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**THE ROLE OF ENTREPRENEURSHIP IN CONFLICT REDUCTION  
IN THE POST-GENOCIDE RWANDAN COFFEE INDUSTRY:  
Quantitative Evidence from a Field Study**

By Jutta Tobias and Karol Boudreaux

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**The Role of Entrepreneurship in Conflict Reduction  
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Quantitative Evidence from a Field Study**

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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 during the summer of 2008 among a sample of Rwanda's emerging specialty coffee workers and reports on significant correlations between economic satisfaction and life satisfaction, as well as meaningful work contact with members from the other group with an attitude of reconciliation. To the best of our knowledge, this is the first study that quantitatively analyzes entrepreneurial activity 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.

Contemporary Rwanda is a country with a particularly violent recent history of group-based violence. It is also a remarkable showcase for the expansion of post-conflict enterprise—the result of a series of economic reforms in the aftermath of its 1994 genocide. One particularly important reform is the successful deregulation of a main export sector: the coffee industry. In this context, our main research question was, to what extent does commercial enterprise in the post-conflict Rwandan coffee sector contribute to conflict reduction, and how, if at all, does this effect occur?

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Rwandan coffee farmers are necessity-driven entrepreneurs: Coffee is one of few income-generating alternatives for rural Rwandans. As a result of liberalization, in recent years the potential for value-added income generation in this sector has improved substantially. We explore other benefits of this improving economic landscape. Officially, ethnic discrimination is banned in Rwanda. Unofficially, it may still exist. However, the economic benefits of liberalization are helping farmers of all ethnicities experience more life satisfaction. We operationalized entrepreneurial activity in this context as commercial activity by Rwandan coffee workers in recently created (i.e., post-1999, hence post-liberalization) coffee enterprises and approximated conflict reduction with an attitude of reconciliation between ethnic groups in Rwanda, expressed by coffee workers during a field survey. This reconciliation attitude was composed of several variables predicting forgiveness, similar in kind to those used in the Northern Ireland, Bosnia, and Israeli-Palestinian conflict literature (e.g., Cehajic, Brown, & Castano, 2008; Hewstone, Cairns, Voci, McLernon, Niens, & Noor, 2004; Nadler & Liviatan, 2006). 239 completed surveys were obtained from a sub-section of rural Rwandan coffee workers associated with recently created coffee enterprises.

Results from statistical analyses uncovered significant correlations between economic advancement among coffee entrepreneurs, as well as general perceptions of life satisfaction, with comparatively more positive attitudes to reconciliation, especially as the new economic linkages in the Rwandan coffee sector have taken root over time and have become more entrenched in workers' rural communities. These results were observed independent of individuals' ethnicity, or the ethnicity mix between members of different groups in Rwanda at a particular survey location.

Overall, a change in identity appeared to contribute to changed and improved intergroup attitudes among the sample studied in that those participants with a significantly more positive stance towards the other ethnic group in Rwanda tended to also have a particularly low sense of ethnic distance towards members from the other main ethnic group in Rwanda. The findings are in line with recent psychological theories of reconciliation (e.g., Staub, 2006), and suggest that enhanced entrepreneurship in Rwanda's liberalized coffee industry may provide the context for increased intergroup contact, which in turn may constitute an opportunity for conflict reduction.

The paper concludes with a discussion of the limitations of this exploratory study and suggestions for further research in this domain in future, with the potential to contribute to the reduction of conflict via commercial means.

## Introduction

Our paper focuses on the link between recent entrepreneurial activity in the post-conflict Rwandan coffee sector and conflict reduction. In particular, we provide a quantitative exploration of the extent to which the liberalization of the Rwandan coffee sector triggers psychological processes among coffee workers affected by this institutional change that lead to 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 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, & 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, which is also associated with a reduction in prejudice (Gaertner, Dovidio, Mann, Murrell, & Pomare, 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 (Polachek & Seiglie, 2006; see Boudreaux, 2007, for a recent 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 entrepreneurial contact 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 speciality coffee workers, based on the small literature of published field research in this context (Staub, Pearlman, Gubin, & Hagengimana, 2005; Pham, Weinstein, & Longman, 2004), and on our conceptualizations of other relevant predictors, as outlined further below. In sum, the original contribution of the paper is a quantitative investigation of whether and how increased intergroup contact in newly created enterprises, triggered by government reforms of the coffee sector, can reduce the 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 journalistic reports 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. 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, 2009, for an overview). The theoretical link to the intra-state case of Rwanda is that as a result of liberalization policies, coffee workers have increased incentives to collaborate with trading partners now as compared with the pre-liberalization 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, p. 7). In this way, the benefits of freer trade for all, including members of groups formerly identified as Hutu or Tutsi<sup>1</sup>, may outweigh the cost of being at war with each other.

