions on the farm. Seeking coffee that complies with rigorous environmental standards, i.e. from certified sources, therefore, is deemed as unnecessary. In order to verify this assumption, the existence of a direct link between coffee quality and environmental quality would be necessary.

This chapter aims to test the existence of this assumed direct link by testing the relationship between a number of environmental quality measures of smallholder coffee farms near Cusuco National Park, Honduras, and the cup quality of the coffee produced on these farms. The chapter evaluates the actual and potential contributions selected coffee farms are making to forest and wildlife conservation by assessing the correlations between the environmental conditions, biodiversity and the quality of the coffee grown on each farm.

The main questions this chapter aims to investigate:

1. Is there a significant relationship between coffee cup quality and individual farm quality measures?
2. Is there a significant relationship between coffee cup quality and farm biodiversity (indicated by local dung beetle abundance and diversity)?

In order to answer these questions, different environmental quality measures were explored using multiple regressions, to test which farm or environmental quality measures could account for variation in coffee quality. Coffee quality in this sense is understood by the cup quality potential of the coffee bean itself if processing methods and roasting are taken as constants (see Chapter 3).

8.1 Introduction

As elaborated in Chapters 2 and 3, some models for improving environmental conservation and producer livelihoods via alternative trading schemes rely on assumed or hypothesised links between product quality and environmental quality on the farm and in the surrounding landscape. For example, the relationship between environmental quality and agricultural crop production has been widely touted. Other studies have related food quality to food safety (Wandel and Bugge, 1997), rather than to its sensory quality (i.e. taste), or have reduced

the definition of environmental quality to soil quality (Pierzynski *et al.,* 2005), producing regions (Decazy et al., 2003) or shade (Vaast et al., 2005). In contrast to Fillion and Arazi's (2002) contention that "organic food tastes better" is not valid, Rembiałkowska (2007) argued that organic crops contain significantly more mineral compounds and also usually have better sensory qualities. Overall, however, the link between environmental quality and sensory quality of the food crop may need to be examined on a case by case basis.

Although the existence of a complex relationship between ecosystem services and agricultural production has been widely recognised (Jackson and Lombard, 1993; Tilman et al, 2002; Swift et. al, 2004; Zhang et al., 2007; Power, 2010), so far few studies have attempted to measure and quantify this relationship within the context of coffee production (Olschewski et al, 2006; Méndez et al, 2009; Bosselmann et al, 2009; Barbosa et al, 2012). Aside from anecdotal evidence within the speciality coffee sector, empirical testing of the assumed link between environmental quality and coffee quality is extremely rare, only a handful of studies have attempted to define the relationship between environmental quality and the beverage or cup quality of coffee (Silva et al, 2005; Muschler, 2001; Vaast et al, 2006; Warner, 2007). This is mainly due to the fact that the very definitions of quality of a commodity and the quality of the environment are problematic due to the complexity of processes involved in creating a 'quality' environment or a 'quality' agricultural product.

The cup quality of the coffee from the study's smallholder farms was assessed by professional tasters at a local exporter facility, Molinos de Honduras, who roasted, prepared and tasted the cups using industry standard (SCAA) cupping methodology. Environmental quality was measured using a biodiversity indicator taxon (dung beetles) and visual assessment of the vegetation structure and condition on the farms. Vegetation structure is important for a wide range of species, such as birds (e.g. MacArthur and MacArthur, 1961), and has been shown to correlate with biodiversity (e.g. Santi *et al.*, 2010). Dung beetles are dependent on vertebrates for their primary resource, and are often specialised, meaning that their diversity should be a good indicator of vertebrate diversity, especially of mammals (Nuñez-Mino, 2009). Dung beetle territories are small enough that they reflect the biodiversity of a localised area such as a coffee farm, but large enough to include some of the surrounding forest as well (Nuñez-Mino, 2009). Indeed, empirical evidence suggests that dung beetles are particularly suitable for indicating environmental condition (Gardner *et al.*, 2008) and their species diversity has been found to be a good surrogate for the biodiversity of other taxonomic groups within Cusuco National Park (Nuñez-Mino, 2009).

8.2 Results

The coffee quality scores from all 34 farms tested were high, and the range from the lowest to highest was relatively narrow: from 77.75 to 84.88 (on a scale of 0-100). All scores for defects were zero and all scores for uniformity, purity and sweetness were 10; because there was no variation within these variables, they could not be analysed separately. Despite the relatively narrow range of values within the other taste components (scoring between 6.5 to 8), and in the overall coffee quality score, significant relationships between coffee quality and climate-related variables were found, the strongest being with altitude (Figure 8.1). Altitude had a statistically significant positive relationship with each of the individual taste components analysed (Table 8.1), with Pearson's *r* ranging from 0.405 (body) to 0.655 (aroma). Thus, all aspects of coffee taste tended to improve at higher altitudes, within the 380m altitudinal range measured (927 to 1308 metres above sea level). Similar, but weaker relationships were found between coffee taste and both mean annual temperature and rainfall (both negative relationships; Table 8.1), but these variables were strongly co-linear with altitude and were not significant in accounting for variation in coffee quality when combined with altitude in multiple regressions.

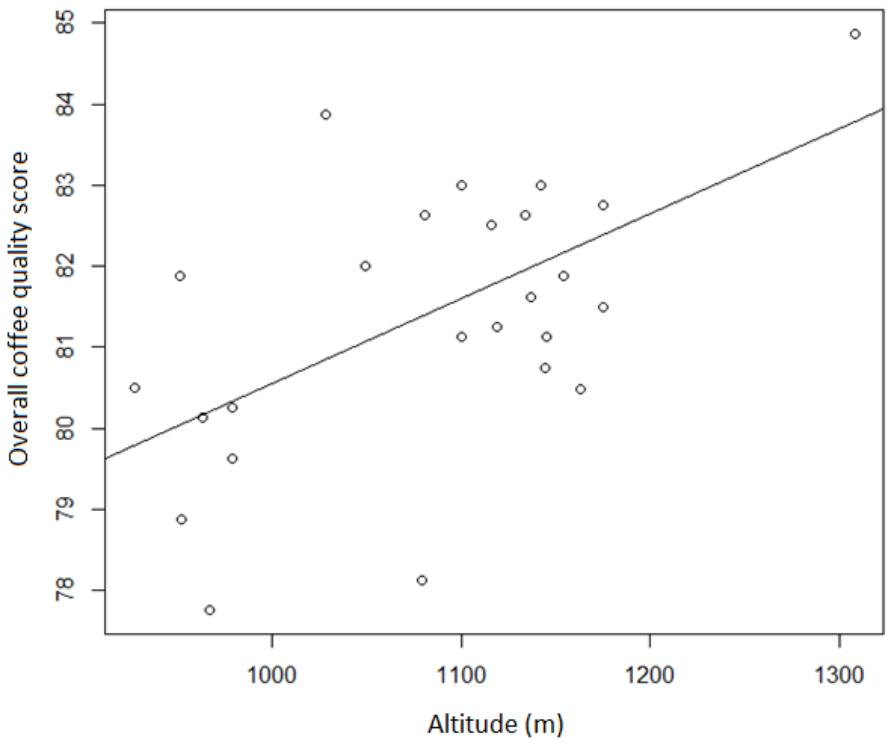


Figure 52: Scatterplot of altitude against overall coffee quality score. The positive relationship shown (Pearson's r = 0.592) is statistically significant (P<0.001).

Table 24: Correlation matrix of coffee taste/quality measures and climate-related variables. Values of Pearson's r are shown; these are significant at P<0.05 where |r|>0.36, and are significant at P<0.01 where |r|>0.46. Some variable names are abbreviated in column headings. 'Temperature' is mean annual temperature, 'Temp range' is the range of monthly mean temperatures across the year, 'Rainfall' is mean annual precipitation and 'Coffee quality' is the overall score.

