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Entrepreneurship and Conflict Reduction in the Post-Genocide Rwandan Coffee Industry

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ABSTRACT. Entrepreneurship is widely acknowledged as a catalyst for poverty reduction and economic development. Yet its role in conflict reduction and social development is largely understudied. This paper presents evidence from a field survey conducted among a sample of Rwanda's emerging specialty coffee farmers and workers at coffee washing stations. To the best of our knowledge, this is the first study that quantitatively analyses economic liberalization and conflict reduction in one of Rwanda's most pivotal industries, i.e., coffee, and one of the few studies addressing the link between entrepreneurship in the developing world and intergroup peace-building. We approximated conflict reduction with an attitude of reconciliation between ethnic groups in Rwanda. Results from statistical analyses uncovered significant correlations between economic and livelihood advancement with comparatively more positive attitudes to reconciliation, especially where intergroup contact has increased alongside new incentives for collaboration across group boundaries. This suggests that enhanced entrepreneurship in Rwanda's liberalized coffee industry may provide the context for increased commercial intergroup contact, which in turn may constitute an opportunity for conflict reduction. We conclude with suggestions for follow-up research, to further analyze which types of economic policy changes may also hold the potential to contribute to positive social change.

RÉSUMÉ. L'entrepreneuriat est largement reconnu comme étant un catalyseur pour la réduction de la pauvreté et pour le développement économique. Néanmoins, il y a peu d'études examinant le rôle de l'entrepreneuriat dans la réduction des conflits violents et le développement social. L'article suivant discute des résultats d'une étude réalisée à partir d'un sondage mené auprès d'un échantillon de producteurs de café de spécialité, un secteur émergent au Rwanda, et des travailleurs dans des stations de lavage de café. Au dire des auteurs, ceci est la première étude qui analyse de façon quantitative la libéralisation de l'économie et la réduction des conflits violents dans l'une des industries les plus importantes au Rwanda, l'industrie du café, et l'une des seules études se penchant sur le lien existant entre l'entrepreneuriat dans les pays en développement et la consolidation de la paix entre des groupes qui s'opposent. La réduction de conflits violents fut estimée en utilisant comme mesure l'attitude de réconciliation entre les groupes ethniques au Rwanda. Les résultats des analyses statistiques ont révélé des corrélations significatives entre l'avancement économique et l'amélioration des moyens de subsistance et des attitudes plus positives envers la réconciliation, particulièrement là où il y a une augmentation des contacts entre les divers groupes et des nouvelles incitatives pour la collaboration entre les groupes. Ces résultats laissent que croire les activités entrepreneuriales accrues dans l'industrie libéralisée du café rwandais pourrait mettre en place un contexte favorable pour une augmentation des contacts commerciaux entre les divers groupes. Ces contacts pourraient avoir comme effet de contribuer à réduire les conflits dans la région. Pour terminer, les auteurs apportent des suggestions pour des recherches de suivi afin d'examiner de façon plus approfondie quel genre de changements apportés aux politiques économiques pourraient être des catalyseurs de changements sociaux positifs.

Introduction

Our paper focuses on a quantitative exploration of the extent to which the liberalisation of the Rwandan coffee sector can be associated with psychological processes among coffee farmers and workers at coffee mills, also called coffee washing stations (CWSs),¹ affected

1 In this article we use the terms "coffee mill" and "coffee washing station"(CWS) interchangeably.

by this institutional change. This policy change may be creating conditions that encourage the development of more positive attitudes towards members of the other ethnic community in Rwanda. More positive attitudes towards others may be equated to less potential for conflict in the future. The research goal was to examine the overall impact of this policy change on new entrepreneurial opportunity and intergroup relations among Rwandan coffee farmers. This involved testing three sets of hypothesized correlations: 1) How the infrastructure change related to entrepreneurship in the liberalized Rwandan coffee sector is linked to changes in livelihoods, intergroup contact patterns, and reconciliation attitudes of coffee farmers; 2) What aspects of intergroup contact are associated with livelihood changes and with reconciliation attitudes; and 3) How livelihood changes correlate to farmers' attitudes to reconciliation.

Operationally, we assessed this structural change by examining differences in economic and social experience across different subgroups in our sample. We compared coffee farmers who were members of coffee cooperatives to those associated with private coffee entrepreneurs, and those who had gained employment at recently created coffee mills to those who remained exclusively coffee farmers. Finally, we examined subgroup differences according to how long a particular coffee venture had been in operation.

The theoretical backdrop for this examination is Gordon Allport's (1954) *intergroup contact theory*. Allport's theory stipulates that contact between groups leads to reduced intergroup prejudice and, in turn, may foster a positive change in attitudes towards members of the 'other' group if certain conditions of the contact are met. There is extensive evidence that positive interaction between antagonistic groups can lead to reductions in prejudice and hostility (Allport, 1954; Pettigrew, 1998), and that contact is considered one of the most effective strategies for reducing intergroup conflict (Dovidio, Gaertner and Kawakami, 2003). Especially if contact between groups in post-conflict societies is intense (Gibson, 2004) and deep (Staub, 2006), it can promote reconciliation and the prevention of renewed violence in a society. This is because intergroup cooperation may contribute to the development of a new, shared identity among previously hostile groups. This is also associated with a reduction in prejudice (Gaertner et al., 1990) and the vision of a more collaborative future.

The study also leans on the *peace through trade* literature, which suggests that countries experiencing substantial gains from trade would lose comparatively more from engaging in war, hence display lower levels of conflict (Dorussen and Ward, 2010; Polachek and Seiglie, 2006; McDonald, 2004; see Boudreaux, 2007, for an overview of this perspective). For the purposes of the present study, this argument is pulled down from a national to a commercial, intra-state context, whereby members of previously warring factions within a nation are brought together in a commercial environment as the result of institutional stimulation of such entrepreneurial activity. The effect of this enhanced commercial contact would, in turn, be a lessened likelihood of conflict between these different groups in society.

To our knowledge, a quantitative field test of the assumed correlations between liberalisation, enhanced opportunities for new types of contact and associations that transcend the boundaries between previously antagonistic groups, and conflict reduction has not yet been conducted. Hence we present the results of a field survey measuring attitudes towards reconciliation among a sample of Rwandan specialty coffee workers. We base our assessments on the small literature of published field research in the context of post-conflict Rwandan reconciliation (Staub et al., 2005; Pham, Weinstein and Longman, 2004), and on our conceptualisations of other relevant predictors, as outlined further below. In sum,

the original contribution of the paper is a quantitative investigation of whether and how structural change and increased intergroup contact in newly created associations, triggered by government reforms of the coffee sector, correlates with reduced potential for future conflict among Rwandan coffee workers. Its goal is thus to provide an exploratory insight into predictors for positive social change through the stimulation of entrepreneurship, and a better understanding of the array of factors fostering peace in post-conflict societies.

Research background

The trigger for this study was several reports in popular media, such as *The New York Times*, linking changes in Rwanda's coffee sector with reconciliation (e.g. van Dyk, 2005; Fraser, 2006; McLaughlin, 2006). The macro-economic argument underlying these accounts relates to an extensive literature on *liberal peace*, suggesting that market-oriented democracies gain from trade and lose through conflict between and within nations. For trading nations, the opportunity costs of engaging in violent conflict outweigh the potential benefits of aggressive and/or violent behaviour (O'Neal and Russett, 2001, 1999; Mansfield and Pollins, 2003; Mousseau, Hegre and O'Neal, 2003; Hegre, 2000). According to this literature, liberal democracies, with open, liberalized markets, are characterised by vibrant trade, and this trade is a catalyst for peaceful relations between potentially warring factions in society (see Boudreaux and Ahluwalia, 2009, for an overview).

The theoretical link to the intra-state case of Rwanda is that, as a result of liberalisation policies, coffee farmers and CWS workers have increased incentives to collaborate with each other and with trading partners now, as compared with the pre-liberalisation era when the government controlled the production and sale of coffee by means of extensive regulation. Today, the income of coffee workers is increasing and they "work together towards a common goal: profits" (Boudreaux, 2007: 7). Members of cooperatives also work together to build a business, providing their time and labour in the effort of developing a competitive enterprise. Effective cooperation increases the likelihood that these entrepreneurial efforts will succeed. If cooperative members revert to conflict or fail to overcome trust problems amongst themselves, they would stand to lose the direct and indirect investments they have made in building their businesses. In their cases as well, the opportunity costs of conflict may outweigh any perceived benefits of conflict or even reduced cooperation and trust. In this way, the benefits of freer trade for all, including members of groups formerly identified as Hutu or Tutsi², may outweigh the cost of being in conflict with each other.