## Conflict, Liberalization, 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, 2009).

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 do changes in the socio-economic conditions in Rwanda's coffee sector contribute to lasting peace in this overwhelming agricultural society where coffee production remains a main 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 at below-market prices. The buyer sold Rwanda's coffee on the world market at market prices and used the gains to benefit the urban elite. This system was reasonably stable until coffee prices on the world market 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 Tutsi 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 coffee (Gahamanyi, 2005). The reason for this

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<sup>1</sup> 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.

remarkable industry transformation is connected to sweeping liberalization efforts undertaken by the post-genocide Tutsi-led government, as well as effective foreign-aid programs managed primarily by non-governmental organizations (NGOs). These changes have helped Rwandan farmers shift from producing low-quality beans (fetching little profit on the international market) to growing much more valuable speciality coffee. Today, most industries, including the coffee sector, have been privatized, and the economy has been opened up and is largely deregulated (Boudreaux, 2009).

The effects of this on the coffee sector, and on those working in coffee, have been particularly positive. The creation of coffee washing stations (CWS) in Rwanda since the early 2000s 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 dramatic 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 CWS and hence being able to sell fully washed coffee. 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 50–100 percent at least 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.

### **Entrepreneurship-Driven Contact in Rwanda's Newly Created Coffee Washing Stations**

Around the new millennium, USAID was also instrumental in the capital-intensive effort of setting up the first coffee washing stations (CWS) in Rwanda, permitting Rwandan farmers to offer fully washed coffee on the international speciality coffee market (OTF Group, 2007). CWS 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. CWS 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 CWS 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 CWS are likely to have come into a new type of commercial contact with members from other groups in Rwanda because of the newly created CWS (as of 2000, there were 2 CWS in Rwanda, neither of which was operational).

CWS offer a new type of infrastructure and opportunity for social exchange and participation in these rural areas that was unheard of before the genocide, independent of their ownership structure, and that may in itself resemble a new community with its own social identity. Between 2001 and 2005, 46 CWS had been established, 38 of which receiving assistance from USAID. These CWS created new employment for 2,000 people (Chemonics, 2006). By the end of 2007, about 120 CWS were in operation in Rwanda (OTF Group, 2007) and the government had issued a projection in its (2006)

strategy document for the sector that set a goal of 240 operational CWS by the end of 2008. Although this figure is likely higher than current reality (yet up-to-date figures were difficult to obtain), this estimate may not be too far off the mark, given the dynamism of entrepreneurial activity in Rwanda's coffee sector today (Sloan, 2006). One measure of this dynamism is the 120 percent 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 CWS of 70 percent for 2007–2010 (OTF Group, 2007). Despite all these advancements, less than 10 percent 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. This suggests that the majority of Rwandan coffee workers have not yet been touched by this phenomenon. Nonetheless, due to its pivotal position in Rwandan society, developments in the coffee sector likely affect the core of its civilisation.

### Contact and Social Identities in Rwanda

The journalistic reports 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 sixty 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 lead to positive changes in attitudes between Hutu and Tutsi coffee workers in Rwanda. This also implies 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 & Liviatan, 2006), and Bosnia (Cehajic et al., 2008).

Intergroup conflict is strongly linked to antagonistic groups' ethnic or social identities. Rwanda has always been extremely integrated 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 then, it was this common understanding of the Tutsi "pre-existing ethnic/racial classification" (Straus, 2006, p. 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 & Turner, 1979), we derive part of our personal identity from our social identity. This occurs primarily through a process

of categorization, i.e. we naturally categorize ourselves into our own “ingroup,” i.e. the social category that we identify with, and others into different “outgroups,” due to their different skin color, 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 categorization 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 behavior (Alexander, Brewer, & 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 categorizations 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-categorization 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, Mann, Murrell, & Dovidio, 1989).

Hence, the study’s main research question was, to what extent does the recent surge in entrepreneurial activity in Rwandan coffee contribute to positive change in intergroup attitudes, and how would this effect occur?