	Altitude	Temp	T-range	Rainfall	Aroma	Flavour	Afters	Acidity	Body	Balance	T. rating	Quality
Altitude	1	-0.838	0.74	-0.832	0.655	0.562	0.572	0.553	0.405	0.525	0.58	0.592
Temperature	-0.838	1	-0.823	0.917	-0.467	-0.387	-0.4	-0.383	-0.265	-0.391	-0.428	-0.418
Temp range	0.74	-0.823	1	-0.91	0.433	0.417	0.381	0.394	0.311	0.451	0.439	0.433
Rainfall	-0.832	0.917	-0.91	1	-0.481	-0.479	-0.407	-0.403	-0.327	-0.447	-0.475	-0.464
Aroma	0.655	-0.467	0.433	-0.481	1	0.863	0.78	0.778	0.683	0.739	0.825	0.866
Flavour	0.562	-0.387	0.417	-0.479	0.863	1	0.914	0.881	0.828	0.891	0.936	0.969
Aftertaste	0.572	-0.4	0.381	-0.407	0.78	0.914	1	0.904	0.815	0.892	0.923	0.958
Acidity	0.553	-0.383	0.394	-0.403	0.778	0.881	0.904	1	0.788	0.908	0.858	0.938
Body	0.405	-0.265	0.311	-0.327	0.683	0.828	0.815	0.788	1	0.836	0.852	0.883
Balance	0.525	-0.391	0.451	-0.447	0.739	0.891	0.892	0.908	0.836	1	0.897	0.944
Taster rating	0.58	-0.428	0.439	-0.475	0.825	0.936	0.923	0.858	0.852	0.897	1	0.966
Coffee quality	0.592	-0.418	0.433	-0.464	0.866	0.969	0.958	0.938	0.883	0.944	0.966	1

None of the correlations between coffee quality measures and farm quality measures were statistically significant (Table 8.2). The same was true for all correlations between coffee quality measures and all dung beetle biodiversity measures (Table 8.3). Given that altitude appears to have been the main measurable influence on coffee quality, this variable was combined with farm quality measures, one by one, and with dung beetle biodiversity measures (again, one by one), to test whether controlling for the main influence revealed any hidden subordinate relationships between farm or environmental quality measures and coffee quality. In every case, the only statistically significant explanatory variable was altitude, all the other variables remaining non-significant. No notable geographic patterning was found for any variable or set of model residuals.

Table 25: Correlation matrix of overall coffee quality and selected farm quality variables.Values of Pearson's r are shown; these are significant at P<0.05 where |r|>0.36, and are significant at P<0.01 where |r|>0.46. Some variable names are abbreviated in column headings.

	Vegetation	Leaf litter	Weeds	Coffee plants	Farm quality	Coffee quality
Vegetation structure	1	0.825	0.459	0.303	0.906	-0.245
Leaf litter	0.825	1	0.243	-0.03	0.757	-0.09
Weed prevalence	0.459	0.243	1	0.489	0.723	-0.031
Coffee plant quality	0.303	-0.03	0.489	1	0.529	-0.214
Farm quality	0.906	0.757	0.723	0.529	1	-0.187
Coffee quality	-0.245	-0.09	-0.031	-0.214	-0.187	1

Table 26: Correlation matrix of overall coffee quality and dung beetle biodiversity and abundance variables. Values of Pearson's r are shown; these are significant at P<0.05 where |r|>0.36, and are significant at P<0.01 where |r|>0.46. Some variable names are abbreviated in column headings.

	Log(abun)	SR	Rar-SR	Simpson	Shannon	Coffee quality
Log(abundance)	1	0.751	0.361	0.386	0.484	-0.017
Species richness	0.751	1	0.712	0.773	0.876	0.141
Rarified SR	0.361	0.712	1	0.924	0.903	0.12
Simpson's diversity	0.386	0.773	0.924	1	0.974	0.139
Shannon's diversity	0.484	0.876	0.903	0.974	1	0.177
Coffee quality	-0.017	0.141	0.12	0.139	0.177	1

8.3 Discussion

The widespread assumption that farms with higher environmental quality tend to produce higher coffee quality received no support – either when environmental quality was measured using on-farm vegetation and/or ground-cover variables, or when dung beetle biodiversity and abundance were used to measure the environmental quality of the farms and their immediate surroundings. Even though there was considerable variation in some of these farm and environmental quality measures, none of them correlated significantly with coffee quality, whether altitude was accounted for or not. The coffee grown at higher altitudes within Cusuco National Park tends to be of good quality, scoring more highly on all the taste components that showed variation. This reinforces the notion that higher altitudes positively influence arabica coffee quality. Weaker relationships were found between coffee quality and both temperature and rainfall, but the fact that these variables did not add significant explanatory power to altitude (with which they are strongly co-linear) suggests that these may, at best, be only part of the altitude effect. However, the climate data on which the temperature and rainfall measures were based, and the interpolation method used to calculate each on a per-farm basis, are such that considerable error is likely to be contained within these variables. Given that all the farms analysed are located at relatively high altitudes, the measured variation in coffee quality was relatively small. This limited variation may be one reason why there was no clear relationship between coffee quality and any of the measures of environmental quality. Even so, it is important to note that the reasonable amount of variation in environmental quality was not sufficient to achieve statistical significance in accounting for variation in coffee quality, while the moderate variation in altitude was sufficient. Nor did controlling for the altitudinal variation reveal any effects of environmental quality on coffee quality that might have been masked by the dominant altitude signal. This suggests that the link between environmental quality and coffee quality may be more complex than assumed.

8.4 Summary

In order to advance understanding of the connections between the ecological integrity of a coffee farm and the quality of its crop, this chapter presented the test of the relationship between a number of environmental quality measures of smallholder coffee farms and the cup quality of the coffee produced on these farms.

This study found no clear evidence for a direct link between environmental quality and coffee quality, however, does not diminish the positive connection between higher soil nutrient content of shaded coffee farms and the higher quality potential of the coffee plant. Given the complexity of the on-farm coffee processing (e.g. fermentation, washing, drying) and the sensitivity of the coffee beans to environmental influences (e.g. coffee is highly absorbent of any fragrances therefore particularly susceptible to contamination during the drying process), it is difficult to directly link the ecological quality of the farm to the quality of the processed coffee. Nevertheless, it is widely recognised that coffee farms with adequate levels and diversity of shade have different microclimate to those of full sun or poorly shaded farms and this improved microclimate-regulating ability of diversified shade has been found to contribute to improved cherry development (due to slower and more even maturation), higher overall yield (Muschler, 2001; Lin *et al.*, 2008), healthier soil (Beer, 1988) and longer lifespan of individual coffee plants (Teketay and Tegineh, 1991). Future research attempting to explore the link between environmental quality and coffee quality, therefore, may want to focus on the quality potential of the coffee plant itself and only when comparable methods of processing techniques and coffee varietals are available, attempt to compare the sensory quality of the coffee produced in a given environment.

While the speciality coffee sector relies on coffee quality as an indicator of the existence of sound environmental quality on the farm and largely dismisses the value environmental standards of certification schemes could bring to the sustainability of the sector, this study suggests that this assumption may have less grounds that previously expected. Concerns over the future – under changing climates and with the possibility of increased incidence of diseases such as coffee leaf rust – make it all the more important to understand the relationships between local and regional environment and the production of commodities such as coffee. The research reported in this chapter suggests that the relationships are not clear-cut, and are much more complex than is commonly assumed. Given the widespread nature of this assumption, and its far-reaching implications, further research is needed to establish whether these conclusions are specific to this study, or are more widely applicable.

Chapter 9: Conclusion

9.1 Introduction

The concept of the three pillars of sustainability has given birth to numerous sustainability standards and certification systems within the agro-food sector in recent decades. Various ethical labelling schemes have entered the commodity markets, aiming (and claiming) to reconnect consumers with the human and non-human environments from which their products originate (Kneafsey *et al*., 2008; Eden *et al*., 2008; Schneider, 2009; Naylor, 2014). Standards compliance has predominantly become the dominant way to increase credibility for businesses operating in mainstream global supply chains. Voluntary standard schemes have made considerable contributions to understanding the complexity of issues faced by agricultural commodity producers – and smallholders in particular. These schemes, however, have made little progress in changing deep-rooted historical North–South power dynamics, retaining power in the hands of consumers, certifiers and retailers in the North (Taylor, 2005; Klooster, 2005; Gonzalez and Nigh, 2005; Mutersbaugh *et al.*, 2005). The considerable bureaucracy associated with standards compliance means that certifications can be more of a cost than a benefit in many situations, particularly for smallholder producers. Reducing vulnerability to fluctuating market prices, minimising the risks associated with pests, diseases, as well as increasing food security and productivity are key to improving the sustainability of smallholder coffee production. Certification premiums are meant to reduce the vulnerability of farmers; however, there is limited evidence to whether the premiums are sufficient to combat these challenges. Climate risks, market volatility and uncertainty for farmers are rising but prices and certification premiums are not rising accordingly (Tucker *et al*., 2010).

The coffee industry has historically been driven by economic factors foremost, while the social and environmental costs of production have not been recognised enough, nor internalised into market prices. The past decade has seen an unprecedented expansion in the development of voluntary sustainability standards in the coffee sector, aiming to develop market mechanisms that internalise some of the socio-economic and environmental externalias in coffee supply chains (Giovannucci, 2010; Reineke *et al.,* 2012). Increasing globalisation and the limited state regulation of environmental and social conditions have pulled forward the development of a range of new voluntary standard setting and certification initiatives all claiming to improve the living conditions of rural commodity producers and the quality of their environments (Raynolds *et al.*, 2007). Certifications are the fastest growing segment of the coffee sector with an average annual growth rate of 8-10%, having reached a trade value of an estimated US$31.6 billion within a decade (Potts, 2014).