Conflict, liberalisation, and entrepreneurship in Rwandan coffee

Political economists such as Paul Collier and his colleagues argue that the main underlying cause of conflict in countries dependent on commodity exports is lack of economic progress and an inequitable distribution of income (Boudreaux and Ahluwalia, 2009). High levels of poverty and dependence on commodity exports characterized pre-1994 Rwanda.

The 1994 genocide in Rwanda was evidently an act of ethnic cleansing, leading to the killing of at least half a million people, most of whom identified as Tutsis (Straus, 2006). Many factors contributed to this horrific act. The topic of this enquiry is more limited: How have changes in the socio-economic conditions of people working in Rwanda's cof-

2 In this paper, the terms "Hutu" and "Tutsi" will be used to describe the different groups in Rwanda *as they were identified* during the last century, up to the time around the 1994 genocide, acknowledging that these socially constructed terms have undergone several changes in meaning due to political and ideological manipulation.

fee sector contributed to improved intergroup relations in this overwhelmingly agricultural society where coffee production remains a primary source of income?

Using a political economy analysis, Verwimp (2003) argues that the social factors related to the Rwandan genocide are inextricably linked to its coffee industry. As Verwimp (2003) explains, both the Belgian Imperial authorities in Rwanda, as well as the Hutu-led post-colonial regimes forced farmers to cultivate coffee and to sell their beans to a single buyer (the government) at below-market prices. The government sold Rwanda's coffee on the world market at market prices and used the gains to benefit political and urban elites. This system was reasonably stable until world market prices for coffee prices collapsed in the late 1980s. The collapse of the market forced the Rwandan government to further lower prices for coffee farmers, the majority of whom were Hutu. Faced with increasing popular dissatisfaction, ethnic ideology against the Tutsis was the ideal (and cheap) way for the regime to increase its legitimacy among the majority of the population.

Today, coffee is an increasingly lucrative means of earning a living for the 500,000 Rwandan farmers who work in the sector (Boudreaux, 2010; Gahamanyi, 2005). The reason for this industry transformation is connected to sweeping liberalisation efforts undertaken by the post-genocide Tutsi-led government, as well as effective foreign aid programs managed primarily by non-governmental organisations (NGOs). These changes have helped Rwandan farmers break a "low-quality/low quantity trap" and shift from producing poor quality beans (fetching little profit on the international market) to growing much more valuable specialty coffee. Before the liberalisation, Rwandan coffee farmers removed the fruit of their cherries either with a hand-pulper or, perhaps, using rocks. Beans would then be dried and fermented in buckets, for varying lengths of time, in water of varied quality. As a result, coffee was of lower, industrial quality. This home-processed coffee still makes up the majority of coffee being sold from Rwanda. Today, most industries, including the coffee sector, have been privatised, and the economy has been opened up and is largely deregulated (Boudreaux and Ahluwalia, 2009).

The effects of this on the coffee sector, and on those working in coffee, have been particularly positive. Since the early 2000s, the creation of CWSs in Rwanda with considerable foreign aid assistance has led to substantial quality improvements in coffee production. Production improvements allow Rwandan coffee farmers to sell a fully washed coffee product and gain access to the high-value speciality coffee market (OTF Group, 2007). This has resulted in important income increases for farmers: about 50,000 of the 500,000 coffee growers were estimated to have doubled their earnings in the five years since the new millennium because of their being able to access newly created CWSs and, hence, being able to sell fully washed coffee (Boudreaux, 2010: 17). Further, about 2,000 new jobs were created by 2005, providing seasonal income to people who work in these new washing stations (Chemonics, 2006). Coffee farmers' earnings seem to have continued to go up by at least 50-100% in USAID-supported coffee zones between 2004 and 2007, as reported in a recent assessment report (Swanson, 2007) commissioned by the NGO *SPREAD*, one of the three main foreign NGOs assisting development in Rwanda's coffee sector.

Coffee washing stations and intergroup contact

Around the new millennium, USAID was instrumental in the capital-intensive effort of setting up the first CWSs in Rwanda, permitting Rwandan farmers to offer fully washed coffee on the international speciality coffee market (OTF Group, 2007). Coffee mills in Rwanda are either owned by a cooperative or by a private investor, and they are always

located in the rural, hilly and relatively inaccessible areas where coffee grows and where little other commercial infrastructure exists.

The strong manual labour aspect of the work at a CWS means that workers have to collaborate at all times to get the work done. CWSs provide seasonal employment to people who have little other income opportunity beyond subsistence and cash crop farming. Although ethnic discrimination is conceivable, it is unlikely that workers at CWSs are chosen based on ethnic allegiances, due to the government's strong focus on unity and inclusion (and severe sanction of non-compliance). This means that workers collaborating at CWSs are likely to have come into a new type of commercial contact with members from other groups in Rwanda because of the newly created CWSs.

CWSs offer a new type of infrastructure and opportunity for social exchange and participation in these rural areas that was unheard of before the genocide. Between 2001 and 2009, 112 CWSs had been established, many of which receiving assistance from USAID, a reflection of the dynamism of entrepreneurial activity in Rwanda's coffee sector (Sloan, 2006). One measure of this dynamism is the 120% annual growth rate of private investment in CWS over the first few years of the new millennium and a projected continuation of annual private investor growth in CWSs of 70% for 2007-2010 (OTF Group, 2007). However, despite all these advancements, less than 10% of Rwandan coffee was sold as fully washed in 2007 (OTF Group, 2007), indicating that only a small minority of farmers benefited from these recent changes (as noted above, approximately 50,000 of the 500,000 coffee farmers). The majority of Rwandan coffee farmers have not yet been touched by this phenomenon. As additional CWSs are built around the country, more farmers and their families will have opportunities to sell in the specialty coffee market. Due to its pivotal position in Rwandan society, positive changes in the coffee sector signal the potential value of increased entrepreneurship in this area. Hopefully, expanded opportunities contribute to further direct and indirect benefits for Rwandan farmers.

Contact and social identities in Rwanda

The newspaper articles mentioned above evoke the principles of a seminal theory in social psychology related to conflict reduction, i.e., Allport's (1954) *contact theory*. Allport's theory relates to intergroup contact as a correlate of reduced outgroup prejudice, one of the predictors for conflict reduction between groups. The theory was recently corroborated in Pettigrew and Tropp's (2006) meta-analytic review of 60 years of research in this area.

The application of *contact theory* to the present context suggests that increased intergroup contact and collaboration in Rwanda's newly created coffee enterprises may be linked with positive changes in attitudes between Hutu and Tutsi coffee workers in Rwanda. This may also imply that contact and collaboration may act as *mediators* of the relationship between institutional/industrial changes and conflict resolution. The triggering, predicting effect of contact on forgiving is mirrored in the post-conflict literature in environments such as Northern Ireland (Hewstone et al., 2004), Israel-Palestine (Nadler and Liviatan, 2006), and Bosnia (Cehajic, Brown and Castano, 2008).

Intergroup conflict is strongly linked to antagonistic groups' ethnic, or social, identities. Rwanda has always been extremely intermixed in ethnic terms, with Hutu and Tutsi clan members living next door to each other, intermarrying, and interacting on a daily basis for centuries. A recent representative study of Rwandan genocidaires (Straus, 2006) provides carefully researched evidence that even most genocide killers had positive relationships with their Tutsi neighbours right up to the beginning of the genocide in 1994. Straus (2006)

suggests that the relationship between ethnic identity and group hatred is not straightforward in Rwanda, and traditional identity-based genocide theories cannot succinctly explain the mass killings in 1994; yet he points to a strong relationship between ethnic *categorisation* and genocidal violence, which hinged on a normative understanding that Tutsi were fundamentally all similar and belonged to a distinct social group in Rwanda. During the lead-up to the 1994 genocide, it was this common understanding of the Tutsi “pre-existing ethnic/racial classification” (Straus, 2006: 224) that enabled the Rwandan authorities to convince the majority of the Hutu population of the *social category* shift of seeing a Tutsi as an enemy who needed to be exterminated, rather than as a neighbour and ordinary fellow citizen.