## The Study

The research paradigm for this field survey consisted of an examination of the economic and social changes among Rwandan coffee workers related to Rwanda’s coffee- sector liberalization and their attitudes towards intergroup prejudice reduction and reconciliation. A series of correlational analyses were conducted with the data collected during the field study, assessing the associations between entrepreneurship in the newly liberalized coffee sector, meaningful commercial contact, and intergroup attitudes among Rwandan coffee workers touched by this surge in entrepreneurial activity.

### Operational Definition of Core Study Concepts

#### Entrepreneurial Activity

For this study, we operationally defined entrepreneurial activity as commercial activity by Rwandan coffee workers in recently created (post-genocide) coffee enterprises, and approximated conflict reduction with an attitude of reconciliation between ethnic groups in Rwanda, as expressed by coffee workers during a field survey.



Specifically, we conceptualized that those coffee farmers in Rwanda who dwell near one of the recently created CWSs would work in a comparatively more entrepreneurial fashion, because the establishment of a CWS typically brings with it more choice for the coffee farmer as to whom she sells her coffee cherries to and whom she associates with commercially, as well as a new (and virtually unique) opportunity for employment. Hence, employees of CWSs (who in most cases were also coffee farmers) constituted half of the targeted survey population of coffee workers.

### Commercially Induced Contact

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. (2007). 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 et al., 2008). The scale measured several aspects of meaningful social contact in recent years<sup>2</sup>, 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 (wedding etc.), and attended a funeral together. The item had been adapted from the World Bank Social Capital Survey (Grootaert, Narayan, Jones, & Woolcock, 2003, item 5.15). All items provided a “no answer” option.

Although each contact sub-scale was internally consistent (Cronbach  $\alpha$ , a measure of internal reliability, was  $\alpha = .6$ ,  $\alpha = .91$ , and  $\alpha = .78$ , respectively), we analyzed 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.

### 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 4-item scale.

A life satisfaction measure on a 4-item scale, adapted from Diener, Emmons, Larson, & Griffin (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 his or her life situation currently and with

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<sup>2</sup> 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 (“5 years ago”).

regards to the recent past. Difference scores were computed to assess changes in these ratings over time.

### 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 comprehensive 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 conceptualizations 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 & Liviatan, 2006; Hewstone et al., 2004; Batson, 1997; Cehajic et al., 2008), whilst ingroup bias (Hogg, M. A., Sherman, D. K., Dierselhuis, J., Maitner, A. T., & Moffitt, G., 2007; Hewstone et al., 2004), distrust (Hewstone, Kenworthy, Cairns, Tausch, Hughes, Tam, Voci, von Hecker, & Pinder, 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.<sup>3</sup> 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, p. 313), using a sample of Rwandans that consisted mainly of Tutsi women recruited by local organizations. 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, we added the additional reconciliation variables developed since the new millennium and outlined in the previous paragraph to the reconciliation attitudes scale.

All items were assessed on a 4-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, i.e. 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 items in the scale, and accounted for 44 percent 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.

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<sup>3</sup> 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).

## Ethnic Distance

Social distance, or the degree to which someone avoids members from another group, is a strong (negative) correlate of reconciliation variables such as forgiving, trust, and outgroup heterogeneity (e.g. Cehajic et al., 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."

## Ethnic Identification, Indirectly Assessed

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 what their ethnic identity was, despite the need to determine the ethnic mix of the groups examined, in order to validate answers related 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, and assessing individuals' identification as Hutu was carried out similarly to Paluck in her (2007) dissertation study, by asking the question "do you have many family members in prison."

## Structural variables

We took note of the duration of time that each visited CWS had been in operation, in order to assess whether there was any difference between farmers who were associated with more-entrenched operations and 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” CWS would have more positive attitudes towards members of the other group. The age range for the ten CWS that we visited was between one and six 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.

We also predicted that coffee farmers who were employed at a particular CWS would have more intergroup contact and would hence display less intergroup prejudice. Therefore, we measured employment status for each participant and added this variable to the analysis.

## Procedure

A sample of ten CWSs was used. The selection of coffee washing stations was based on advice and recommendations of staff at *SPREAD*, a major NGO supporting the development of Rwandan speciality coffee sector with which we collaborated.<sup>4</sup> Using a purposive opportunistic sampling methodology, a total number of 240 coffee workers were approached at and around the CWS with which they are associated, on one particular day during the coffee-harvesting season during May and June 2008. One of these interviews was unusable, leaving a total sample of 239 participants, 126 of whom (53 percent) were currently employed at a CWS, the remainder (113 individuals, or 47 percent) working exclusively as coffee farmers but selling their coffee cherries to the CWSs that were visited during the sampling period.