These new initiatives required the development of new governance mechanisms, which involved setting and monitoring standards for production, processing and communicating the added-value to stakeholders and consumers, of what appears to be the same product (Giovannucci, 2001). The primary aim of consumer-facing labelling initiatives was to find ways for NGOs and civil society to raise production and trade standards and to

engage consumers in the moral questions of commodity markets. During the last couple of decades, certifications have become important operational tools for businesses that influence purchasing decisions of raw materials, help manage reputational and supply chain risks and provide a framework for delivering social and environmental projects on the ground. Certification labels can also form part of businesses' broader communication strategy on key sustainability commitments and to help enhance the 'ethical story' of a brand.

Both the speciality and the certified sector are based on the idea of differentiation, traceability and premiums. Neither of these sectors would be able to make meaningful claims about the value of their product without being able to trace the it back to the producer who supplies the coffee with a specific added value. Regardless of whether the standard compliant certifications or the quality focused speciality sector will grow faster to a greater market share; both approaches share a common desire for traceability. The ethical stories, as well as the exceptional product quality, is closely related to provenance and traceability of an otherwise faceless commodity. The speciality industry's particular focus on quality and traceability encourages the de-commodification of coffee from a mass produced crop to a diverse food product with a wide variety of flavours and stories behind them. Coffees that are traceable to a single farm are seen as a way to help understand the geography of coffee, helping connect geographically distant places and people through the consumption of an everyday beverage. This increased awareness of where a particular food stuff – in this case coffee - is coming from, is helping reduce the distance between places of production and consumption and bring people at opposite ends of the chain closer together through a shared experience.

This separation between production and consumption provides a unique opportunity to study the notion of care. The primary aim of the research was to investigate the motivations of key stakeholders along the coffee supply chain to care about the sustainability of the industry and geographically distant people and places within it. This thesis explored the complex relationships between development and environment, examining the systematic linkages among the dynamics of agricultural development, rural poverty and environmental degradation in the context of the global coffee value chain. The three main aspects of the research were coffee consumption, production and trade, which were united by the frameworks of care and responsibility and political ecology of resource access. Given that voluntary certifications became almost synonymous with sustainability in the coffee sector over the last few decades, the research looked to explore the extent to which popular certification schemes and the standards that underpin them create value to key stakeholders along the supply chain. The broader objective of the research was to investigate whether current practices of buying into the promise of sustainability is the best way to express a notion of care towards distant people and places within a global supply chain and to consider what other alternative mechanisms are available to those looking to strengthen the sustainability of the industry over the long-term.

9.2. Care and responsibility at the consumer level

9.2.1. Is it possible to 'care from a distance'?

Human geographic enquiry has become increasingly engaged with theories of care and responsibility in the context of ethical consumer behaviour (Barnett et al., 2005; Popke, 2006; McEwan and Goodman, 2010; Raghuram, 2016). Consumers nowadays are expected to consider the consequences of their purchasing decisions on geographically distant people and environments (Seyfang, 2006; Watkins et al., 2016). The potential for everyday consumption to embody a notion of 'caring-at-a-distance' continues to be a much debated topic in human geography (McEwan and Goodman, 2010; Shaw et al., 2016). Many have argued that consumption can and should be interpreted as an important site of moral behaviour (Grauel, 2016) and that 'sustainable consumption' can be guided by notions of 'ecological citizenship' (Lewis and Potter, 2011; Lewis, 2016). The myriad of market-based voluntary standard systems that emerged over the last decade, all aim and claim to bridge the gap between places of production and consumption (Winter, 2003; Watts *et al.*, 2005; Shaw et al., 2016). Ethical food labelling systems challenge understandings of care based on individual spaces and demand consideration of the global consequences of everyday purchasing decisions (Ehrenreich and Hochschild, 2003). Individual consumption choices are argued to be connected to broader political movements aimed at fighting poverty, promoting social justice and contributing to a cleaner and more sustainable global economy (Rezabakhsh *et al.,* 2006; McEwan and Goodman, 2010; Saito, 2016; Wright, 2016). But is this really the case? Can global inequalities be rectified through acts of 'ethical consumption'? Can ethical consumption choices be expected to solve all cultural, political and structural issues within poverty-ridden commodity supply chains?

Much of the debate on geographies of care and care ethics (Popke, 2006) has been concerned with distance, where moral consideration is expected to arise out of a sense of responsibility toward unseen others. Ethical certifications are generally thought to help reconnect consumers with the places where their food originates from and this sense of connection is meant to invoke a moral calling to care about the wellbeing of these distant places. Contrary to this notion, this research found limited evidence for the ability of ethical certification labels to (re)connect consumers with the places of production and challenges whether it is reasonable to expect consumers to exercise 'care at a distance' (Young, 2003).

The idea behind ethically labelled food products is that consumers will actively seek out and prioritise products which possess some form of credibility claim about the ethical sources of its ingredients. Consumers are often assumed to want to pay more for products that claim to be produced in ways that are in alignment with certain 'ethical/sustainability' principles regardless of the material quality of the product itself (e.g. taste) (Lawson, 2007; Aprile et al., 2016). The benefits emphasised by ethical labelling schemes tend to impact people and places which are usually geographically removed from the consumer and make relatively few claims about the tangible benefits that can be detected at the point of consumption (Nunes and Rivanto, 2001; Poelmans and

Rousseau, 2016). The benefits of certified products, from the consumers' point of view, are intangible, difficult to monitor and are often detached from the actual material quality of the product (Olshavsky and Miller, 1972; Anderson and Laband, 2005; Grunert, 2002; Larson, 2003). The intangible nature of ethical credentials in certified products makes it difficult to appreciate their value at the point of consumption and makes 'caring-at-a-distance' even more problematic. The findings of this research agree with much of the ethical consumption literature arguing that, in the long-term, the perceived taste and quality of a product ultimately play more influential roles in the consumer decision making process than any associated ethical or sustainability claims (Coff, 2006; 2012; Poelmans and Rousseau, 2016). The ethical values-based 'ideologies' should, therefore, go hand-in-hand with the material aspects of a product where the non-material 'ethical' qualities (wellbeing of producers and the environment) become an extension of, but not a substitute for, the tangible qualities (food safety, nutrition, taste) if they are to ensure long-term support at the consumer level.

Although consumers are becoming more sophisticated and aware of various social and environmental issues surrounding production of food and other commodities, this heightened awareness does not necessarily translate into more ethically conscious purchasing decisions (Shaw et al., 2016). Findings of this research are in agreement with arguments claiming that ethical attitudes, values and rational information processing have limited reliability in consumer decision making and that primary drivers for consumption lie in habits, self-gratification and peer influence (Davies et al, 2012; 2016). As the hierarchical attitude–intention–behaviour model presented in Ajzen's (1985; 1987; 1991) Theory of Planned Behaviour (TPB) asserts, consumer decision making is a complex, socially embedded and highly contextual process where ethical considerations are a function of preformed ideas about personal values and self-identity (Carrington et al. 2012), beliefs and habits (Verplanken and Wood, 2006) and are also strongly influenced by emotions (George and Dane, 2016) and neutralisation techniques related to feelings of guilt (Chatzidakis *et al.*, 2007, 2012; 2016). The complexity of consumer decision making, however, only partly explains the 'ethics without action' phenomenon (Hassan et al., 2016). Beyond the complex network of motivations that influence the expression of care at the point of purchase, consumers' sense of responsibility has also been shown to make significant impact on ethical purchasing behaviour (Kjærnes et al., 2007; Kjærnes, 2012; Hosta and Žabkar, 2016; Savolainen, 2017). Building on Foucault's (1997) notion of 'ethics as care of the self,' ethics can be extended to all aspects of everyday consumption (Barnett *et al.*, 2005b). Findings are aligned with arguments stressing that consumers may have different understandings as to who should take responsibility for social and environmental justice in commodity supply chains and that purchasing of ethically labelled products may not be the only, nor necessarily the best way to express care towards distant human and non-human others.