According to social identity theory (SIT; Tajfel and Turner, 1979), we derive part of our personal identity from our social identity. This occurs primarily through a process of categorisation, i.e., we naturally categorise ourselves into our own “ingroup,” i.e., the social category that we identify with, and categorise others into different “outgroups,” due to their different skin colour, religion, etc. We fundamentally strive for positive self-esteem, and we often do this through a favourable comparison of our social identity, or ingroup, with relevant yet different outgroups. By comparing our own group to another in a positive light, we aim to become positively distinct from this outgroup, in this way enhancing our socially derived self-esteem.

Holding a stereotypical, prejudiced image of outgroup members is the result of a competitive social categorisation of one’s own ingroup in relation to a particular outgroup, and it is one of the main predictors of committing violent acts toward the outgroup, as this serves to justify one’s own behaviour (Alexander, Brewer and Herrmann, 1999). Consequently, ingroup bias and outgroup prejudice are a major impediment to overcoming social category-based group differences. However, the above-mentioned dynamic nature of social categorisation and identity-creation implies that no socially created group category is ever fixed in time, and hence it is possible to reverse destructive intergroup categorical perceptions with time and in changing environments.

Considering that the newly created coffee cooperatives and washing stations in Rwanda bring together members of groups previously engaged in violent conflict, social categorisations are bound to be salient, as well as dynamic, concepts in the process of *merging* Hutu and Tutsi in this context.

This is all the more pertinent to the present study, as Gaertner and his colleagues suggest that social re-categorisation makes intergroup contact more effective, if participants in the intergroup contact replace an ‘us vs. them’ ideology with a more socially inclusive and overarching identity (Gaertner et al., 1989).

The study

Policy changes generally have heterogeneous effects on the people targeted by the intervention (Duflo, Glennerster and Kremer, 2008). In the Rwandan post-group-conflict context, therefore, it is particularly meaningful to evaluate the differential effect of the government’s coffee sector liberalisation efforts on the Hutu and Tutsi and their intergroup relations. However, a truly randomized evaluation of Rwanda’s coffee industry liberalisation would have been impossible. It is not possible to randomize phenomena that have already been rolled out, nor is it realistic to cut a society experiencing a policy change in half, neither before nor after. Moreover, as is typical for the majority of policy impact assessments (Banerjee and Duflo, 2008), data was unavailable on social relations between groups *before* the policy change was implemented.

Hence, we set out to explore subgroup differences within the population affected by coffee sector liberalisation. In particular, we dissected our sample into several subsets according to newly established infrastructure in the coffee sector (e.g., by membership of cooperatives, or employment at a CWS). We chose this approach to evaluate alternative potential variants and to obtain clues for more sophisticated follow-up investigations.

While self-reports of phenomena that have occurred in the past contain unique validity constraints, we nonetheless also assessed pre-intervention differences between subgroups in our study in this way. This enabled us to follow a difference-in-difference approach, i.e., we approximated pre-period differences in outcomes between subdivisions of participants to control for pre-existing differences between groups.

In order to maximise construct validity of the survey, we assessed several variables in a variety of ways (e.g., intergroup contact quality, or association with a cooperative). Our goal in this was to triangulate the essence of relevant constructs and to bring out maximum “heterogeneity of irrelevancies” (Shadish, Cook and Campbell, 2002), so that any bias among a single sub-scale may be different to that of another, and inferences about the construct are not systematically compromised.

Especially because we could not identify previous research data on this topic, this survey is a typical retrospective evaluation, using theory “instrumentally” (Duflo, Glennerster and Kremer, 2008), i.e., to provide structure around the study’s key assumptions. Albeit less powerful than a randomised field experiment in its power to test and challenge theories, our approach was very much grounded in the established theories of intergroup contact and reconciliation. During the analysis phase, we heavily relied on pattern matching (Campbell, 1966), and examined a possible match between the pattern of the observed outcome and the underlying theories, also to inform future research efforts in this area.

Operational definition of core study concepts

We assessed four sets of variables to examine the correlations at the base of our hypotheses: 1) Infrastructure created in the aftermath of coffee sector liberalisation; 2) Livelihood variables; 3) Conceptualisations of intergroup contact; and 4) Attitudes towards reconciliation. We outline each of these concepts in the paragraph below.

The diagram below illustrates the hypothesised correlations between the concepts examined in this study.

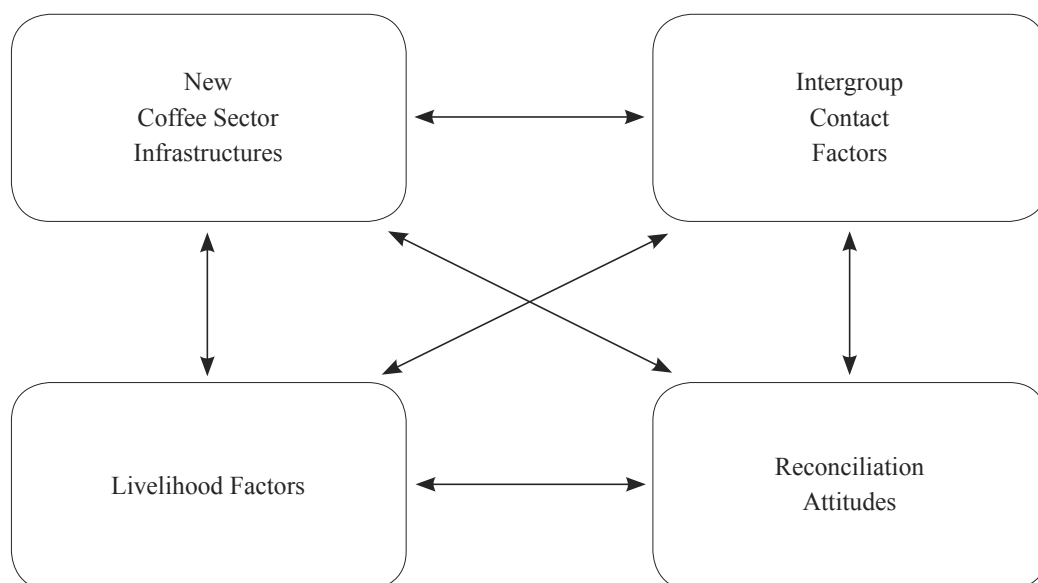


Figure 1. Conceptualisation of the study's hypothesised correlations.

Infrastructure variables related to new coffee sector entrepreneurship

The following three variables were examined to examine potential subgroup differences, related to new entrepreneurial infrastructure created as a consequence of coffee sector liberalisation: 1) Membership in a coffee cooperative; 2) Whether an individual was also employed at a recently established CWS; and 3) The duration of time that each visited CWS had been in operation.

Cooperatives are owned by their members. All ethnic groups in Rwanda are invited to join cooperatives in the localities where these have been created. Rwandan coffee cooperatives are run by supervisory boards that regularly report their results to the membership base. This may imply a greater degree of intergroup contact for coffee farmers who have joined cooperatives. We thus predicted that members of cooperatives would have comparatively more positive reconciliation attitudes. Operationally, we compared the responses of survey participants interviewed at five coffee mills owned by cooperatives to those of respondents surveyed at the five sampled CWSs with a private owner. We also asked each participant to indicate if they were a member of a coffee cooperative.³

We predicted that coffee farmers who were employed at a particular CWS would have more intergroup contact, and would hence display less intergroup prejudice, compared to participants who did not enjoy this routine contact with members of the other group. We also identified the employment status for each participant. Hence employees of coffee mills (who in most cases were also coffee farmers) constituted half of the targeted survey population; the other half of respondents were farmers who only sold beans to the CWSs at which they were interviewed.

Finally, we assessed whether there was any difference between farmers who were associated with more entrenched operations compared to those who only recently had begun to cooperate as part of a newly built CWS. As a logical extension of *contact theory*, we predicted that people working at comparatively 'older' CWSs would have more positive attitudes towards members of the other group. The age range for the 10 CWSs that we visited was 1-6 years. For the data analysis, we split our sample into two groups, i.e., those in operation for up to three years, and those operating for four or more years.