121 male participants (51 percent) and 118 female (49 percent) coffee workers were interviewed. 34 percent had no formal education, 61 percent had gone to primary school, and fewer than 5 percent (i.e. 11 individuals) had secondary education. The age range was from 18 to 86 years, mean age was just above 38 years old, and the median was 35 years. 165 individuals (69 percent) were classified as Hutu, 25 percent (or 59 individuals) as Tutsi, and 11 individuals as belonging to another group (5 percent). These figures seem reasonably accurate and reflect the ethnic proportions reported in Pham et al.’s (2004) representative nationwide study on reconciliation in Rwanda. Four individuals (out of 239) did not provide valid ethnic identifications.

Survey participation was voluntary and no pre-selection of participants occurred in this opportunistic sampling technique, which in conjunction with the fact that ten different coffee washing stations were visited, ensures the largest degree of random assignment feasible for this type of study. 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 undergone extensive training over a 2-week period on the content of the survey instrument, i.e. a standardized questionnaire,

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<sup>4</sup> For more detailed information on the sampling methodology used please refer to Tobias (2008).

and on establishing trust and rapport with participants throughout the confidential interviewing process, yet were blind to the specific research questions of the study<sup>5</sup>.

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 5 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

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 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.

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

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<sup>5</sup> Seven of the eight student interviewers self-identified as at least partially Tutsi. A selection based on ethnicity was logistically not feasible.

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 twelve people in total, i.e. 5 percent of all participants, expressed unease about being honest during the survey.<sup>6</sup> 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 journalistic reports 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 may mediate the relationship between liberalization 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 in order to gain a better understanding of the psychological factors that seem to change alongside the coffee-industry liberalization that has been occurring 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 difficult to observe causal relationships,<sup>7</sup> let alone gain clarity over the direction of statistical relationships. Nonetheless, we lean on Straus's (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.

Hence we provide below cautious support for a further exploration of variables that are correlated in our study. What is more, we report on statistical comparisons between *naturally occurring 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 variables that may contribute to positive social change associated with the liberalisation of Rwanda's coffee industry.

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<sup>6</sup> These responses were kept in the analysis, as it was unclear how extensive misreporting was for each individual participant.

<sup>7</sup> As the study's subject is the social change associated with deregulation in a specific sector, the only comparable control group would have been coffee farmers who are not located near a CWS, and the reason why the currently existing CWS have been created in the locations where they are is that these locations are more accessible. For the same reason was it logistically not feasible to add such a control group to the present study.

## 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 during the genocide (90 percent vs. 85 percent of all Tutsi participants). The same applied to Hutu group heterogeneity (98 percent agreed strongly, vs. 95 percent 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 percent vs. 95 percent 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. 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 4-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 percent of participants indicated that they were very satisfied with their economic situation in the recent past, whereas 40 percent reported that they are very satisfied with their economic situation today. In addition, 45 percent of participants reported a one-point improvement (on a 4-item scale) in economic satisfaction in recent years, for 22 percent this was a two-point increase, and 10 percent even reported a 3-point increase in economic satisfaction. 15 percent experienced no change in economic satisfaction while fewer than 5 percent (4.6) indicated a decrease by one or two points. This is strong support for the assertion that coffee farmers with access to CWS are experiencing economic advancement and satisfaction.

Life satisfaction ratings today and in the past were provided on a 4-item scale, and both indicators (“life satisfaction change and “life satisfaction today”) were computed so that higher scores indicate higher life satisfaction. 80 percent of participants reported a positive life satisfaction change, while for 10 percent life satisfaction had remained unchanged over recent years. Only 7 percent 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 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), and the “ethnic distance change” score constituted the difference between an affirmative answer today and in the past for a statement indicating that none of the social interaction would be taken up by the participant. 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. The following table illustrates mean and standard deviation scores for the social factors outlined in this section.