While 'everyday' consumption practices may already involve ethical considerations (Barnett *et al.*, 2005b; Hiller et al., 2016), some also argue that ethical consumer behaviour is not only a choice but rather a moral obligation (Varul, 2008). The notion of becoming an 'ethical consumer' who is morally compelled to exercise care towards

distant people and places (Popke, 2003, 2006, 2009), implies that the responsibility for making ethical choices in the market rests with individual (Carrington et al., 2016). By focusing only on the responsibilities of the individual, however, it becomes difficult to answer questions like: "why people should care about distant people and places" and "what do we do with people who simply do not care" (Braidotti, 2006, p. 119). While ethical consumption provides an opportunity for re-thinking our responsibilities toward the unseen implications of our actions and cultivate a renewed sense of social interconnectedness (McEwan and Goodmann, 2010), consumers cannot individually be expected to take responsibility for the plight of the poor in global supply chains. They can, however, be expected to consider their collective part in the global economy and the collective impact individual actions may have on human wellbeing and environmental sustainability.

It is questionable whether ethical labels are sufficient to invoke the types of changes in global agro-food systems that are required to combat the threats of climate change, soil degradation and global food security (Renting *et al.*, 2003; Watts, 2005; Lockie, 2009; Raynolds, 2017). Nevertheless, in an increasingly unsettled and unequal world, 'care-full' consideration of our responsibilities as collective participants in the global economy matter more than ever. Ethics of care in the context of consumption asks individuals to step out of their private space and connect with the interests of the collective (Kneafsey et al., 2008; 2016). Not because it might 'save the world' but rather because small expressions of care might help build the knowledge and positive relationships that create the capacity for change in otherwise faceless commodity networks. Ethical consumption, therefore, should not be seen as an individual moral obligation but rather as an opportunity; an opportunity to care and to expand ethics beyond the 'care of the self' and connect with the responsibilities of the collective.

9.3. Care and responsibility from the smallholder producer perspective

9.3.1. What responsibilities do smallholders have at the family and farm level and how could care for the community and the environment extend their livelihood opportunities?

The primary responsibility of a smallholder producer lies within their ability to provide a stable livelihood for themselves and their families. Their main concerns are whether they are able to have safe living and working conditions, provide food security for their families, have access to medical care and education for their children. At the farm level, smallholder producers often have limited access to training that could help improve the productivity and efficiency of their farms. They tend to have limited understanding of the quality (and quality potential) of their crop and often have no control over the prices they receive for their coffee. Poor local infrastructure can further limit their access to higher value markets. On top of this, unpredictable weather as well as recurring incidences of pests as diseases can threaten their already fragile livelihood strategy. When compared with other potential land use options (such as cattle grazing or intensive timber production), it appears that coffee grown under a diverse canopy of carefully managed shade cover would have the potential to provide a more diversified livelihood opportunity for smallholder farmers. In order to benefit from this

potential, however, producers may need credit to invest in the diversification of their farms, training in how manage different crops and access the relevant markets that reward quality.

In Honduras, due to the deep rooted systemic challenges of the economy and the local coffee sector, increasing numbers of people, who are unable to make a living from coffee, are now seeking alternative incomes in nearby cities, while many of them embark on dangerous journeys to the US, often illegally, in hope of a better life. Migration of the younger generation from coffee growing regions to cities is a common phenomenon and a serious concern in many traditional coffee producing countries. It is a clear sign that coffee production at smallholder scale is far from being an attractive and profitable business. Within these conditions it is not hard to understand why smallholders might find it difficult to relate to and care about the agendas of environmental conservation projects, especially if the financial reward for protecting the environment might be elusive. At the upper end of the supply chain network, smallholder farmers hold very little power in accessing basic inputs and technologies that would be essential to increase their productivity and have limited opportunities to leverage the economies of scale needed to take advantage from modern market systems. Producer organisations and co-operatives are often thought to be able to fill this capacity gap and the benefit mechanisms of many 'ethical' certifications (particularly those of the Fairtrade system) tend to rely on the existence of these community-level institutions. Cooperation between smallholder farmers at the community level is often assumed as a 'given' in rural agricultural settings, where cooperatives are assumed to function as one homogenous entity (Ettlinger, 2004). Geographic 'locality' or 'neighbourhood', however, does not necessarily make a true community (Hogett, 1997). The success of such producer organisations depends on the strength of pre-existing social capital and intra-community trust within the community (Fukuyama, 1995, 1999, 2001). It is this social capital that enables individual producers to build trust and cooperation among themselves and to implement collective actions, which are fundamental to accessing services and higher value markets.

Similar to the tensions highlighted in the consumer context between sense of responsibility and power (Kjaernes, 2007), the field research in Honduras uncovered tensions related to intra- community cohesion, corruption and conflicting power relations within the smallholder community context. These intra-community tensions were exacerbated by unequal distribution of costs and benefits arising from earlier community-based conservation projects which, in turn, undermined farmers' willingness to work together and share the rewards of collaboration (Corbridge and Kumar, 2002). As highlighted by Menzies (2009), community-based conservation and development projects cannot be expected to resolve intra-community tensions and power conflicts. The rhetoric of 'ethical labelling' schemes often ignores the existence of internal community politics and potential power struggles between resource dependent smallholder farmers. The results of this research challenge the romanticised idea of smallholder communities often portrayed by ethical labelling initiatives that assume maximum willingness and ability for cooperation between community members. The results conclude that much of the literature on ethical certification and community-based development misses both the issue of scale

and the importance of acknowledging the diversity of interests and unequal access to power in smallholder communities.

Improving smallholders' access to higher value markets that reward quality, training and investment in farm and coffee quality improvement techniques, and better infrastructure, are indeed crucial to improve the livelihood options of smallholder producers. The future prosperity of smallholder communities, however, depends largely on the development of social capital (Fukuyama, 1995, 1999, 2001) that enables individual producers to build trust in community level institutions. By engaging in community development and conservation projects or organising into democratically run cooperatives, individual producers get a better chance to access higher value and certified markets than they would be capable of on their own. This, however, requires a shift in culture and the ability and willingness to embrace the idea of collaboration within a community that may have a history of corruption, lack of trust and high levels of inequality between its members.

The situational issues in smallholder communities pose considerable barriers to economic development of individual farmers and the community as a whole. Although smallholder farmers face numerous barriers to development, the biggest challenge can lie in the mind-set that is concerned only with the 'care of the self' (Foucault, 1997). While local economic, infrastructure and situational issues create considerable limitations as to how much smallholder farmers can be expected to care about community-based conservation agendas – similar to consumers - smallholder farmers may also have some untapped opportunities. While 'ethics as care of the self' (Foucault, 1997) can be justified on many levels, it can also be a significant hindrance to development, especially in resource poor rural contexts. Echoing the care motives of consumers, community-based incentives (such as many certification programmes) provide smallholders not so much the responsibility but rather an opportunity to improve their livelihood options by extending their sense of care from the level of the family to the wellbeing of others within their local community and the non-human environment that surrounds them.

9.4. Care and responsibility in the speciality coffee sector

9.4.1. Does the speciality sector care about sustainability as much as they care about coffee quality?

The primary responsibility of roaster buyers is to ensure consistency of supply both in the short and long-term. In order to run their businesses, buyers must receive the agreed quality and quantity of green coffee at the right time whilst ensuring their purchases stay within budget. There are a number of factors that affect the contractual price; these include quality, supply and demand levels on the market, hedging strategies as well as the strength of relationship with the supplier and the commitment of the company to sustainability and ethical sourcing principles. While these complex market factors pose some limitations as to how much buyers can influence price levels, there are a number of ways in which buyers can show commitment and care to the sustainability of the industry and the wellbeing of smallholder producers.

Both the certifications and the speciality approach use differentiation from the mainstream commodity market as a tool to achieve a greater market share and ensure higher returns for the producer. Their basis of differentiation, however, is not the same. While in the case of certification, differentiation is based on the intangible promise that certain practices were in place during the production, processing and trade of the product ('ethical story'), the speciality approach uses the cup quality of the coffee that is detectable for the consumer. It is assumed that if a producer is capable and willing to put the extra care into producing high quality coffee, then he or she is also more likely to approach social and environmental concerns with the same level of care. In a sense, this 'quality story' serves as a guarantee for ethically sound production and trading practices. The speciality sector believes that in order to inspire long-term commitment to 'ethical choices', the intangible credentials of the product have to be in alignment with its tangible sensory qualities, i.e. the taste. Contrary to the attitude-intention-behaviour gap (Hassan et al., 2016) that characterises the 'certification market', empirical evidence shows that consumers are willing to pay higher premiums for coffee that tastes better (Freidberg, 2003; Borrella et al., 2015) than they are for their ethically labelled counterparts.