Livelihood variables: economic and life satisfaction

Out of a recognition that the frustration of basic human needs, such as the need for security (Staub, 1998) and difficult life conditions, contribute to mass violence (Staub, 2006), the reverse should apply. Satisfaction of basic human needs, such as improved security and more comfortable life conditions, should contribute to conflict resolution and peace building. Hence participants' economic security or satisfaction was measured by asking: "How happy are you about your economic situation," both in relation to the recent past as well as currently, on a four-item scale.

A life satisfaction measure on a four-item scale, adapted from Diener et al. (1985), was also created, consisting of three statements on life satisfaction (e.g. "In most ways my life is..." or "The conditions of my life are...") that the participant was asked to complete, for

3 This was to cross-check that our data split reflected actual cooperative membership vs. association with a private enterprise. Most participants surveyed at a CWS owned by a cooperative were also cooperative members.

his or her life situation currently and with regards to the recent past. Difference scores were computed to assess changes in these ratings over time.

Commercially induced contact and social distance

Due to its pivotal position at the core of the correlational analyses of this study, several related items were designed to measure the quality of commercially induced contact between Hutu and Tutsi participants at work and socially. The first set of items was a measure of intergroup contact frequency (“How much contact do you have with members from the other group?”), and the second item pair measured intergroup contact affect (“In general, when you meet a member from the other group, do you find the contact pleasant or unpleasant?”), based on Tam et al. (2008). The third measure of intergroup contact aimed at assessing deep interdependence or high-quality contact, deemed particularly important in its relationship with reconciliation (Staub, 2006; Cehajic, Brown and Castano, 2008). The scale measured several aspects of meaningful social contact in recent years⁴, asking participants to indicate how frequently they had met socially with members of the other group in Rwanda, helped members of the other group, received help from them, celebrated together (e.g. wedding), and attended a funeral together. The item had been adapted from the World Bank Social Capital Survey (Grootaert et al., 2003, item 5.15). All items provided a “no answer” option.

Although each contact sub-scale was internally consistent (Cronbach α , a measure of internal reliability, was $\alpha = .6$, $\alpha = .91$, and $\alpha = .78$, respectively), we analysed each contact scale separately in its relationship with the other variables of the study (as outlined below), in order to understand the multiple dimensions of intergroup contact *quality* in its effect on attitudes towards peace and reconciliation.

Social distance, or the degree to which someone avoids members from another group, is another intergroup contact variable. It is also a strong (negative) correlate of reconciliation variables such as forgiving, trust, and outgroup heterogeneity (e.g. Cehajic, Brown and Castano, 2008). In the Rwandan context, intergroup avoidance is likely based on ethnic identification; hence, we based the intergroup distance measure on ethnic divisions, incorporating classic social distance measures, as described in the World Bank’s Social Capital Survey (Grootaert et al., 2003), and incorporating elements of measurement scales used in another recent research study with Rwandans (Paluck, 2007). A set of questions asked participants to indicate “yes” if they were willing to interact with a member of a group that has done harm to a person from their group in the past (e.g. share a beer, let this person look after their child, allow their child to marry this person, or none of the above), both currently and in the past. We computed two sub-scales from participants’ answers; the first, ‘Ethnic distance today’, counting all ethnic intergroup interaction types currently ($\alpha = .96$), and the other, ‘Ethnic distance change’, constituted the difference between an affirmative answer today and in the past for the option ‘none of the above’.

Reconciliation attitudes

Since there is no cross-validated scale measuring attitudes towards peace and intergroup conflict reduction in the Rwandan context, and there do not seem to be other compre-

4 All questions referring to the past differed in their reference point, depending on whether the survey was carried out at a coffee cooperative (in this case, the past reference point was “before you joined the cooperative”), or at a privately owned CWS (“five years ago”).

hensive measurement scales in the public domain measuring conflict-reducing variables within any other cultures, we based the development of measurement of attitudes towards reconciliation among Rwandan coffee workers on conceptualisations and psychological concepts related to reconciliation and forgiveness that have been reported upon in related scholarly articles. Reconciliation and forgiveness are related constructs, and prior studies of the conflict in Northern Ireland and conflict between Israelis and Palestinians revealed that trust, perspective-taking, empathy and outgroup heterogeneity are positively correlated with forgiveness and reconciliation (Worthington, 2005; Nadler and Liviatan, 2006; Hewstone et al., 2004; Batson, 1997; Cehajic, Brown and Castano, 2008), whilst ingroup bias (Hogg et al., 2007; Hewstone et al., 2004), distrust (Hewstone et al., 2008), and the perception of threat and insecurity (Staub, 1998) are negative predictors.

In particular, we used Staub et al.'s (2005) *Orientation to the Other (OOM)* scale as basis for the assessment of variables related to reconciliation attitudes in Rwanda.⁵ Staub, a noted genocide scholar familiar with the Rwandan context, had developed and administered this scale on "the essence of psychological reconciliation" with his colleagues in 1999 (Staub et al., 2005: 313), using a sample of Rwandans that consisted mainly of Tutsi women recruited by local organisations. However, with the socio-political landscape in Rwanda changing continuously in the meantime, it was necessary to extend the underlying conceptual framework. Following detailed discussions with informants during the pilot study in Rwanda in February 2008, we added the additional reconciliation variables developed since the new millennium and outlined in the previous paragraph to the reconciliation attitudes scale. Our scale consisted of 17 questions (see Appendix A).

All items were assessed on a four-point Likert-type scale, ranging from 1 (strong agreement) to 4 (strong disagreement), with the option of not providing an answer. Five meaningful factors reflecting the academic literature on reconciliation were confirmed during the factor analysis of the responses. These were: perspective-taking, distrust (negatively correlated), group heterogeneity, an expectation of peace in the future, and conditional forgiveness. The five factors were made up of 11 out of the 17 items in the scale, and accounted for 44% of the scale's total variance. All five factors were kept for the analyses, rather than computed into a single 'reconciliation attitude' score, in order to understand as much conceptual detail during this exploratory study as possible.

Procedure

As is often the case with exploratory field research, unique constraints affected the sampling for this study. Randomisation, especially if applied in conjunction with pre-test/post-test designs, solves the problem of selection bias and of its interaction with other threats to a study's internal validity. This generally enables researchers to draw causal inferences. In our study, however, even an ex-post-facto design was not feasible because there was no genuinely valid control group among Rwandans for our study. A statistically valid control group exists only when people *can be randomly* assigned to the control group, and others to the 'treatment' group. Here, the 'treatment group' would have consisted of those experiencing the policy change and its consequences.

Our population of interest were coffee farmers and CWS workers, and our research goal was to assess the social impact of structural change and new commercial contact as-

5 Staub et al.'s (2005) study is one of the two published surveys measuring attitudes towards reconciliation in Rwanda. For a detailed description of the factor analysis and scale development for this study, please refer to Tobias (2008).

sociated with coffee sector liberalisation. The most valid control group for this study would have been coffee farmers living in remote areas, who were not selling beans to CWSs, and, therefore, not yet affected by the consequences of liberalisation policies. However, we did not include these people in our study for the same reasons that the new league of coffee entrepreneurs have so far also stayed out of these regions: these populations are difficult to reach using any means of transport.

Additionally, in Rwanda, coffee is cultivated exclusively as a cash crop. In Rwanda's southwestern region, where we based our study for logistical reasons, cultivating coffee is the main agricultural income source, taken up by most rural Rwandans who live there. Therefore, it was not feasible to compare 'commercial' coffee farmers against subsistence farmers or persons cultivating a different cash crop.⁶

Logistically, our physical presence in Rwanda was limited to six weeks between February and June 2008. Geographically, our reach was limited to a two-hour off-road vehicle radius around Huye, where the research team and our local NGO contacts were located.

Sampling

Sampling occurred at two levels, i.e., we selected 10 sites at which we administered the survey instruments. The survey sites were the location of 10 coffee mills, and these were selected based on the following criteria: out of all CWSs within a two-hour four-wheel drive radius around Huye in the southeast of Rwanda, we selected the 10 that were closest in physical proximity to our research base. We only selected one CWS per coffee enterprise,⁷ and five that were each run by a cooperative and by a private entrepreneur, respectively.

At each CWS site, we arrived on one particular morning during the coffee-harvesting season during May and June 2008, and invited a sample of 24 individuals to participate. Our daily sample thus consisted of 12 coffee farmers who had arrived at the CWS to sell their coffee beans, as well as 12 employees who had arrived to work at the coffee mill on that day. Our arrival had only been announced in advance to the CWS manager, who had been instructed not to disclose our survey to anyone before our arrival.