*Table 1: Mean and standard deviation scores for social factors linked to reconciliation attitudes.*

<b><i>Social factor</i></b>	<b><i>Mean</i></b>	<b><i>Standard deviation</i></b>
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

### Attitudes towards reconciliation

The items measuring participants’ attitudes towards reconciliation were assessed on a 4-item Likert-style scale (‘1’ denoting strong agreement, ‘4’ denoting strong disagreement). Most participants strongly agreed with the factors measuring perspective taking towards Hutu actions during the genocide (M= 1.29, SD= .67), heterogeneity of the Hutu group (M= 1.29, SD= .67), peaceful expectations for the future (M= 1.24, SD= .52), and conditional forgiveness (M= 1.08, SD= .32). Conversely, the majority of respondents disagreed with the distrust factor (M= 2.62, SD= 1.01). 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.



## Correlations with Attitudes of Reconciliation

Bivariate correlations were conducted between the predictors outlined above and the factors on reconciliation attitudes obtained during the principal component analysis.

### Contact Predictors

Frequent contact correlates with low distrust scores ( $r = .167, p < .01$ ), and with conditional forgiveness ( $r = -.161, p < .05$ ). In particular, highly frequent work contact is highly correlated with low distrust ( $r = .193, p < .01$ ), while highly frequent social contact is linked to conditional forgiveness ( $r = -.163, p < .05$ ). In addition, deep contact correlates with low distrust ( $r = .172, p < .01$ ), 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 ( $r = .128, p < .05$ ).

### Ethnic Distance

Low ethnic distance today is linked to a heterogeneous perception of the Hutu group in Rwanda ( $r = -.195, p < .01$ ). 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.

### Economic and Life Satisfaction

Changes in economic satisfaction are linked with changes in life satisfaction ( $r = .183, p < .01$ ), and both concepts' 'today' scores are also highly correlated ( $r = -.249, p < .01$ )<sup>8</sup>. Participants who reported high degrees of economic satisfaction today also reported strong conditional forgiveness ( $r = -.145, p < .05$ ). Those coffee workers who indicated high degrees of life satisfaction today ( $r = -.167, p < .01$ ), as well as those who have experienced an improvement in economic satisfaction over time ( $r = -.137, p < .05$ ), also promoted a peaceful expectation for the future.

Surprisingly, participants who reported high degrees of economic satisfaction today also displayed high levels of distrust. This was contrary to our expectations and predictions.

As the table below illustrates, economic and life satisfaction variables are correlated, and both concepts are also linked to changes in ethnic distance over time. In particular, high economic satisfaction today was connected to low ethnic distance ( $r = -.175, p < .01$ ), and a positive change in life satisfaction was associated with a reduction in ethnic distance ( $r = -.178, p < .01$ ).

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<sup>8</sup> Note that unlike scores for "Life Satisfaction today," high values for "Economic Satisfaction today" indicate less satisfaction, as outlined in the previous section.

Table 2: Bivariate correlations between economic and life satisfaction variables, as well as measurements of ethnic distance between groups.

	<i>Economic satisfaction today</i>	Life satisfaction today	Ethnic distance today	Ethnic distance change
<i>Economic satisfaction today</i>		-.249**	.175**	
Economic satisfaction change	-.490**	.183**		
Life satisfaction change	-.177**	.546**		.178**

\*\* indicates  $p < .01$

### CWS Length of Existence (or “Age”)

We had split the sample into two groups regarding CWS “age,” i.e. as either “young” (i.e. a value of 1), or “old” (i.e. 2). Hence a high value indicated that a participant was associated with a CWS that had been in operation comparatively longer. At those CWS 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 ( $r = -.161, p < .05$ ), suggesting that the positive social benefit of being associated with one of the newly created CWS amplifies as time goes by.

The following table outlines the correlations discussed in the previous section.

Table 3: Bivariate correlations between reconciliation variables and their predictors.

	Perspective-taking towards Hutu	Distrust	Hutu heterogeneity	Peaceful expectation of the future	Conditional forgiveness
Economic satisfaction today		.138*			-.145*
Life satisfaction today				-.167**	
Contact frequency		.167*			-.161*
Deep contact		.172**			
Contact affect				.128*	
CWS age of operation			-.161*		
Ethnic distance today			-.195**		

\* indicates  $p < .05$

\*\* indicates  $p < .01$

## Employment Status

It was 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 correlation between predicting factors with attitudes to reconciliation among the sample is unaffected by the fact that participants may encounter members from the other ethnic group as part of their everyday employment.