While the link between certification standards and product quality is understudied empirically, the industry experts interviewed felt that the quality of certified coffee is mediocre at best and this lack of connection between certification standards and coffee quality limits producers' ability to improve their livelihoods. Arguably, certification schemes don't work closely enough with the farmers to help them improve their production and processing practices and therefore the contribution of certification schemes to coffee quality and farm productivity is negligible. There is agreement in the speciality sector that certification schemes miss 'the quality point' and their standards give little recognition to the importance of quality and taste in generating consumer commitment toward ethically labelled products. While certifications predominantly count on consumers' moral judgements and 'ethical behaviour' to help lift producers out of poverty and protect the environment, the quality-focused approach adopted by the speciality industry instead aims to empower producers by creating a market for high quality coffee. This lack of connection between certification standards and coffee quality largely discourages the involvement of higher value markets such as the speciality sector in certification schemes. From the speciality industry's point of view, certifications are not seen as adding any tangible value to the consumer and they even question the value certification systems are adding at the producer level. Given the inherent risk of corruption in most coffee producing countries, the speciality sector has limited trust in the effectiveness of cooperative level premium mechanisms of community-based ethical certification schemes such as Fairtrade. Instead of elusive promises of certification logos, the speciality sector has chosen to lay their trust in developing 'direct relationships' with their producers. While a few intermediaries (such as importers and/or exporters) often mediate the connection between roasters and producers in most 'direct trade' relationships, the level of connection between the two ends of the chain is still far greater than in conventional supply chains. This (more) direct connection allows greater transparency regarding the challenges

and needs faced by both parties and helps develop a deeper sense of care and responsibility towards the wellbeing and prosperity of producers.

Instead of relying on certifications to create a connection with the upstream end of the supply chain, the speciality sector is committed to build mutually beneficial trading relationships, where smallholder producers are not framed as vulnerable farmers in dire need of first world help. Rather, smallholders supplying the speciality market are seen as capable business partners who are willing to go the extra mile to produce exceptional quality coffee. The extra effort and care the grower places in producing coffee for the speciality market is in turn rewarded by generous quality premiums and an opportunity to develop a reputation as a quality – and trusted – supplier. In this sense, the source of care in speciality trading channels comes from respect rather than pity. The speciality sector believes that disengaging the certification paradigm from the notion of charitable giving and instead linking it to detectable quality improvement at the point of consumption could be key in furthering the impact of the certification agenda.

The speciality sector speaks the language of quality and traceability and the steady growth of its market share illustrates that these concepts create value to consumers (Ionescu, 2013). By emphasising the importance of quality and provenance in coffee, the speciality sector helps connect their consumers with the people and places where their coffee originates from. Besides the inspirational flavour descriptors that consumers can expect to indulge in the cup, the speciality 'quality story' also includes details of the origin of the coffee, the local terroir, the coffee variety, processing methods, the altitude of the farm and even the name of the grower and the farm where the coffee came from. This level of information lifts supply chain traceability to a new level. In this sense, the speciality sector's favoured direct relationship approach could be considered more successful in bridging the gap between consumption and production than the certified market.

Instead of relying on the 'ethical message' of certification labels, the speciality sector market uses 'stories of excellence' and 'stories of quality and care'. Care in this sense is understood as the attention producers give to producing high quality coffee while simultaneously creating a new form of romanticised image of the smallholder producers as celebrated 'quality coffee champions' and environmental stewards of idyllic coffee oases. While in many cases this may well be true, there is some danger in portraying a simplistic and overly positive image of an arguably large group of people who face considerable challenges. In the speciality sector, it is often assumed that producers who are capable and willing to make the extra effort to produce exceptional quality coffee, are also likely to approach treatment of their workers and the environment with the same care and attention. But is that really the case? Speciality consumers are told that the quality premium is necessary to cover the increased costs of producing a high quality product. These quality premiums are sometimes referred to as the 'cost of quality', or the 'cost of direct relationships'. Regardless of terminology, the speciality sector is willing to pay more for higher quality coffee because they trust that their customers will also be willing to pay

more for 'excellence in a cup'. In this sense, speciality price premiums are meant to be rewards for excellence and incentives for the growers to invest more time, money and energy into improving the quality of their coffee (Ionescu, 2013). Therefore, coffee quality for the speciality sector becomes the mediator of ethics and the main indicator of sustainability. But what about the sustainability of the farm or the fair treatment of workers on farms supplying coffee to the speciality market? Has the speciality sector found the golden middle between consumer satisfaction and socio-environmental justice or is there a way to deepen care and responsibility towards 'distant others' along the global coffee value chain?

The speciality sector claims that the financial rewards for growing speciality grade coffee is much higher than the rewards of certification premiums or the Fairtrade minimum price (for relevant quotes see Chapter 7). Many in the speciality sector believe in the power of quality premiums to deliver livelihood security and social development just as blindly as Fairtrade evangelists believe in the power of the Fairtrade system to eradicate poverty from commodity supply chains. Although the industry and academia are still debating the best ways to measure the impact of certification standards, there is even less clarity over the impacts of 'direct trade' and speciality premiums on human welfare and environmental conservation. The speciality premiums often clearly outperform the premiums of any certification scheme (including minimum price arrangements) but the production of speciality grade coffee also requires considerable investment in time and resources, which, inevitably pushes production costs higher than those of conventional coffees. While many speciality businesses may be committed to paying a sustainable price – which covers cost of production and allows additional income for investment – there is less clarity over what this sustainable price level is in practice and how to make sure a 'sustainable price' doesn't end up subsidising inefficiency. While there is some empirical evidence for smallholder farmers getting higher returns in speciality markets (Borrella et al., 2015) there is less evidence for the link between coffee quality and environmental quality (Decazy et al., 2003; Vaast et al., 2005). As the research presented in this thesis (Chapter 8) was unable to show a direct link between coffee quality and environmental quality, especially biodiversity levels on farms, there remains uncertainty about the long-term impact of the 'quality focused speciality approach' on producer livelihoods, the community or the broader environmental matrix.

9.5. Responsibility of certifications, NGOs and civil society

Different certification and verification systems play an undeniably positive in the coffee industry, largely by creating visibility of the plight of smallholder producers and awareness of the power-imbalance and inequality in global commodity supply chains. Certification schemes for agricultural production systems aim to provide a way out of poverty for producers, with many of the standards also seeking to minimise pollution and loss of soil and biodiversity on the farms. Certifications have made considerable achievements in making the general public and the industry more aware of the environmental and social externalities of production and trade but so far they have only managed to reduce some of these negative externalities. While community-based conservation-

development projects offer numerous socio-economic and environmental benefits, the success of these projects is also dependent on the existence of a number of institutions, the appropriate functioning of which are highly sensitive to local socio-cultural circumstances.

Initially brands used labels as a tool for differentiation in the marketplace. In certain commodity markets such as coffee, certifications are close to becoming mainstream while the significant costs of gaining and maintaining certification may become a barrier to entry for those smallholder producers who would benefit the most from certification price premiums. While considerable investments are being made by businesses and donor organisations to help the uptake of certifications by smallholder farmers, there is limited transparency regarding their net social and environmental benefits. Considering the number of competing schemes on the market, consolidation between different certification systems could bring positive outcomes for every actor in the value chain. At the farmer level, a unified certification could generate economies of scale, rationalise the chain of custody reporting requirements, reduce audit costs, increase farmer engagement and support on the ground in countries of origin. A single standard for best practice on sustainable agricultural practices would bring desirable outcomes for all stakeholders. Beyond certification, there would likely to be additional benefits for the industry in terms of combined leverage in securing donor funding, developing projects at scale and delivering sector-wide impact where it is most needed. Reducing the number of schemes would help improve consumers understanding of certification and brands could focus more energy into delivering impact on the ground.

In order to meet growing demand for coffee without the clearing additional land for plantations, sustainable agricultural practices will need to be employed on the existing farms. Investment in low-cost technologies that aim to reduce community reliance on forest resources would be important in preventing degradation of forests and associated ecological services near coffee growing areas. The need for extension services, which work closely with producers to implement development projects on the ground, is difficult to overstate. The interlinked challenges of climate change, food security, deforestation and ecosystem degradation call for an integrated approach that considers the interests, challenges and opportunities of all stakeholders at an industry level. Education, climate resilience, nutrition, food security, productivity and quality improvement in producing regions are just some of the areas that require increasing focus and collaboration between private sector, certifications and NGOs. Sharing more granular information and learning from pilot projects could help reduce duplication of efforts and spread the benefits more evenly across multiple regions. Sustainable practices can help ensure that coffee contributes to economic prosperity and improved well-being for coffee growers, workers and their families and in turn safeguard the long-term sustainability of the sector. Success in the industry should be defined by arriving to a point where sustainable production practices become so widespread that sustainability is no longer a choice but rather a common practice. Market demand plays a critical role in enabling the transition to sustainable practices, however, farm-level certification and fragmented pilot projects are not going to be able to ensure the sustainability of coffee producing landscapes in the long-term.