While we may have failed to eliminate selection bias in principle using this technique, and thus cannot be certain that there are no pre-existing differences among our sample that may contaminate our survey, these selection criteria were systematically adhered to, minimising human bias in this exploratory research design. One of the interviews was unusable, leaving a total sample of 239 participants, 126 of whom (53%) were currently employed at a CWS in some capacity. The remainder (113 individuals, or 47%) worked exclusively as coffee farmers but sold their coffee cherries to the CWS that we visited during the sampling period. In all, 121 male participants (51%) and 118 female (49%) coffee workers were interviewed; 34% had no formal education, 61% had gone to primary school, and fewer than 5% (i.e. 11 individuals) had secondary education. Their ages ranged from 18 to 86 years, mean age was just above 38 years, and the median was 35 years. There were 165 individuals (69%) classified as Hutu, 59 (25%) as Tutsi, and 11 (5%) as belonging to another group. These figures seem to reasonably reflect the ethnic proportions reported in Pham et al.'s

6 This would have been different had we accessed other regions in Rwanda (e.g. the East where tea is one of the main cash crops). In addition, as the vast majority of Rwandan farmers occupy one hectare or less of land, coffee production is overwhelming "smallholder," not plantation style as in Brazil or some Central American countries.

7 Most coffee ventures own more than one CWS, i.e., a coffee cooperative as well as a private coffee investor typically operates at least two or more coffee mills.

(2004) representative nationwide study on reconciliation in Rwanda. Four individuals (out of 239) did not provide valid ethnic identifications.

In Table 1 below, we list the names, location (expressed as distance in km from Huye), and ownership type of all coffee mills we surveyed. We also provide a breakdown of the

CWS	Location (vis-à-vis Huye)	Ownership Type	CWS 'age'	% Hutu	% Tutsi
Buff Café	27 km NW	Private	3	54	38
Maraba (Sovu)	6km N	cooperative	4	61	30
Mayaga	41km E	Private	1	67	33
Ngera	25km S	Private	2	70	30
Ntyazo	35km E	cooperative	2	71	26
Nyakizu	43km SE	cooperative	4	71	29
Sonicoff	31km S	Private	3	75	21
Mugombwa	63km SE	cooperative	4	73	18
Koakaka	20km NW	cooperative	6	79	13
MIG	27km N	Private	4	83	13

percentage of Hutu and Tutsi farmers who participated at each CWS in our survey.

The research team consisted of eight paid final-year students and recent graduates from the National University of Rwanda, located in Huye, and the second author. The Rwandan students conducted surveys in Kinyarwanda, Rwanda's local language, with the survey participants in these communities. All students had been selected from a group of 15 volunteers, and had undergone extensive training over a two-week period on the content of the survey instrument, i.e., a standardised questionnaire, and on establishing trust and rapport with participants throughout the confidential interviewing process, yet were blind to the specific research questions of the study.⁸

The survey instrument had been pilot-tested during a two-week period in February 2008. The scale had undergone a systematic back-translation procedure that consisted of five iterations, due to the two-fold challenge of translating between two very distinct languages, and of the fact that Kinyarwanda is a language with many dialect variations where universal consensus over semantics is comparatively more difficult to achieve than, say, in English. A small, non-monetary token of appreciation was given to the participants after completion of the interview (either a Polaroid picture of the participant, or a T-shirt), which was in line with customary and expected compensation for such research activities in Rwanda.

Confidentiality and ethnic identification

Consent was obtained orally from participants. This was because the researchers wanted to avoid identifying the participants at any time during the interviewing process in order to

8 Seven of the eight student interviewers self-identified as at least partially Tutsi. A selection based on ethnicity was logistically not feasible.

ensure the maximum amount of trust and openness from the participant in answering questions about the genocide and intergroup attitudes, which are without any doubt sensitive topics in contemporary Rwanda and needed to be discussed in a confidential setting. Additionally, respondents were reminded of their choice not to answer questions throughout the survey, and they were encouraged at the end of the survey session to indicate their ethnic identity in a 'secret ballot' procedure (outlined below), and also if they felt indeed able to provide truthful answers or not.

In addition to assessing participants' demographic details such as gender and education levels, they were also asked to provide their ethnic identification as they had been 'classified' during the time of the genocide. Discussing ethnicity has been an awkward and sensitive topic in Rwanda since the genocide, especially after the post-genocide government introduced its policy of unity and reconciliation, which strongly discourages anybody in Rwanda from using the words "Hutu" or "Tutsi," and insists that Rwanda consists of "Rwandans."

The taboo nature of discussing ethnic identity in Rwanda today made it socially unacceptable to directly ask participants about their ethnic identity, despite the need to determine the ethnic mix of the groups examined to validate answers related to conflict and reconciliation questions. By the same token, it would be virtually impossible to create survey questions on cross-group prejudice and determine the construct validity of any answer, especially one that suggests the existence of intergroup prejudice. This is because Rwandans are likely to be afraid of severe punishment by the Rwandan government if they speak against official government party lines on ethnic identity, fearing accusations of holding 'genocide ideology', which the Rwandan government has defined so broadly that even opposition to unrelated government positions may result in persecution, human rights activists such as the late Rwandan genocide expert Alison des Forges argued (afrol News, 2008).

Public discourse in today's Rwanda resorts to using group descriptions that circumscribe the meaning of ethnic identity in Rwanda reasonably well (e.g. "genocide survivor" for a person identified as Tutsi during the genocide, or "retournee"—a "returning" person—for a person identified as Tutsi who came to Rwanda after the end of the genocide). Hence, these "synonyms" were used to ask participants to self-identify as Tutsi. Assessing individuals' identification as Hutu was carried out similarly to Paluck (2007) in her dissertation study, by asking the question: "Do you have family members in prison?"

Ethnic identity questions, as well as questions geared towards assessing a participant's perceived ability to answer honestly, were assessed at the very end of the interview. During this procedure, the interviewer explained and showed the questions on ethnic identity and truth in responding (see Appendix B) to the participant, without asking the participant to complete the answer at that point, and illustrated how the participant was to seal the questionnaire into an unmarked envelope without the help of the interviewer afterwards. Due to the fact that between a quarter and a third of all participants were unlikely to be able to read (Globalis, undated), these questions were illustrated with different graphical representations (e.g. a square for the "Tutsi" category, a circle for the "Hutu" category, and a star for the question assessing perceived social pressure in responding), to ensure that participants could understand the meaning of the questions without having to read the question texts. Following this explanation, the interviewer left the participant alone to answer the question privately. The participant was then asked to place the unmarked envelope containing his or her survey in a vessel containing all other surveys in unmarked envelopes collected during the same day, before receiving his or her token of appreciation in return for participating

in the survey effort.

Manipulation check

Rwandan society is very polite, and prior reconciliation researchers in Rwanda (Staub et al., 2005) reported on social desirability threatening research. For this reason, we included two items at the end of the survey, which the participants were encouraged to consider privately during the secret ballot part of the survey. Participants were asked to mark a star-shaped symbol if they felt any pressure during the interview to say what others would want them to say. Similarly, they were asked to mark a symbol in the shape of a sun if they did not feel comfortable to answer truthfully. Eight participants selected the former symbol and five the latter, with one person marking both symbols. Thus, 12 people in total, i.e., 5% of all participants, expressed unease about being honest during the survey.⁹ Taken together, this comparatively low level of concern regarding honest responses suggests that, for most responses, at least a face-valid degree of honesty was achieved during the study.

Results

Our data analysis approach

To reiterate the starting position of this study, the newspaper articles linking changes in Rwanda's coffee sector with reconciliation suggest that increased intergroup contact may be linked to reductions in prejudice between Hutu and Tutsi coffee workers in Rwanda. This journalistic evidence suggested that commercial contact might mediate the relationship between liberalisation and peace-building attitudes in Rwanda.

Due to the exploratory nature of this research, we set up the data analysis as a correlational study across the variables measured in the survey to gain a better understanding of the psychological factors that may have changed alongside the coffee industry liberalisation in Rwanda in recent years. Correlation is of course not the same as causation, and without a control group in a non-experimental study it is not possible to observe causal relationships, let alone gain clarity over the direction of statistical relationships. Nonetheless, we lean on Straus' (2006) argument, suggesting that in exploratory studies such as his study of Rwandan genocide perpetrators, the mere absence of a correlation is informative in that it suggests the absence of a causal relationship.

Below, we report on statistical comparisons between various subgroups within the changing coffee sector and their attitudes towards conflict resolution and reconciliation, with the goal of providing a preliminary insight in the structural and psychological variables that may contribute to positive social change associated with the liberalisation of Rwanda's coffee industry.

General tendencies

Ethnicity effects. It is worth mentioning ahead of the analysis proper that ethnicity did not have any significant effect on any variables outlined below. This means that Hutus and Tutsis reported comparable levels of agreement concerning attitudes towards reconciliation, despite the fact that some reconciliation variables seemed, at initial examination, to be more relevant for one group. In particular, there was a slightly higher percentage of Hutu participants who agreed strongly with perspective-taking towards Hutu actions dur-

⁹ These responses were kept in the analysis, as it was unclear how extensive misreporting was for each individual participant.

ing the genocide (90% vs. 85% of all Tutsi participants). The same applied to Hutu group heterogeneity (98% agreed strongly, vs. 95% of Tutsi), indicating a slight bias of Hutus to 'take the side of' Hutu persons in general. By the same token, a slightly higher percentage of Tutsi participants agreed strongly with conditional forgiveness (98% vs. 95% of Hutus), as one might argue that Tutsi in general may find the concept of forgiving more relevant for their own group. However, neither of these differences proved significant, which adds to the claim that these variables validly measure reconciliatory attitudes in Rwanda, independent of whether the respondent was Hutu or Tutsi.

A largely similar result applies to the effect of the ethnicity mix in a particular survey location, i.e., the proportion of participants who self-identified as Hutu to those self-identified as Tutsi.¹⁰ The lack of any significant correlation of ethnicity mix with other predictors for reconciliation attitudes provides further support for the construct validity of the claim that the observed effect may have occurred for both main ethnic groups.

Economic and life satisfaction

Economic satisfaction today and in the past was measured on a four-item scale, with low scores indicating high degrees of economic satisfaction. We computed a score on 'economic satisfaction change' by deducting a participant's current economic satisfaction score from their assessment of their past. Hence, a high 'economic satisfaction change' score indicates an improvement in economic satisfaction in recent years. Overall, only 3% of participants indicated that they were very satisfied with their economic situation in the recent past, whereas 40% reported that they are very satisfied with their economic situation today. In addition, 45% of participants reported a one-point improvement (on a 4-item scale) in economic satisfaction in recent years; for 22% this was a two-point increase; 10% even reported a three-point increase in economic satisfaction; however, 15% experienced no change in economic satisfaction while less than 5% (4.6) indicated a decrease by one or two points. This is strong support for the assertion that coffee farmers with access to CWSs are experiencing economic advancement and satisfaction. We note, however, that world market prices for coffee reached a low of \$0.48 per pound in 2002 and have since steadily increased to reach a composite price of \$1.26 in 2010 (ICO, 2010). Thus, for all Rwandan farmers, the price they receive for beans, whether semi-processed or fully washed, has risen appreciably over the past decade. Had we surveyed a wider range of coffee farmers we would likely have recorded increased levels of economic satisfaction even among those farmers not selling specialty coffee. Nonetheless, Rwanda specialty coffee continues to command a premium on the market (see Boudreaux, 2010, for more details on this), and so farmers and CWS workers may be experiencing even higher levels of economic satisfaction than are other coffee farmers in Rwanda, though this suggestion requires additional research.

Life satisfaction ratings today and in the past were provided on a four-item scale, and both indicators ('life satisfaction change' and 'life satisfaction today') were computed so that higher scores indicate higher life satisfaction. In all, 80% of participants reported a positive life satisfaction change, while 10% reported their life satisfaction had remained unchanged over recent years. Only 7% indicated less life satisfaction today compared with the past. In a similar vein to the figures on economic satisfaction above, these figures indicate that the overwhelming majority of the sample experienced positive life satisfaction

10 We had created several ranking categories of ethnicity mix to distinguish survey sites that were more ethnically homogeneous from those where the proportion of Hutu to Tutsi group members was more equal. No effect of this could be detected during the analysis.

gains in recent years.

Contact-related factors

The items measuring ethnic distance were computed as follows: the ‘ethnic distance today’ score was obtained by counting each of five possible interaction types from a classic social distance scale (hence, high scores indicate low ethnic distance). The ‘ethnic distance change’ score was calculated as the difference between a participant’s ethnic distance today and his or her ethnic distance level in the past. In this way, a high numeric score for ‘ethnic distance change’ signals less ethnic distance today than previously. Note that the considerable difference between past and present mean ethnic distance scores is corroborated by the fact that a mere three survey respondents selected the option “none” to express that they had no social interactions as outlined in the social distance scale currently, while 52 individuals out of the 239 participants indicated having none of these types of social interactions in the past.

Intergroup contact frequencies at work and socially were coded such that high values denote highly frequent intergroup contact. Intergroup affect was coded so that participants who agreed that contact with members of the other group was pleasant would score a low value, while those who disagreed would score a high value, with the option of providing no answer. Hence, low values generally denote pleasant contact. Deep contact was measured by counting frequencies of meaningful intergroup contact. High values denoted deep contact.

In general, high degrees of ethnic distance reduction and highly frequent social and work-related contact were reported. Table 2 illustrates mean and standard deviation scores for the social factors outlined in this section.

Attitudes towards reconciliation

The items measuring participants’ attitudes towards reconciliation were assessed on a four-item Likert-style scale (‘1’ denoting strong agreement, ‘4’ denoting strong disagreement) (see Table 3). Most participants strongly agreed with the factors measuring perspective-taking towards Hutu actions during the genocide, heterogeneity of the Hutu group, peaceful expectations for the future, and conditional forgiveness. Conversely, the majority of respondents disagreed with the distrust factor. Since distrust is a concept negatively correlated with an attitude of reconciliation, this means that all five factors have elicited a broad level of general agreement among participants.

Hypothesised correlations

Bivariate correlations were conducted to analyse the predicted correlations between new infrastructures created in the aftermath of coffee sector liberalisation, livelihood factors, intergroup contact, and reconciliation attitudes.

Infrastructure variables and their correlations

Members of coffee cooperatives were significantly more likely to have experienced a positive change in economic satisfaction, and also rated their life satisfaction today higher than coffee workers not associated in cooperatives. Furthermore, cooperative members reported significantly less propensity for high distrust. Concerning contact patterns, cooperative membership meant that participants reported more positive contact affect, as well as significantly deeper contact with members of the other group in Rwanda. (See Table 4.)

No statistically significant correlation between employment status or the age of opera-

tion of a particular coffee mill and any of the livelihood factors could be detected. Concerning the ‘age’ of a given coffee mill that we sampled, we had split the sample into two groups: ‘young’ (established up to three years ago, which we gave a value of ‘1’), or ‘old’ (established between 4 and 6 years ago, coded as ‘2’). Hence, a high value indicated that a participant was associated with a CWS that had been in operation comparatively longer. At those CWSs that have been in operation for longer than the others where we conducted our interviews, participants were more likely to report a heterogeneous perception of the Hutu group, suggesting that the positive social benefit of being associated with one of the newly created CWSs amplifies as time goes by.

Additionally, at those CWSs that have been in operation for longer than the others where we conducted our interviews, participants were more likely to report a reduction in ethnic distance. (See Table 5.)

Table 2. Mean and standard deviation scores for social factors linked to reconciliation attitudes.

Social factor	Mean	Standard deviation
Ethnic distance today	3.53	2.12
Ethnic distance in the past	1.24	2.01
Intergroup contact frequency (at work)	3.81	.63
Intergroup contact frequency (socially)	3.83	.5
Deep contact	17.32	3.68
Contact affect (at work)	.93	.31
Contact affect (socially)	1.00	.17

Table 3. Mean and standard deviation scores for reconciliation attitudes.

Reconciliation attitude	Mean	Standard deviation
Perspective-taking towards Hutu group	1.29	.67
Hutu Heterogeneity	1.19	.46
Peaceful expectation of the future	1.24	.52
Conditional forgiveness	1.08	.32
Distrust	2.62	1.01

Table 4. Bivariate correlations of cooperative membership variable.

	Economic satisfaction change	Life satisfaction today	Distrust	Contact affect	Deep contact
cooperative membership	-.145*	-.155*	-.151*	.194**	-.312**
* indicates p<.05 ** indicates p<.01					

Table 5. Bivariate correlations relating to how long ago a CWS was established.

	Hutu heterogeneity	Ethnic distance change
CWS age	-.161*	-.191*
* indicates p<.05		

Contact factors and their correlates

Frequent contact correlates with low distrust scores and with conditional forgiveness. In addition, deep contact correlates with low distrust, illustrating that the link between trust and contact variables is strong and multidimensional. Finally, pleasant contact, measured as a total contact affect score, is associated with a peaceful expectation of the future in Rwanda. Low ethnic distance today is linked to a heterogeneous perception of the Hutu group in Rwanda. It is interesting to see that participants who report low ethnic avoidance patterns also see the heterogeneity of the group often associated with genocide perpetrators in Rwanda. This also points to the conceptual link between higher intergroup contact and lowered prejudice, expressed as a recognition of the humanity of the outgroup member (Table 6).

	Distrust	Hutu heterogeneity	Peaceful expectation of the future	Conditional forgiveness
Contact frequency	.167*			-.161**
Deep contact	.172**			
Contact affect			.128*	
Ethnic distance today		-.195**		
* indicates $p < .05$ ** indicates $p < .01$				

Both economic and life satisfaction variables are linked to changes in ethnic distance over time. In particular, high economic satisfaction today was connected to low ethnic distance, and a positive change in life satisfaction was associated with a reduction in ethnic distance (Table 7).

	Economic satisfaction today	Life satisfaction change
Ethnic distance today	-.175**	
Ethnic distance change		.178**
** indicates $p < .01$		

Livelihood variables and their correlations

Those coffee workers who indicated high degrees of life satisfaction today, as well as those who have experienced an improvement in economic satisfaction over time, also promoted a peaceful expectation for the future (Table 8).

	Life satisfaction today	Economic satisfaction change¹⁰
Peaceful expectation of the future	-.167**	-.137*
* indicates $p < .05$ ** indicates $p < .01$		

11 A statistically significant correlation ($r = .138$, $p < .05$) between distrust and current economic satisfaction was also detected. This is the only observed significant correlation in our study that runs counter to our hypotheses. Moreover, it does not match the research on market integration and trust; hence, we note it here and intend to follow up this issue in future research on this topic.

A note on employment status as a hypothesised correlate of reconciliation

It had been our assumption that employees of the newly created coffee enterprises would have comparatively more opportunities for everyday contact with members of the other group in Rwanda, which may have a positive effect on reconciliation-related attitudes. However, during the cross-tabulation analyses, no significant correlations could be detected. This means that the study's participants' attitudes to reconciliation is unaffected by the fact that participants may encounter members from the other ethnic group as part of their seasonal employment.

Discussion

In this paper, we have presented the results of a quantitative field assessment of a recent policy change within the Rwandan coffee sector, which prompted the creation of new entrepreneurial ventures and associations such as coffee cooperatives and privately owned CWSs. This new infrastructure in Rwanda's coffee sector has provided opportunities for quality improvement in coffee trade, as well as intergroup contact between Hutu and Tutsi coffee farmers at newly created coffee mills that did not exist before coffee industry liberalisation. It specifically targeted a group benefiting from institutional change in a particular industry in a society that has experienced extreme violence and trauma in the recent past. Since this is, to our knowledge, the first quantitative study of this kind, it was exploratory in nature. A survey methodology was used, applying a non-random sampling methodology that does not permit generalisations to other populations within or outside Rwanda.

Our research goal was to provide an exploratory insight into the extent to which entrepreneurship-led contact between different groups of Rwandan coffee farmers and CWS workers, triggered by government reforms of the coffee sector, may help increase the potential for peace in this post-conflict society.

In particular, we interviewed a sample of Rwandan specialty coffee farmers and CWS workers and measured their commercially induced contact patterns and attitudes towards reconciliation, alongside with the changes they have experienced over recent years in terms of economic and life satisfaction. We analysed the correlations between policy changes in the coffee sector that created incentives to develop new coffee infrastructure and trading relations, intergroup contact, livelihood changes, and reconciliation attitudes observed among our sample. Support and affirmation from outside may contribute to healing the wounds of mass violence (Staub, 1998). Those coffee farmers and CWS workers fortunate enough to dwell in a location where international NGOs and private investors established coffee cooperatives and CWSs in recent years have benefited economically from this development. Although this type of external support is economic in nature and is not directly geared at healing Rwanda from the genocide, it nonetheless provides a new and positive focus in these people's lives, which may partially account for the positive attitudes observed in this study.

The significant correlations we observed between economic and life satisfaction and participants' expectation of a peaceful future is mirrored in the reconciliation literature, suggesting that difficult life conditions (Staub, 2006) and the frustration of basic human needs such as the need for security (Staub, 1998), often associated with high levels of poverty, contribute to mass violence. Improvements in these conditions would likely enhance economic security, reduce poverty and perhaps increase general satisfaction with life, which, in turn, would logically also predict a reduction in conflict potential and, conversely, more positive attitudes towards reconciliation. This process also goes along with

a re-conceptualisation of group cohesiveness and solidarity (Hornsey, 2008). As Sherif (1966) suggested, working towards a common goal is a predictor for conflict reduction, which is in itself a pre-condition of a peaceful coexistence of groups.

The observed positive livelihood factors and their correlates with a peaceful outlook also suggest that opportunity cost of conflict may be increasing for our sample of coffee farmers. As coffee farmers and CWS workers who are members of cooperatives build new enterprises (cooperatives), they invest time, labour, and financial resources in hopes of competing profitably in the specialty coffee market. Such investments were not undertaken in pre-genocide Rwanda because of a notably different policy environment that provided no incentives for such investments. Investments, direct and indirect, in the specialty coffee sector have expanded across Rwanda under this changed policy environment. Given the scope of these investments, farmers, seasonal workers, and private CWS entrepreneurs may find the potential loss they face from conflict (in the form of lost income and loss of property) greater than any benefits they might gain from renewed ethnic conflict. This insight may mirror, at a micro level, the insights of the peace through trade literature. This literature suggests that trading partners oftentimes (although not always) have more to lose from conflict than they have to gain.

Overall, meaningful contact with members from the other group was significantly correlated with low distrust and conditional forgiveness among our survey participants; hence, the survey results provide initial support for the theory-based link between contact and positive intergroup attitudes. However, contrary to our expectations, employment status was not significantly correlated with enhanced contact or improved intergroup attitudes in the study. It is likely that our assessment of employment lacked sufficient granularity. We did not assess *how many hours per week or month* employees in our sample worked, and observed during the survey that many participants who indicated employment at a CWS were seasonal or occasional labour, rather than full-time employees. Follow-up research can provide more clarity here.

More generally, psychologists emphasise that contact alone between groups is not sufficient to improve intergroup relations (e.g., Brewer, 1996). When formulating his seminal *contact hypothesis*, Allport (1954) specified certain conditions that need to be met in order for intergroup contact to produce improved relationships between groups, e.g., equal status, cooperation, common goals, and support from authorities. This means that the *quality* of contact between groups matters, as well as the emotional aspects of this interaction.

Several findings in our study support this theory. In our sample, a positive affective experience of cross-group contact was correlated with the expectation of a peaceful future. Especially members of coffee cooperatives reported comparatively more positive affect in their relations with members from the other ethnic group. They also had deeper levels of cross-group contact and spoke of more intergroup trust.

It is reasonable to assume that positive social change in the coffee sector takes time, and the survey data supports this perspective. This is also reflected in our survey data. The responses of participants at CWSs that have been in operation for a comparatively longer period of time are significantly correlated with lower ethnic distance and a perception that the Hutu group members are “not all the same.” This is an important predictor for reconciliation. All of the CWSs in the study had been in operation for less than seven years, and most of them were created less than five years ago. If the observed pattern were to continue, however, the potential effect size of positive social change associated with the creation of well over a hundred coffee mills since the new millennium will be substantial.

What is the theoretical contribution of the observed link between low ethnic distance in our sample with higher life satisfaction and a perspective that Hutu are heterogeneous? In order to answer this, we need to delve back into social identity theory (Tajfel and Turner, 1979), which observes that groups that interact *automatically* engage in cross-group categorisations and comparisons. One of the primary consequences of categorisation in across-group interactions is the depersonalisation of outgroup members, and the tendency to see individual members of the other group as undifferentiated representations of a homogenous category, or block (Brewer, 1996). This does not bode well for intergroup relations—it is the beginning of intergroup prejudice, discrimination, and the potential of violence. Status hierarchies complicate the relationships between any two groups further (Sidanius, 1993). In the commercial context that this study was run, it is conceivable that at least two factors may contribute to a reversal of this destructive mechanism. First, the high-quality contact observed especially among members of coffee cooperatives may be in line with Wilder's (1978) finding that getting to know members of a different group as *individuals* may contribute to a reduction in seeing this outgroup as a homogeneous unit. Second, the act of cooperating in a commercial infrastructure may have started a social recategorisation process, which is predictive of reduced intergroup prejudice (Gaertner et al., 1990).

Perhaps our study's participants eagerly embraced a new and inclusive commercially induced identity. While speculative, this view would reflect Gaertner and Dovidio's (2000) Common Ingroup Identity Model. The model suggests that when members of different groups are encouraged to perceive themselves as well as members from the other group as one single, all-encompassing group, then this would result in improved intergroup attitudes. In the context of entrepreneurship research, Bouckaert and Dhaene's (2002) paper observes a similar pattern: the authors found high levels of interethnic trust and reciprocity correlated to shared business characteristics among small business owners in Belgium. Several factors may play into this in the Rwandan context; first, the group distinction between Hutu and Tutsi is a politicised socio-economic construct, hence it may make sense for the coffee workers in our study to replace this former distinction with a new, economics-related identity that is deemed more fruitful. Second, group differences in Rwanda are neither based on race, ethnicity, religion, or language; therefore, group members may shed old identities comparatively more readily when presented with an opportunity to do so, especially in Rwanda's political climate where the government has been striving to move away from differentiating between Hutu and Tutsi for over a decade now. More empirical data is needed to shed light on this theory to minimise the risk of suggesting a false positive in Rwanda's complex political context.

Continuing research in this area

Although we cannot draw inferences beyond our sample, all examined variables, except perspective-taking towards Hutu actions during the genocide, significantly correlated with the other predictors in the study according to the theory of forgiveness and reconciliation. Hence, the hypothesised correlations are meaningful for the sample studied, all the more as the underlying theory for this study is to a large extent laboratory based, where effect size would be naturally larger. As field research is notoriously cluttered by extraneous noise dampening any discernible effect, the significant correlations reported here can be taken as an indication that the institutional changes linked to the liberalisation of Rwanda's coffee sector may indeed be linked to more positive attitudes between Hutus and Tutsis who benefit from these changes.

Are these results suggestive that the liberalisation of the coffee sector is connected to positive attitudes towards reconciliation amongst study participants? Perhaps these positive attitudes reflect the effect of time passing since the genocide, or the trend towards reconciliation that we observed in our sample is unrelated to the coffee industry changes. What if our findings point towards a false positive, suggesting invalid policy recommendations? While we were only able to sample a small subset of coffee farmers, we examined correlations in intergroup attitudes specifically related to components of the newly built coffee sector infrastructure. This is connected to Rwanda's biggest and most noteworthy economic success story of recent years: the creation of a buoying coffee industry, providing new choices and unprecedented opportunities for commercial contact between Hutu and Tutsi coffee farmers.

Clearly, more extensive and longitudinal follow-up research efforts are needed. For example, future research should compare intergroup attitudes of specialty coffee farmers to those of coffee farmers who have continued to sell unwashed coffee, for any reason. Other liberalized industry sectors should be assessed against social relationships observed in coffee. Cooperatives, their leadership structure and any potential for social capital development across group boundaries should be assessed further. Further investigation is warranted, for reasons that transcend theory building. The Great Lakes Region of Central Africa continues to be marked by identity-based conflict, hampering sustainable economic development and the prospect of peace for all. Rwanda is in a pivotal position, both geographically and symbolically. This is a valuable opportunity for researchers to investigate a new avenue towards peace and prosperity in this conflict region. The potential for follow-up research to make a substantive contribution to effective policy-making is considerable.

Therefore, the present study is particularly encouraging, especially as the effect of this type of commercial contact does not seem to differ for members of both ethnic groups, despite Pettigrew and Tropp's (2006) research finding that the effect of contact on improving intergroup relations is not necessarily the same for members of majority and minority status groups. Engaging and integrating members of low-status groups into mainstream society in a respectful and effective fashion is a delicate task in any environment. If that task were in fact the ancillary benefit of an economic development effort, then this would be even better.

Conclusion

We may summarize the observed correlations of this exploratory field study on entrepreneurship and conflict-reduction attitudes in the newly liberalized Rwandan coffee sector as follows: the coffee sector liberalisation in Rwanda has resulted in the establishment of new infrastructures in the coffee sector in recent years. In particular, new coffee cooperatives and coffee washing stations (CWS) have been created; structural variables associated with these developments, such as how long an individual CWS has been in operation, are significantly correlated with a positive change in perception of the other group. The social factors examined in this study are significant correlates with positive attitudes related to reconciliation, such as low distrust, conditional forgiveness, recognition that members of the Hutu group are heterogeneous, and peaceful expectations for the future in Rwanda. In a similar fashion, perceived improvements in economic and life satisfaction among participants also significantly correlate with reconciliation-related attitudes.

Taken together, the study's findings suggest that the enhanced entrepreneurial activities in this particular sector of Rwanda's economy not only seems to produce positive economic change among those individuals touched by this institutional change, but it may

also be related to positive social change among the coffee farmers sampled in our study. This observation is intriguing because it is unrelated to the stated goals of coffee-sector liberalisation, i.e., economic development, yet such outcomes are extremely desirable in this post-conflict nation where the trauma of genocide is still present in everyday life.

This is all the more noteworthy, as the observed effects in our study were neither dependent on ethnicity, nor on the particular ethnic mix of participants in a given location, suggesting that forgiveness in Rwanda is a construct that may apply to all if the conditions are right. For this reason, it would be fruitful to explore these observations further in future research with larger, more representative samples. In so doing, it can also be assessed to what extent the discovered tendencies can be generalised and applied to policies in other post-conflict contexts in order to shape similarly positive results.

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Appendix A. Factor analysis of reconciliation scale

Table 9. Items and factor loadings for the factors examined during this study's analysis.	
<i>English version of wording</i>	<i>Factor loading</i>
<i>Factor 1: perspective-taking (towards Hutu actions during genocide)</i>	
It was very dangerous for Hutu to help Tutsi during the genocide	.82
Some Hutu endangered themselves by helping Tutsi	.78
<i>Factor 2: Distrust</i>	
It is naïve to trust	.82
There is a lot of distrust in our communities	.64
<i>Factor 3: (Hutu group) heterogeneity</i>	
Not all Hutu participated in the genocide	.77
Members of the other group are human beings, like everyone else	.64
The acts of perpetrators do not make all Hutu bad people	.49
<i>Factor 4: Expectation of peaceful future</i>	
The groups in Rwanda will never live together peacefully (recoded)	.71
The Rwandan conflict is nearing its resolution	.45
<i>Factor 5: Conditional forgiveness</i>	
I cannot forgive members of the other group, even if they acknowledge that their group has done bad things (recoded)	.78
I can forgive members of the other group who acknowledge the harm their group did	.68
<i>Additional items not selected during factor analysis</i>	
Each group has harmed the other in Rwanda	Factor 6: .44
There were complex reasons for the violence in Rwanda	Factor 2, 3, 4: .4
I could begin to forgive members of the other group if they requested forgiveness of my group	Factor 6: -.62
The genocide has only had negative consequences for one group	Factor 6: .58
I feel compassion for families who have family members in prison	Factor 1, 4: .4
I feel sorry for families who have lost family members during the genocide	Factor 7: .81

Appendix B. Ethnicity assessment during survey

- If you are a reescape
- If you belong to both groups
- If many members of your group have been imprisoned after the genocide
- If you have returned to Rwanda after the genocide
- If you belong to a different group
- If you felt pressure to say what others want you to say
- If you did NOT feel comfortable to answer truthfully

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