## Discussion

In this paper, we have presented the results of a quantitative field study of the correlations between liberalization, enhanced entrepreneurial contact between previously antagonistic groups, and conflict reduction in Rwanda's coffee sector. 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 workers, triggered by government reforms of the coffee sector, can help increase the potential for peace in future in this post-conflict society. In particular, we interviewed a sample of Rwandan speciality coffee workers and measured their commercially induced contact patterns, attitudes towards reconciliation alongside with the changes they have experienced over recent years in terms of economic and life satisfaction due to their new associations in the liberalised coffee sector.

Support and affirmation from outside may contribute to healing the wounds of mass violence by helping people to heal (Staub, 1998). Those coffee farmers fortunate enough to dwell in a location where international NGOs and private investors established CWS 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.

Meaningful contact with members from the other group is significantly correlated with low distrust and conditional forgiveness; hence the survey results provide support for the theory-based link between contact and positive intergroup attitudes.

Also in line with reconciliation theory, those participants who expressed satisfaction with their overall life situation had significantly correlated responses in terms of positive attitudes towards reconciliation. In particular, participants with greater economic security also reported low ethnic distance and a tendency towards conditional forgiveness. Life satisfaction significantly correlated with economic security variables, and those reporting greater satisfaction with life also expected a more positive, peaceful future in Rwanda. The observed correlations hence support the predicted link.

Low ethnic distance was significantly correlated with a heterogeneous perception of Hutus, providing strong support for the predicted positive link of a shared social identification with reconciliation attitudes.

Another noteworthy result of the analysis is that the responses of participants at CWSs that have been in operation for a comparatively longer period of time are significantly correlated a perception that the Hutu group are heterogeneous, corresponding to a view that “they’re not all the same.” This is an important predictor for reconciliation. It is reasonable to assume that positive social change in the coffee sector takes time, and the survey data supports this perspective. 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 CWSs since the new millennium is substantial.

In contrast to our expectations, employment status proved not to be correlated with enhanced contact in the study, and seems therefore not to be related to the social benefits reported in conjunction with the sector liberalization. This is intriguing, as employees of CWSs *do* have more everyday contact with colleagues at the washing station than coffee farmers who spend their time in their coffee plantations. In a similar vein, it was surprising to find that high current economic satisfaction was significantly correlated with low distrust. Perhaps this reflects the tendency to trust others less *in general* when one becomes more economically secure, and so economic security in this instance operates on a different dimension than peace and forgiveness. Finally, one of the five factors identified as predicting reconciliation in the Rwandan context, i.e. perspective-taking towards the Hutu group, was not correlated with any of the other predicting factors in the study. Hence, this factor may be related to other individual, social, or structural variables that were not part of the present study. Further research in this area can shed more light on this intriguing result.

Of particular interest were the observations related to a change in identity among survey participants, in that those coffee workers especially who reported low ethnic distance also had higher overall life satisfaction, and comparatively more positive attitudes towards members of the other group. In the commercial context that this study was run, it is conceivable that participants eagerly embraced a new, commercially induced identity. Several factors may play into this; 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 formerly differentiating between Hutu and Tutsi for over a decade now.

## Continuing Research in this Area

### Limitations of this Study

The opportunistic sampling method of this field survey drastically limits control over extraneous variance and generalisation claims for the study. What is more, since the survey was administered once, with measurement scales being presented in a single, fixed order, generalizations of the observed correlations without a re-test are also imprudent.

Lacking the possibility of examining a comparable control group minimizes causality inferences and introduces history and maturation threat into the research design. In addition, the results of our measures towards reconciliation reflect participants' attitudes towards this concept, rather than actual behaviour towards members of the other group. Understanding and predicting behaviour unequivocally can only occur once additional, more behaviour-related methods of measuring the concepts presented in this study are applied.

However, since 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, it can be validly claimed that the 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 liberalization of Rwanda's coffee sector may indeed be linked to more positive attitudes between Hutus and Tutsis who benefit from these changes.

Another question related to the absence of control-group evaluation is, are these results suggestive that the liberalization of the coffee sector is connected to positive attitudes towards reconciliation amongst study participants, or are these positive attitudes rather the effect of time passing since the genocide, with the survey participants showing a general trend towards reconciliation in Rwanda? Perhaps the trend towards reconciliation that we observed is unrelated to the coffee industry changes. The study's results strongly suggest that all of the survey participants' economic and life satisfaction has been increasing in recent years, and this is connected to Rwanda's biggest and most noteworthy economic success story of recent years: the creation of a speciality-coffee industry, made possible mainly through the creation of CWS in Rwanda.