Interventions based on consumer market demand must be complemented by supply-side investments both at individual brand levels as well as part of pre-competitive alliances at industry level. The industry needs to move towards an era where standards and partnerships with certifications and NGO's are used as pre-competitive platforms for cooperation on industry-wide issues.

Certifications, NGOs and industry alliances have both a responsibility as well as an opportunity to facilitate this sector-wide dialogue and to help develop a framework for a sustainable coffee economy where ethics of care for 'others' and the collective is not seen as an obligation but rather as an opportunity to 'care for the self'.

9.6. Recommendation for future research

Concerns over the future supply of quality coffee stress the importance of understanding the relationships between the quality of the environment and the quality potential of commodities such as coffee. As Chapter 8 of this thesis suggests, the relationships between coffee quality and environmental quality measures are not clear-cut, and more research is needed to understand the impact sustainable agricultural practices may have on the quality potential of the crop. While the speciality sector claims to respect and care about the environmental sustainability of the industry, it is less clear as to how this sense of care delivers measurable conservation outcomes on the ground. Future research could investigate how the value of the environment could be repositioned in the quality agenda of the speciality sector in order to enable sustainability and development initiatives to succeed in the long-term.

Alongside the severe environmental challenges, the industry faces a multitude of socio-economic and structural issues impacting the lives of millions of people who contribute to the production and supply of coffee along the chain. Many of these issues are rooted deeply within the history of the coffee trade and are often strongly linked to various economic, political, cultural and structural issues within producing countries. While sustainability initiatives, certification standards and 'direct trade' relationships all contribute to improving social and environmental conditions in coffee supply chains, more research is needed on the role of local governments and the potential of industry-level collaboration to leverage positive change in producer economies.

Despite the best efforts of sustainability conscious businesses and NGOs to raise the bar on social standards, labour conditions on coffee farms (large or small) often resemble situations that can only be described as modern slavery. Incidences of forced or bonded labour, child trafficking, sexual harassment and many other forms of human rights violations are not always easy to spot and can remain hidden even from the most rigorous ethical audits. Besides poor labour conditions and human rights violations, there is growing awareness of issues around gender inequality, alcoholism and household violence in smallholder producer contexts. Further research is urgently needed to explore ways in which gender equality and empowerment of women may

accelerate the development of rural communities and increase the impact of any community-centred conservation programmes along the value chain.

9.7. Closing remarks

Sustainability is a moving target and meaningful progress requires systemic thinking (Adler *et al.,* 2014). Sustainability in coffee means creating an industry that serves everybody; producers, traders and consumers alike. Given the diversity of people and places where coffee is produced and consumed, it is fair to say that there is no one way to achieving a sustainable and thriving coffee economy.

The ultimate goal of any development initiative is to help generate empowered and resilient producer communities who have sustainable livelihoods with decent living and working conditions. The establishment of the right circumstances enabling the evolution of empowered and resilient communities usually extends beyond the lifespan of a 3 to 5-year project or the reach of voluntary certification standards. Therefore, the challenge and question facing the coffee community is less about whether voluntary certifications, private investment projects or NGO-led initiatives are the most effective tools for development and more about how the available tools are combined and adjusted to local circumstances to create enabling environments and embed lasting sustainability within a diverse industry.

Certifications are not perfect. Nor is direct trade or the relationship approach. Standards compliance combined with a 'relationship approach' to sourcing is increasingly regarded as a more reliable way of ensuring that ethical and sustainability standards are met. While certification schemes still have their place in the market, the emphasis is shifting from standards compliance to commitment to long-term relationships based on trust and mutual understanding of shared interests and challenges. Certification and labelling should not be expected to solve all systemic issues; but they can be part of a larger toolbox to improve the economic, environmental and social impacts of global value chains and deliver important sustainability outcomes on the ground.

Coffee, however, is not only a beverage; it is also a social phenomenon. The café culture throughout the centuries has created space and stillness in otherwise increasingly busy lives and enabled people to connect with each other and share stories over a cup of coffee. The industry – both certified and speciality – has a tremendous opportunity as well as responsibility in facilitating this exchange of stories both ways along the value chain. This, however, requires not only traceability and standards compliance, but also transparency of both the challenges as well as the rewards for adding value at each part of the chain. This way there may come about a time when the rhetoric of ethics and sustainability in the coffee sector might shift from a narrow vision of labels or taste profiles to a deepened understanding of what it actually takes to create a pound of coffee and who are those remarkable people who make the experience of a great cup of coffee possible in the first place.

"it is perhaps not unrealistic to expect that in the future there might be a time when people say, 'I remember that there was a time when you could buy a cup of coffee and didn't know where it came from". (Interviewee N, pers. comm.).

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Appendix 1

Table 27: Criteria covered by individual certification schemes – adapted from standardsmap.org

Claim	Fairtrade	Rainforest Alliance	Organic	UTZ
Environmental				
Soil				
Soil conservation/ erosion control	✓	✓	✓	✓
Soil health (nutrients/fertility/ productivity/ biodiversity)	✓	✓	✓	✓
Soil preparation for specific crops	✗	✓	✗	✓
Soil maintenance by crop rotation	✓	✓	✗	✗
Forests				
Reforestation	✓	✓	✗	✓
Deforestation prevention / remediation	✓	✓	✓	✓
Forest conservation	✓	✓	✓	✓
Forest maintenance record keeping for 5 years	✗	✓	✗	✗
Chemicals and agricultural inputs				
No use of prohibited chemicals	✓	✓	✓	✓
Integrated pest management	✓	✓	✓	✓
Agrochemical record keeping	✓	✓	✓	✓
Agrochemical storage and labelling	✓	✓	✗	✓
Protection of non-target areas from agrochemical use	✗	✓	✗	✓
Training on chemicals handling and exposure	✓	✓	✗	✓

Chemicals variation to prevent pest resistance	✗	✓	✗	✓
Treatment of waste of chemical substances	✓	✓	✓	✓
Biodiversity				
Habitat restoration	✓	✓	✓	✓
Biodiversity impact assessment	✗	✓	✗	✓
Housing of living wildlife specimens	✗	✓	✓	✗
Protection of biodiversity zones / ecological corridors / HCV areas	✓	✓	✓	✓
Risk assessment on ecosystem impacts	✗	✓	✗	✓
Prohibition of land clearing with fire and explosives	✗	✓	✓	✓
Buffer zone around human settlements	✗	✓	✗	✗
Animal welfare	✗	✓	✓	✗
Waste				
Waste reduction/re-use/recycling	✓	✓	✓	✓
Air quality/pollution monitoring	✗	✗	✗	✓
Disposables measured/reduced	✗	✓	✗	✗
Water				
Water management plan	✓	✓	✗	✓
Water usage record keeping	✓	✓	✗	✗
Mitigation of transboundary effects of water pollution	✗	✓	✗	✗
Energy				

Reduced use of non-renewable energy sources	✓	✓	✗	✓
Use of alternative/renewable energy sources	✓	✓	✗	✓
Carbon				
Criteria for reducing GHG emissions	✓	✓	✗	✗
Encouraging soil or trees carbon sequestration	✓	✓	✗	✗
Social				
Human Rights and Local Communities				
Respect of rights of indigenous communities	✓	✓	✓	✓
Gender considerations in impact and risk assessments	✓	✓	✗	✗
Labour conditions and Social Protection				
Women's rights at work / no sexual harassment	✓	✓	✗	✓
Training on health and safety	✓	✓	✓	✓
Access to safe drinking water	✓	✓	✓	✓
Access to sanitary facilities	✓	✓	✗	✓
No worst forms of child labour	✓	✓	✓	✓
Employment and Employment Relationships				
No forced labour	✓	✓	✓	✓
Right to refuse overtime	✗	✓	✗	✓
No retention of workers documentation	✓	✓	✗	✓
Minimum wage	✓	✓	✓	✓
Living wage	✗	✗	✓	✓
Human Development and Social Dialogue				

Freedom of association/Collective bargaining/No discrimination	✓	✓	✓	✓
Gender policies	✓	✖	✖	✓
Management				
Economic viability				
Long-term sustainability management plan	✓	✓	✖	✓
Production efficiency/productivity	✖	✓	✖	✓
Supply chain traceability				
Traceability of inputs and records of materials used	✓	✓	✖	✓
Business Ethics				
Anti-corruption and bribery policy	✓	✖	✖	✖

Appendix 2

Key dates in the evolution of certifications

1961 – FAO, Codex Alimentarius

1962 – International Coffee Agreement (ICA) created by the UN

1968 – 2nd UNCTAD conference (United Nations Conference on Trade and Development) in Delhi – embraces "Trade not Aid" concept bringing Fair Trade into development policy

1969 - Oxfam and other European humanitarian organizations open the first World Shop, in the Netherlands, to sell crafts, build awareness, and campaign for trade reform.

1986 – first Fairtrade cooperative in Nicaragua

1987 – Rainforest Alliance Inc.

1988 – First Fairtrade coffee sold: Farmers and activists launch the first Fair Trade certification system, Max Havelaar, in the Netherlands, to offer third-party recognition and a label of Fair Trade products

1989 – Break down of the 1983 ICA - ICO failed to reach an agreement on new export quotas in the coffee indsutry, causing the 1983 ICA to break down

1990 – National Organic Program established by the USDA

1995 – 1st Rainforest Alliance certified coffee farms in Guatemala

1996 - First Sustainable Coffee Congress – organised by the SMBC - laid the foundation for an ongoing coalition dedicated to sustainable coffee

1997 - Fairtrade Labelling Organizations International (FLO) established, which led to a third-party label in the U.S. in 1998 managed by TransFair USA

1998 – Launch of Bird Friendly coffee certification

1999 – Launch of Starbucks' C.A.F.É. Practices

2000 – Fairtrade & Starbucks partnership

2001 – Launch of UTZ certification

2002 – Launch of International Fairtrade Mark

2003 – Launch of USDA Organic certification / Nespresso AAA Programme

2004 – Launch of EU Organic certification

2006 – Launch of 4C – Common Code for the Coffee Community

2011 – Fairtrade, Rainforest Alliance and UTZ joint statement

Appendix 3

Field study in the UK - Consumer questionnaire

Questionnaire number: Date:

Location: Time:

Section 1: Your personal coffee buying habits - Please tick any of the option(s) that apply.

1. How often do you drink coffee?

- ☐ More than 3 times a day
- ☐ Once or twice a day
- ☐ Every week
- ☐ Rarely
- ☐ Never (go to section 2)

2. Where do you drink coffee?

- ☐ At home
- ☐ At work
- ☐ Coffee shops / Cafés
- ☐ Restaurants
- ☐ Other _____

3. Where do you buy coffee?

- ☐ Supermarkets
- ☐ Health food/Organic shops
- ☐ Specialty coffee shops
- ☐ Internet
- ☐ Vending machines
- ☐ Other _____

4. What type(s) of coffee do you prefer buying when given the choice?

- ☐ Instant
- ☐ Whole bean
- ☐ Ground
- ☐ Other _____
- ☐ N/A

5. How important are the following criteria in your coffee purchasing decisions? Please rate each category on a scale between **1 = not at all** and **5 = very important**.

	1 Not at all	2	3 Somewhat	4 Quite	5 Very
Price	○	○	○	○	○
Quality	○	○	○	○	○
Taste	○	○	○	○	○
Convenience (easy to make)	○	○	○	○	○
Always available (ease of purchase)	○	○	○	○	○
Stick with the brand you know	○	○	○	○	○
Try something new	○	○	○	○	○
Uniqueness/specialty	○	○	○	○	○
Forest and wildlife conservation	○	○	○	○	○
Fairness towards farmers, workers	○	○	○	○	○
No artificial chemicals	○	○	○	○	○

6. Which of the following words or their equivalents would you look for on coffee packaging? Please circle the 5 most important cat egories.

Extra free	Quick & easy	Fairly traded/ Fairtrade	Organic
Value pack	Single serve	Responsible supply chain	Eco refill
100% Natural	Traditional	Co-operatives involved	Recycled/biodegradable
Pure	Original blend	Sustainably produced	Tree planting projects
Fresh	Limited edition	Directly from growers	Rainforest Protection
Great taste	Single origin	Charity donation	Wildlife protection

Section 2: Coffee related certification schemes

Questionnaire no:

7. How familiar are you with the following coffee certification schemes? Please tick any boxes that are correct for you.

	Never heard of them	Have heard of … … and have bought their certified **coffee**	Have heard of … … and have bought **other products** certified by them	Have heard of … … but have **never bought any** of their certified products
Fairtrade	○	○	○	○
Rainforest Alliance	○	○	○	○
Organic	○	○	○	○
Bird Friendly Coffee	○	○	○	○
UTZ Certified	○	○	○	○

8. How often do you buy any of the above certified coffees?

- □ Every time it is availab le
- □ Most of the time
- □ Some of the time
- □ Rarely
- □ Never

9. What would encourage you to buy more certified coffee? Please tick any of the boxes that apply.

- □ Lower cost
- □ Free samples
- □ More widespr ead availabili ty
- □ Clearer explanat ion about benefits on product
- □ Recom menda ion by a friend
- □ Wider media covera ge
- □ If it were easier to verify claims made
- □ Other _____

packagi
ng

10. Please express how strongly you agree or disagree with the following statements:

By buying coffee certified by Fairtrade (FT) or Rainforest Alliance (RA) I expect / hope / believe that… :

		Strongly Agree	Agree	Disagree	Strongly disagree	Neither agree nor disagree
… I am paying more than I would for a non-certified coffee.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… a fair amount of the money that I pay will actually reach individual coffee farmers.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… the coffee farmers' entire communities are benefiting financially from the premium prices.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… I am contributing to forest and wildlife protection on and around the coffee farms.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… both the natural environment and the livelihoods of coffee farming communities are equally protected	FT	○	○	○	○	○
	RA	○	○	○	○	○
… absolutely no artificial agrochemicals were used on the coffee farms.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… local communities are actively protecting natural forests around the coffee farms.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… the certification bodies are doing regular checks on each farm to make sure their standards are met.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… producers or their co-operatives have to pay for certification and/or for annual audits.	FT	○	○	○	○	○
	RA	○	○	○	○	○
… it is a high quality product and is likely to have a great taste.	FT	○	○	○	○	○
	RA	○	○	○	○	○

Section 3: Your views on the general impacts of conventional coffee production: Questionnaire no:

11. Please indicate how strongly you agree or disagree with each of the following statements:

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The choices I make regularly about buying coffee, significantly affect the livelihoods of millions of coffee growers worldwide.	○	○	○	○	○
Most of the coffee farms are located in places that are environmentally important.	○	○	○	○	○
Conventional coffee production has contributed to social inequalities in coffee producing countries in recent decades.	○	○	○	○	○
Industrial coffee production has worsened the loss of tropical rainforests in the last few decades.	○	○	○	○	○
Coffee producers and their communities have the power to protect the local forests and the associated wildlife.	○	○	○	○	○
Coffee grown in an environmentally friendly way is likely to have high quality and great taste.	○	○	○	○	○

Some statements to assess your fundamental beliefs about humans' relationship to the natural environment

Tropical rainforest conservation is a great concern for me.	○	○	○	○	○
Forest and wildlife conservation is primarily the responsibility of environmental conservation groups and organisations.	○	○	○	○	○
Individual people's efforts, like buying eco/wildlife-friendly products, can make significant difference in protecting natural forests and wildlife.	○	○	○	○	○
The so-called 'ecological crises' facing humankind has been greatly exaggerated.	○	○	○	○	○
Humans have the right to modify the natural environment to suit their needs.	○	○	○	○	○
The balance of nature is strong enough to cope with the impacts of modern industrial nations.	○	○	○	○	○
Humans will eventually learn enough about how nature works to be able to control it.	○	○	○	○	○
The earth is like a spaceship with very limited room and resources.	○	○	○	○	○

Age:	Gender:	Total household income:
□ < 25 □ 25 – 34 □ 35 – 49 □ 50 – 64 □ 65 +	□ Female □ Male	□ Up to £20,000 □ £20,001 - £35,000 □ £35,001 - £50,000 □ £50,001 - £70,000 □ £70,001 - £100,000 □ Above £100,000 Postcode: _____
Highest level of education/qualification: □ GSCE / O-level / Standard grades □ BTEC / A-level / Highers □ Vocational / NVQ □ Degree or equivalent □ Postgraduate qualification □ Other _____		If you would like to be invited to a one-time discussion event about coffee as the second part of this research please provide your contact below: Email/Tel: _____

Thank you

Appendix 4

Field study in Honduras

Economic Interview Questions to smallholder coffee producers:

Preparation:

1. Interview date & time: _____

2. Economic Evaluation:
   - ☐ Category 1: poor quality house with a mud floor, mud, plaster or wooden walls that are poorly kept, a tin roof usually in disrepair, and very few personal possessions
   - ☐ Category 2: slightly better quality house with a mud floor, mud, plaster or wooden walls that are reasonably well maintained, a better quality tin roof, and more possessions such as cooking utensils or furniture
   - ☐ Category 3: reasonable quality house with a concrete floor and possibly concrete walls, a roof in good condition, and more possessions
   - ☐ Category 4: good quality house with concrete floor and walls, many ornaments and possessions, and obvious signs of wealth such as a solar panel, television, or DVD player
   - ☐ Category 5: ownership of a vehicle in addition to all the criteria of category 4

Survey Questions:

1. Name
2. Gender
3. How many people live in your household?
4. How many of these are dependents (i.e. children or elderly)?
5. Sources of income
   - ☐ Farming
   - ☐ Commercial Business Owner / Worker
   - ☐ Handicraft Sales
   - ☐ Family Abroad
   - ☐ Other _____

6. Do you receive a steady income flow, or is your income concentrated primarily in particular months? Please specify what months.

7. IF FARMING, what is your role in the farm?
   - ☐ Employed Labourer
   - ☐ Owner Manager
   - ☐ Renter Manager
   - ☐ Contract Manager

8. IF LABOURER, roughly how much do you earn in daily wages? If possible, please specify the approximate amount and the number of times per year received.

9. IF NOT LABOURER, what is the size of your farm? (in manzanas, specify how much land is used for coffee)?

10. IF FARMING, who do you sell your product to?
    - ☐ Family and friends for personal consumption
    - ☐ Middleman
    - ☐ Processing plant or other exporter
    - ☐ Other _____

11. IF FARMING, where does the buyer reside, or where is the product ultimately sold?
    - ☐ Buenos Aires

- ☐ Bañaderos
- ☐ Cofradia
- ☐ San Pedro Sula
- ☐ Elsewhere in Honduras (give name)
- ☐ Abroad

12. IF FARMING, How many permanent labourers do you employ?

13. IF FARMING, How many seasonal labourers do you employ (e.g. for coffee harvest)?

14. IF FARMING, How much do you spend on labourers per year? (if farmer doesn't know, ask him how much he pays the labourers per day and we can work out the approximate total cost)

15. IF FARMING, How many years have you been farming the land (if the farmer rotates his farm land, ask how many years they farm each piece of land before clearing more forest)?
    - ☐ Less than 5 years
    - ☐ 5-10 years
    - ☐ 10-20 years
    - ☐ More than 20 years

16. IF FARMING, Is there anything you would like to improve on your farm?

17. IF FARMING, Have you ever received outside assistance to improve your farm? What kind of assistance and who from?

18. IF FARMING, what do you think are the main barriers to improving farm quality and increasing farmer incomes?

19. IF FARMING, Do you take any measures to maintain the long-term health of the farm and local environment? (delete or rephrase this question)

20. Are there currently, or have there been any cooperatives in this community in the past?
    - ☐ Yes
    - ☐ No
    - ☐ Uncertain

21. If YES, what were they based on and who was involved?

22. If YES, were they operated fairly?
    - ☐ Yes
    - ☐ No
    - ☐ Uncertain

23. IF NO, why were they not fairly operated?

24. Do you think that illegal logging and hunting are severe problems in some areas the Cusuco National Park?
    - ☐ Yes
    - ☐ No
    - ☐ Uncertain

25. Why do people hunt and log in the park?
    - ☐ Economic / poverty
    - ☐ Culture
    - ☐ Outsiders coming into the park to hunt
    - ☐ International hunting / animal trade

26. Do you believe that monetary incentive and/or educational initiatives could prevent further hunting and logging in the park?
    - ☐ Yes
    - ☐ No
    - ☐ Uncertain

Farm Visit: Interview

General questions

1. Have your yields increased or decreased over the last 5 years? (amount and quality)
2. If yes, what are the reasons for the change in yield?
3. Where do you get your agricultural knowledge from?
4. Would you be interested in learning more about agriculture or new techniques?

Fertilizers

1. Complete the table below regarding the types of fertilizers used on the farm. This includes both organic and chemical fertilizers

Type of Fertilizer	Amount used per year	Cost per bag (state weight of bag)	Months which fertilizer is applied to soil

2. How do you decide what fertilizers to use (Do you test your soil)?

Planting

1. Do you select the seeds you pick? – characteristic of seed? – Where from in the branch?
2. Do you use bancos?
3. What species of coffee to you plant?

Coffee plant maintenance

1. How often do you cut the branches to allow new growth?
2. Do you maintain a specific height of the coffee plants?
3. How long is the tree productive for?

Harvest

1. What is the appropriate technique for collecting coffee beans (e.g. picking one by one versus pulling multiple beans off branch at once)?
2. Is there supervision/training for this?
3. When and where do you wash your seeds after you have picked them?
4. How many times do you wash them?
5. What do you do with the waste water?
6. What do you do with the pulpa?

Farm visit: Visual check

Planting:

1. Distance between coffee plants (between each plant and between each row, e.g. 2x1 metres)?

2. Coffee planting pattern (in rows, following contours of hill or random)?

	1) Random
	2) In rows, not following contours
	3) In rows, following contours

Shade

1. Record level of canopy shade?
   Middle: North: South: East: West:
2. Number of tree species used (circle relevant number)?
   1 2-5 6-10 11+
3. What distance between trees?
4. Tree planting pattern (in rows or random)?
5. Is the shade cover managed (e.g. do they cut branches to allow some light in)?
6. Was it planted before or at the same time as the coffee crops?

Farm maintenance:

	1) No evidence of farm maintenance, ground is very overgrown with considerable amounts of weeds and competing plants
	2) Large amounts of weeds and competing plants although some areas are better and is noticeably more clear than 1
	3) Quite a clean farm that has obviously been maintained, some areas are still have weeds but generally good
	4) Farm is very clean with no or almost no weeds, clearly very well maintained

Quality of coffee trees:

	1) Coffee trees are of consistently very bad quality, probably diseased and poorly maintained/selected ie too many stems, branches, too tall. Bean amount and quality very low
	2) Coffee trees are poor although clearly better maintained than 1. Some trees may have reasonable amount of beans although in general fairly low
	3) Coffee trees look healthy, fairly well maintained although some areas of farm are not as good. Most trees have large amounts of beans
	4) Excellent coffee trees with considerable amounts of beans. All coffee trees are very well selected and maintained

Appendix 5

Coffee Quality Assessment

Example of cup quality assessment of a coffee sample from one of the studied coffee farms in Bañaderos. Cupping was performed by professional coffee tasters as Molinos de Honduras, in San Pedro Sula, Honduras.

Marlon Omar Mejia
Evaluación de la Calidad de Control
Fecha Análisis: 2 de Abril 2013

MOLINOS DE HONDURAS, S.A. DE C.V.

Información

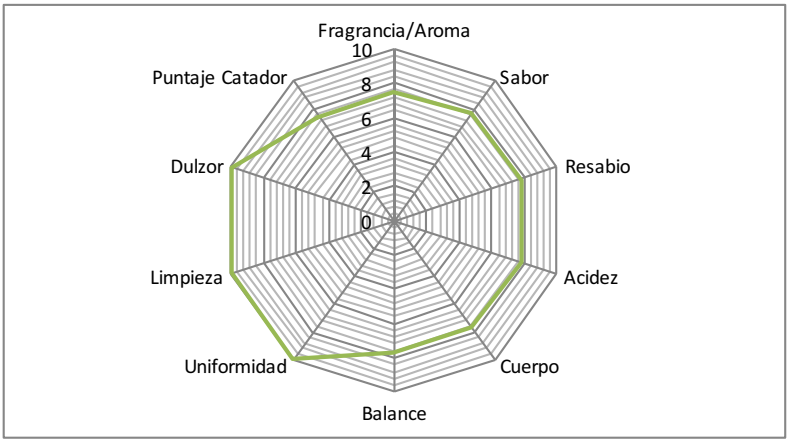
Catadores: Erin Wang y Gerardo Vasquez

Análisis Sensorial

Descripción	Calificación Erin	Calificación Gerardo	Calificación Promedio
Fragrancia/Aroma	7.50	7.50	7.50
Sabor	8.00	7.50	7.75
Resabio	8.00	7.50	7.75
Acidez	8.00	7.75	7.88
Cuerpo	8.00	7.50	7.75
Balance	8.00	7.50	7.75
Uniformidad	10.00	10.00	10.00
Limpieza	10.00	10.00	10.00
Dulzor	10.00	10.00	10.00
Puntaje Catador	7.50	7.50	7.50
Defectos	0.00	0.00	0.00
Nota Final	**85.00**	**82.75**	**83.88**

Comentario

Café muy balanceado, acidez citrico, cuerpo cremoso, chocolate, caramelo, melocoton, naranja y muy bueno sabor residual



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