We argue, therefore, that it is likely that the individuals we surveyed are experiencing a unique and unusual positive development in their lives, which is not representative of changes experienced by Rwandans as a whole but rather, is a function of the particular environment in which they navigate. In line with positive change in terms of economic and life satisfaction, ethnic distance among most survey participants has been reduced in recent years. Although correlation cannot be equated with causation, the study's results are again in line with the reconciliation literature, suggesting that low ethnic distance and high perceptions of economic control and security are correlates of forgiving and reconciliation. The most likely trigger for this chain of correlations among this special group of Rwandan (speciality) coffee workers is also the most parsimonious: changes in the coffee industry that benefit them.

## Future Research Directions

There is potential for inferences and generalizations if more research were to be conducted in this area. This is because contact effects typically generalize beyond the participants of the immediate contact situation, with the result that attitudes towards the entire outgroup change for the better (Pettigrew & Tropp, 2006).

The present study is particularly encouraging as the effect of this type of commercial contact does not seem to differ for members of both ethnic groups, despite Pettigrew & 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. Clearly, more research on moderations of this effect would be useful.

## 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 liberalization in Rwanda has resulted in the establishment of new coffee enterprises in recent years; in particular new coffee cooperatives and CWSs have been created. CWS allow those Rwandans who have access to them to sell higher-quality coffee for better prices than even five years ago. Structural variables associated with these developments, such as how long an individual CWS has been in operation, are significantly correlated with a change in perception of the other group.

These social factors, in turn, are concepts that the psychology literature has identified as predictors for forgiving and reconciliation between groups. The social factors examined in this study are significant correlates with positive attitudes related to reconciliation, such as low distrust, conditional forgiveness, a recognition that members of the Hutu group are heterogeneous, and peaceful expectations for the future in Rwanda. In a similar fashion, individual factors linked to the economic liberalisation in Rwanda's coffee sector, i.e. perceived improvements in economic and life satisfaction among participants, also significantly correlate with the 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 produces positive economic change among those individuals touched by this institutional change, but it may also be triggering a chain of mediating effects linked to positive social change among these coffee workers. This potential mediation chain is intriguing because it is unrelated to the stated goals of coffee-sector liberalization, i.e. economic development, yet these 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 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 applies to all, and most people fortunate to experience other positive economic change in their lives may also benefit by starting to reconcile with others. For this reason, it would be fruitful to explore these observations

further in future research with comparable populations. In so doing, it can also be assessed to what extent the discovered tendencies can be generalized and applied to other post-conflict context in order to shape similarly positive results.

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## Appendix

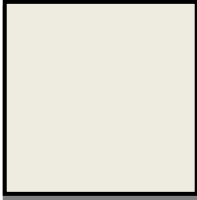
### Appendix A: Factor analysis of reconciliation scale

Table 4: Items and factor loadings for the factors examined during this study's analysis.

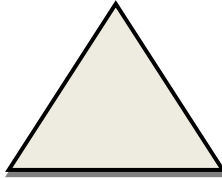
<b>English version of wording</b>	<b>Factor loading</b>
<i>Factor 1: perspective-taking (towards Hutu actions during genocide)</i>	<i>Factor 1:</i>
It was very dangerous for Hutu to help Tutsi during the genocide	.82
Some Hutu endangered themselves by helping Tutsi	.78
<i>Factor 2: Distrust</i>	<i>Factor 2:</i>
It is naïve to trust	.82
There is a lot of distrust in our communities	.64
<i>Factor 3: (Hutu group) heterogeneity</i>	<i>Factor 3:</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>	<i>Factor 4:</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>Factor 5:</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

Appendix B – Ethnicity assessment during survey

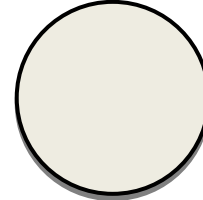
If you are a reescape



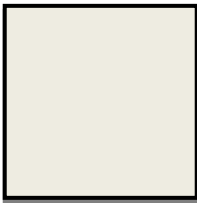
If you belong to both groups



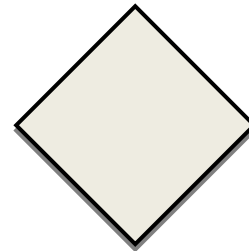
If many members of your group have been imprisoned after the genocide



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:

