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**Gordon Institute
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Motivating revenue flow down the economic pyramid

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

Date: 11th November 2013

Abstract

Encouraging remittances to flow despite the usually negative effects of increasing social distance is one of many ways economies with high Gini coefficients might assist those at the bottom of the economic pyramid. Many studies have looked into remittance flows between international and internal migrants and their families. This study examines the extension of these models to encourage remittance flows beyond the traditional family unit to include domestic workers and community schemes through the use of frames.

The experimental research utilised a dictator game to investigate the effects of different theoretical conditions on remittance flow in the form of an insurance premium that would benefit a family member, domestic worker or community scheme. Each condition represented an increase in the social distance between the remitter and receiver. A frame was then added to investigate if these flows could be increased by providing the remitter with more information.

The study found that people were generally willing to remit to non-family members. It was determined that the proportion of people willing to remit stayed constant in cases where an inter-personal relationship existed, but decreased without such a relationship. The amount a remitter was willing to remit was also found to decrease as social distance increased. The frame used was found not to improve remittance flows regardless of social distance.

Keywords

Remittance flow, Dictator Games, Social Distance, Framing, Bottom of the Pyramid.

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Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Dedication

This thesis is dedicated to my family, Monica, Phillip and Timothy who have given up so much by giving me the time and space needed to complete this thesis and the MBA as a whole. Thanks guys, I am looking forward to spending more time with you all.

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Motivations for revenue flow down the economic pyramid

Table of Contents

Abstract.....	i
Keywords	i
Declaration.....	iv
Dedication.....	v
Acknowledgements.....	v
Table of Contents.....	vi
Table of Tables	x
Table of Figures.....	xi
Chapter 1 : Introduction to research problem.....	1
1.1 Definition of problem and purpose	1
1.2 Why was this problem selected	1
1.3 What is the evidence in support of the problem	3
1.4 What is the relevance of this topic to business in SA.....	4
1.5 Contribution to the theory.....	4
Chapter 2 : Literature review.....	6
2.1 Background to remittance flows.....	6
2.2 Motives for remittance flows	7
2.2.1 Pure altruism	8
2.2.2 Enlightened self-interest and self interest.....	10
2.2.3 Domestic remittance.....	10
2.2.4 Advantages and disadvantages of remittance.....	11
2.2.5 Factors limiting remittance	11
2.2.6 Expanding remittance.....	11
2.2.7 Crowding effect and control.....	13
2.3 Non-financial remittance	13
2.4 Dictator games.....	14
2.4.1 Introduction to dictator games	14
2.4.2 Nash solution	15
2.4.3 Anonymity	15

2.4.4	Social distance	16
2.4.5	Framing	17
2.4.6	Identified issues with dictator games	18
2.5	Summary	19
Chapter 3	: Research questions and hypotheses	21
3.1	Research question one: presence of willingness to remit	21
3.1.1	Hypothesis H1 _a	21
3.1.2	Hypothesis H1 _b	22
3.2	Research question two: effect of increasing social distance	22
3.2.1	Hypothesis H2	23
3.2.2	Hypothesis H3	23
3.2.3	Hypothesis H4	23
3.3	Research question three: effect of using a frame	23
3.3.1	Hypothesis H5	24
3.3.2	Hypothesis H6	24
3.3.3	Hypothesis H7	24
3.4	Conceptual model	25
Chapter 4	: Research methodology	26
4.1	Research design	26
4.2	Section one	26
4.2.1	Sampling section one	30
4.3	Section two	30
4.4	Controls for issues identified in literature	30
4.4.1	Crowding effect and control	30
4.4.2	Windfall effect	31
4.4.3	Anonymity	31
4.5	Population and sampling	31
4.6	Pilot study	33
4.7	Analysis	33
4.7.1	Data preparation	33
4.7.2	Level of significance	34
4.7.3	Review of results	34
4.7.4	Research question one: presence of willingness to remit	35
4.7.5	Research question two: effect of increasing social distance	35
4.7.6	Research question three: using a frame to reduce social distance	36

4.7.7	Limitations	36
Chapter 5 :	Results	38
5.1	Data cleansing and review	38
5.2	Data demographics.....	39
5.3	Research question one a: willingness to remit.....	43
5.4	Research question one b: willingness to remit per condition	45
5.5	Research question two: effect of increasing social distance	47
5.5.1	Entire sample	47
5.5.2	Sample excluding those not willing to remit.....	50
5.6	Research question three: using a “frame” to reduce social distance	53
5.6.1	Entire sample	53
5.6.2	Sample excluding those not willing to remit.....	56
5.7	Results summary	59
Chapter 6 :	Discussion of results	60
6.1	The Sample	60
6.1.1	Response rate	60
6.1.2	Sample demographics.....	60
6.2	Research question one: willingness to remit.....	61
6.2.1	Hypothesis one discussion.....	61
6.2.2	Conclusion for willingness to remit	63
6.3	Research question two: Effect of increasing social distance.....	64
6.3.1	Research question two: discussion	64
6.3.2	Conclusion for effect of increasing social distance	66
6.4	Research question three: using a “frame” to reduce social distance	67
6.4.1	Research question three: discussion.....	68
6.4.2	Conclusion for using a frame to reduce social distance	70
6.5	Summary	70
Chapter 7 :	Conclusion	71
7.1	Introduction.....	71
7.2	Major findings	71
7.3	Recommendations for stakeholders	73
7.3.1	Potential remitters	74
7.3.2	Potential companies providing service	74
7.3.3	Potential receivers and government.....	74
7.4	Limitations.....	75

7.5	Future research	75
7.6	Conclusion	76
	Reference list	78
	Appendix 1: Demographic questions	87
8.1	Cover Letter	87
8.2	Question 1 (factorial questions)	88
8.2.1	Response options	89
8.3	Demographic questions	89

Table of Tables

Table 1: Experimental conditions	27
Table 2: Willingness to remit	28
Table 3: Case processing summary by demographic	39
Table 4: Support of extended family	41
Table 5: Insurance purchase	41
Table 6: Gender	41
Table 7: Age	41
Table 8: Ethnic background	41
Table 9: Household income	42
Table 10: Education level.....	42
Table 11: Area of residence	42
Table 12: Domestic employed	43
Table 13: AMPS (DATE) vs. experiment insured ethnic origin.....	43
Table 14: Count of willingness to remit	44
Table 15: Binomial test	45
Table 16: Descriptive results of willingness to remit per condition presented	45
Table 17: Binomial tests by condition.....	46
Table 18: ANOVA of family, domestic worker and community conditions.....	48
Table 19: ANOVA of conditions for those willing to remit.....	51
Table 20: Binomial test comparison against observed using family proportions	52
Table 21: Summary of means	53
Table 22: Univariate tests on frame	54
Table 23: Univariate tests on frames by condition	56
Table 24: Univariate tests on lens by condition (willing to remit only)	57
Table 25: Summary of hypothesis results	59

Table of Figures

Figure 1: Remittance motivations in the new economics of labour migration.....	8
Figure 2: Conceptual model.....	25
Figure 3: Means per condition presented.....	49
Figure 4: Means per condition presented for those willing to remit	52
Figure 5: Estimated marginal means by frame status	54
Figure 6: Estimated marginal means by frame status for each condition.....	55
Figure 7: Estimated marginal means by lens status for each condition (willing to remit only)	58
Figure 8: Aspects of decreasing remittance.....	67

Chapter 1 : Introduction to research problem

1.1 Definition of problem and purpose

There is a substantial body of literature discussing the motivations for a migrant worker to pay a portion of their income as a remittance to family remaining behind in the country of origin (Rao & Hassan, 2011). The motivations occur over a spectrum from altruistic to self-interest (Lucas & Stark, 1985) and there are arguments that some countries derive benefit from remittances (Aggarwal, Demirgüç-Kunt, & Pería, 2011; Chowdhury, 2011; Mueller & Shariff, 2011) while others are actually no better off or in a worse position as a result of the remittances (Rao & Hassan, 2011; Wouterse, 2010).

This study aimed to determine if the same motivations for international remittance could also be leveraged to trigger a remittance from higher income earners to lower income earners within the same country. This would be an internal transaction in countries with a large difference in purchasing power between the rich and the poor. In addition it attempted to identify what circumstances are need to initiate and encourage a remittance flow from rich to poor in addition to already established salaries, charitable donations and support for less fortune family members. These additional flows while monetary in nature to the donor are not intended to be monetary to the receiver. Instead they take the form of a service or intangible product like insurance, which many low income families cannot afford. Maitra and Ray (2003, p. 26) determined that social grants crowd out monetary remittance to families as basic needs are met by the grant and additional finds are not always deployed in a manner with which the remitter is happy. Providing a channel to remit funds to receivers that are not monetary in nature in the hands of the receivers can reduce this crowding out effect by allowing the remitter to retain control over the usage of funds.

1.2 Why was this problem selected

The world is changing, technology is improving and more people are living in urban areas (Ghosh, 2013; The Economist, 2010). A specific example can be shown in the South African census data from 2011 where the more urbanised centres in the Western Cape and Gauteng received net inflows of people when compared to the less developed

provinces (Statistics South Africa, 2012a, p. 26). Over the past decade or so, low income earners in South Africa have seen their household income grow at a faster rate than their more wealthy counterparts, notably between 2001 and 2011 (Statistics South Africa, 2012a, p. 42). However the disparity between these two groups still needs to close significantly. Current predictions state that the majority of expected world population growth will be concentrated in urban areas (Heilig, 2012, p. 12). The World Economic Forum listed severe income disparity as the number one risk when examining the likelihood of occurrence and in the top ten for severity of impact (Howell, 2013, p. 5).

The Gini coefficient is a measure of income disparity and a Gini coefficient close to one implies a high differential in income (Bosch, Rossouw, Claassens, & du Plessis, 2010). The world economic forum has raised concern around the trend of increasing Gini coefficient in many nations. So initiatives to mitigate this trend can only help reverse this increase in inequality. Multiple initiatives are needed to ensure the increasing inequality is slowed and reversed. Finding ways to encourage the redistribution of wealth from those fortunate enough to be higher up the economic pyramid to those lower down in meaningful and sustainable manner can only help reduce this global risk.

The focus on this issue must be greater in countries with currently high Gini coefficients. Examples include South Africa, with a Gini coefficient of 63.1(0.631), and Honduras at 57 (0.57) who are listed as having the highest Gini coefficients per the most recent information from the World Bank (2013). In these and other countries near the top of the list, the gap between the “haves” and the “have nots” is already wider than in other regions and therefore requires significant attention.

A country that experiences prolonged periods of inequality will result in instability and dissatisfaction of those at the bottom of the pyramid, often resulting strikes and civil disturbances over service delivery, factionalism and violence (Von Holdt et al., 2011). An extreme example was the incident at Marikana mine in South Africa where 34 people were killed in clashed with the police on the 16th August 2012 (BBC, 2012; Lynch, 2012). Therefore finding ways to stimulate remittance flows down the economic pyramid beyond the established pattern of family remittance from regional and international migrant workers could enhance the long term sustainability of a country that otherwise experiences wide disparity in incomes.

1.3 What is the evidence in support of the problem

There is substantial literature discussing the macro level motivations and benefits of international remittance and its effect on the receiving countries Gini coefficient (Housen, Hopkins, & Earnest, 2012; Lucas & Stark, 1985; Rao & Hassan, 2011; Yang, 2011). The amount of work on internal remittance was found to be somewhat more limited (Housen et al., 2012). However both international and internal remittance studies showed that remittance can have cause either a decrease (Adams, 2004; Chiwuzulum Odozi, Taiwo Awoyemi, & Omonona, 2010; Zhu & Luo, 2010) or an increase (Adams, Richard H., 2006) effects on the Gini coefficient.

Adams and Richard (2006) determined that international and internal remittances actually lead to a small increase in the Gini coefficient in Ghana. Despite this, the remittance still resulted in a poverty-reducing effect because of an overall increase in the mean household income. Therefore, despite the Gini coefficient indicating an increase in the wealth gap, remittance was still assisting in poverty reduction in this case in Ghana. The original imbalance is the result of only a few households receiving remittance. Once this has been overcome several studies (Adams, 2004; Chiwuzulum Odozi et al., 2010) suggest finding ways of stimulating additional remittance flows will assist in reducing the Gini coefficient, resulting in a more homogeneous society.

In countries where there is a high Gini coefficient, due to uneven development in economic activity and wealth, the more affluent are able to assist the poor. This is shown in countries like South Africa where welfare grants, funded from taxing the wealthy, have been shown to reduce inequality from theorised levels without the grants (Pauw & Mncube, 2007). Encouraging additional private inter-household transfers should enhance this effect. It has been shown that government pensions and allowances reduce private inter-household transfers (Maitra & Ray, 2003) and so investigation of alternative non-monetary flows could overcome this obstacle.

In the same way as the more affluent members of society, the poor are faced with risks, ranging from health to economic issues. However, unlike the more affluent, they are unable to access risk mitigation mechanisms like traditional insurance, neither do they have savings significant enough to “buffer” the impacts of events outside of those already budgeted for. They may use sophisticated arrangements, like remittance as a

form of internal family insurance to mitigate risk, but this is often not enough (Dercon, Bold, & Calvo, 2007). Therefore, developing a framework to extend remittance flow beyond family boundaries in the form of insurance or other options not involving a direct transfer of money from one individual to another could help mitigate the risk of loss of property, poor health and security in retirement faced by the poor.

1.4 What is the relevance of this topic to business in SA

As discussed in detail above, South Africa has one of the highest Gini coefficients in the world (World Bank, 2013). Despite this, discussions suggest there is still a significant population that is able and potentially willing to help those less fortunate than themselves. Identifying if this desire to help is real and something people are willing to pay for will allow South African businesses to determine if there is merit in designing “socially responsible” products that meet such a market. Those willing to assist will then be able to do so, with minimal effort and in a coordinated manner. This will increase the likelihood of success of such products and the businesses that provide them.

In addition, a recent article indicated that almost 20 percent of households in Limpopo, South Africa’s poorest province, said remittances from relatives were their main source of income (The Economist, 2013). Enhancing these flows will provide resources to poorer regions to help stimulate growth. In addition, exposing individuals to risk mitigating products will provide them with knowledge of the benefits presented by the products. As South Africa continues to increase the size of the middle class by the upliftment of previously disadvantaged individuals (SA info, 2013) knowledge of products which meet such a need, notably various forms of insurance, will lead to a faster uptake as disposable income becomes available.

1.5 Contribution to the theory

The study aimed to determine if the previous work on remittance flow could be used to increase remittance beyond the immediate family situation to assist extended family and others within social networks and communities beyond the common scenario of migrant labour “sending money home”. The study was undertaken using the dictator game model; this work extends the body of knowledge of this model and adds to others who have investigated if experiment based dictator games can be taken beyond the windfall games played in laboratory experiments and lecture theatres (Johannesson & Persson, 2000) by specifically addressing real life situations.

By controlling for issues surrounding levels of control, anonymity and inconsistencies resulting from windfalls of money, as identified in the literature review, the experiment was designed to take the dictator game a step closer to real world application by leveraging the remittance literature. The overall aim was to determine whether stimulation of remittance could be used as a tool to give those less fortunate a helping hand up.

Chapter 2 : Literature review

This chapter provides a literature review which surveys the academic literature for the major themes addressed by this research study. The literature review begins by examining the current state of the discussion around international and domestic remittance flows and looks at the motivation, limitations and effects of remittance. This is supplemented with a brief review of non-financial remittance before an examination of game theory with a focus on dictator games and the findings surrounding stimulation of donation or sharing.

This project aims to pull together the remittance theory with the experimental dictator games scenario to investigate if a desire to remit exists beyond the family situation under real world conditions.

2.1 Background to remittance flows

Revenue flows between countries are important in the day-to-day running of the global economy. The types of revenue include foreign direct investment, portfolio investments, official development assistance and remittances (Yang, 2011). For many developing nations, remittances by expatriate migrant workers are rapidly growing in importance as a source of funds (Rao & Hassan, 2011). The current literature indicates that remittance is second only to foreign direct investment in its contribution to the financial flows into developing countries (Aggarwal et al., 2011; Chowdhury, 2011; Yang, 2011).

Remittance has been defined as “household income received from abroad, resulting mainly from the international migration of workers” (Yang, 2011 p. 132). This definition is limited in that it fails to consider national or internal migration and remittance as an alternative source of remittance. Internal remittance is often overlooked due to the lower differences in purchasing power (Carling, 2008). However, some countries have greater differences in purchasing power between regions. This can often be inferred from a high Gini coefficient. In countries where this is the case, stimulating internal remittance flows could be used to reduce the Gini coefficient by expanding who is remitting to whom.

2.2 Motives for remittance flows

Remittance is mainly in the form of cash and is thought to be mainly due to altruistic motivations, like the support of family members back in the country or town of origin. Funds are sent by a family member to support the living expenses of family members left behind. A second reason for remittance is the more self-interested motivation resulting from financial incentives offered by recipient countries as an incentive to relocate funds to the country of origin (Rao & Hassan, 2011). The original work by Lucas and Stark (1985) on the theories of remittances listed three theories considered to explain remittance, as listed below:

1. Pure Altruism, where the migrant derives utility from the utility of those back home.
2. Pure Self-Interest, this is where the migrant aims to secure an inheritance or to purchase property or assets in region of origin.
3. Tempered Altruism or Enlightened Self-Interest, where a mutual beneficial contract is entered into between the migrant and home and could be a form of insurance for those at home (Lucas & Stark, 1985).

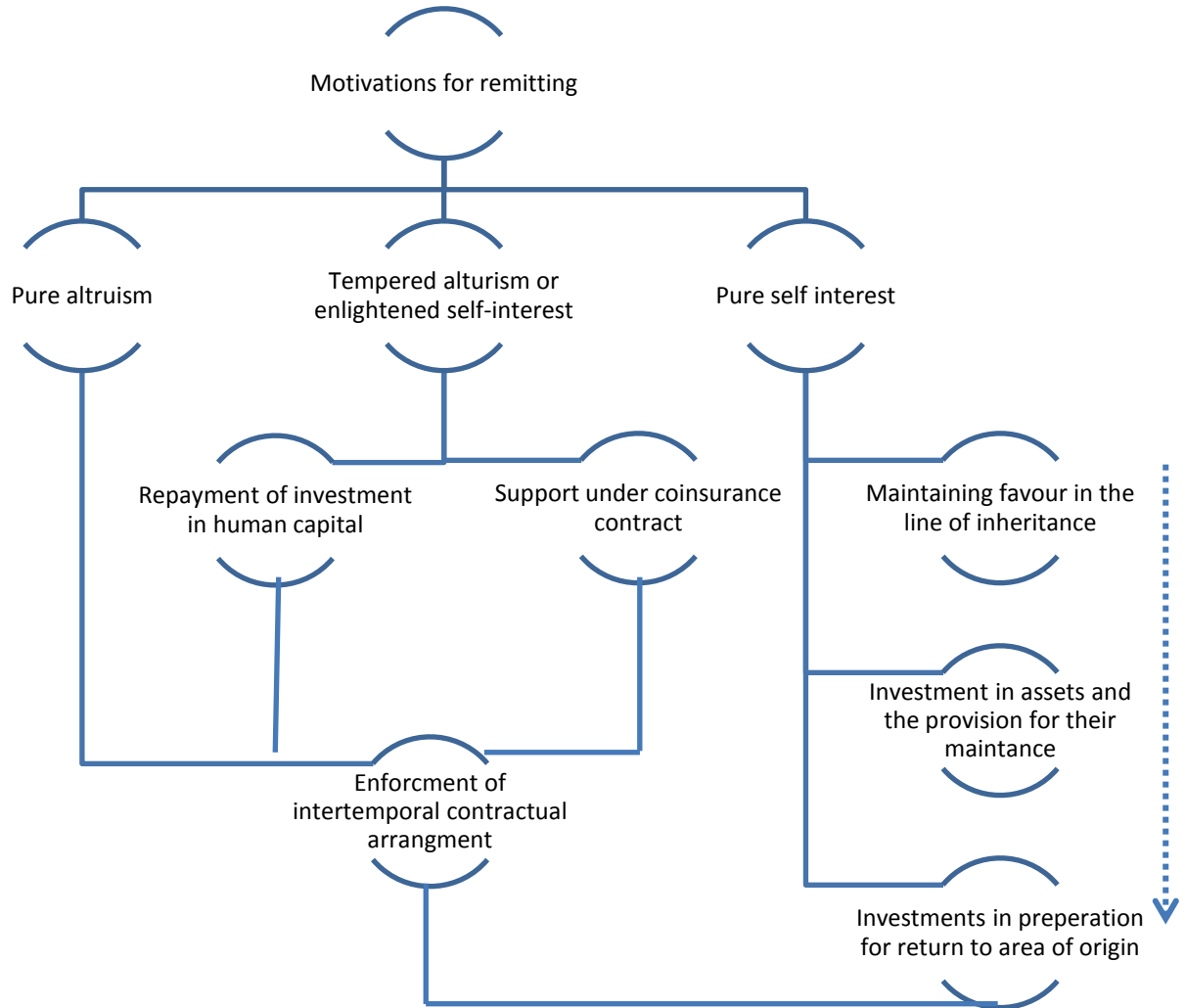
The three motivations talk to another definition used in the economics of charity. In this definition, altruism is defined as a concern for others that is not linked to a concern for oneself (Rutherford, 2010). Rutherford (2010) also suggests that it is hard to measure altruism, as it is an internal state and so cannot be proven or disproven just by observing behaviour that can be deemed altruistic. This supports Batson (2002) in the discussion that the line between altruism and egoism or self-interest is blurred. This is because there are a variety of possible motives for an observable act which may be considered to be altruism resulting from a person's internal state (Rutherford, 2010). This is summed up by the "warm glow" discussed by Rutherford (2010) who notes that the individual may even think that they are acting out of altruistic intentions, but the reality is that the motivation ultimately stems from the positive emotional state such actions engender.

Figure 1: Remittance motivations in the new economics of labour migration, shows Carling's (2008) framework and was modified from Lucas and Stark's (1985) work to explain remittance motivations in more detail by providing some potential scenarios that trigger the different motivations for remittance flows. Therefore, in 2008 motivating

factors were still an elaboration of Lucas and Stark (1985) rather than an extension, or a refinement or a challenge.

Figure 1: Remittance motivations in the new economics of labour migration

Source: (Carling, 2008, p. 583)



2.2.1 Pure altruism

Pure altruism is defined as when individual derives utility from the utility of those left at home (Lucas & Stark, 1985). Under this model, an individual will remit because it helps the family, but may impose limitations for the usage of the remittance to ensure it is used for tasks deemed vital. This was demonstrated in one study when increasing the control

that the remitter had over the remittance caused an increase in the amount of remittance sent home (Ashraf, Aycinena, Martinez, & Yang, 2011).

This can be extended to non-family members as a desire to help because it is “the right thing to do”. This would be something like returning a stranger’s wallet or giving food to someone in need. In ethical terms, this may stem from a belief structure based upon “the golden rule”, generally expressed as “treat others how you yourself would like to be treated” (Andrew, Crane & Matter, 2010, p. 106). In this case, the behaviour appears more like self-enlightenment as it more about a social contract based around how we should ideally interact. In the earlier example it could be argued that you take such an action because you yourself would like your wallet returned. –So this is actually the same as the tempered self-interest of Lucas and Stark (1985). There is debate around whether altruism is really a egoistic behaviour (Batson, 2002, p. 90). Batson (2002) also explains the extension of altruism into collectivism where the benefit is not for an individual but a group (Batson, 2002, p. 99).

Another definition used in the economics of charity is that altruism is a concern for others that is not linked to a concern for oneself (Rutherford, 2010). Rutherford (2010) also suggests that it is hard to measure altruism as it is an internal state and so cannot be proved or disproved just by observing behaviour that can be deemed altruistic. This supports Batson (2002) in the discussion that the line between altruism and egoism or self-interest is blurred. This is because there are a variety of possible motives for an observable act or altruism and a person’s internal state (Rutherford, 2010). This is summed up by the “warm glow” discussed by Rutherford (2010) as the individual may think they are acting out of altruistic intentions, but the reality is that it’s because it makes them feel good.

2.2.2 Enlightened self-interest and self interest

In contrast to altruism, self-interest is more about what the individual remitter can gain personally, for example favour with parents with regard to inheritance (Lucas & Stark, 1985). Enlightened self-interest still focuses on what the individual remitter and other parties mutually gain by an action (Carling, 2008; van Dalen, Groenewold, & Fokkema, 2005). This could be as a form of informal internal insurance within a family where family members support one another by providing a room to relatives who have just arrived in an area. Or this could be in the form of financial support when a crop fails at home or while a overseas family member is looking for work (Carling, 2008).

In the end, the motive for the remittance is not as important as the actual occurrence of the remittance. Carling (2008) argues that the focus on the balance between altruism and self-interest may be futile due to the contextual differences in each specific scenario. An understanding of these differences would allow remittance schemes to be customised per region to increase likelihood of success. This is because different regions increase or decrease remittance in different ways in response to the same stimulus (Carling, 2008).

2.2.3 Domestic remittance

The motivations given as reasons for domestic migration are similar to the reasons given for international migration (Lucas & Stark, 1985; Yao & Treiman, 2011). This is normally as a means to improve the economic position of a family, most commonly through access to better jobs (Yao & Treiman, 2011). It is normally the poorest households that receive internal remittance (Housen et al., 2012). The receipt of this remittance in the poorest households increases household expenditure between 15% to 40% (Housen et al., 2012). In situations where government pensions are implemented, it has been found that local remittances or private inter-household transfers are crowded out by the pensions (Maitra & Ray, 2003). So it follows that increasing the income of a remitter does not necessarily increase the amount of remittance sent home. Overcoming the crowding out effect would therefore be required to increase remittance beyond current levels. Utilisation of non-financial means, such as insurance policies, to increase the remittance will assist in this as greater control is granted to the remitter (Yang, 2011). Such increased remittance on top of various types of social grants and current remittance can further help reduce inequality.

2.2.4 Advantages and disadvantages of remittance

Remittances have been shown to assist in the financial development of the recipient country (Aggarwal et al., 2011; Chowdhury, 2011) and growth in human capital through improved education by lessening the need for child labour to earn an additional income. Increase familial income to a suitable level (Mueller & Shariff, 2011). Both of these indicate a positive influence resulting from remittance. Moreover, both studies focus on the country level as a unit of analysis in the frame of remittances between countries.

In contrast, other studies have failed to show a significant effect on growth (Rao & Hassan, 2011) and in some cases can have a negative effect on equality, ultimately causing an increase in the Gini coefficient of recipient countries (Wouterse, 2010). Several authors (Adams, Richard H., 2006; Wouterse, 2010) have shown that there is a slight increase in the Gini coefficient as a result of remittances. According to Wouterse (2010), this is the result of households with migrant workers gaining an advantage from the additional income. As arguments exist both for and against remittance, governments would benefit from a detailed understanding of the role remittance plays under their specific circumstances. This would allow governments to encourage the remittance flow into areas that provide maximum benefit to the recipient country and mitigate some of the negative effects of remittance.

2.2.5 Factors limiting remittance

Yang (2011) implied that remitters also have concerns over how remittances are being deployed by the receivers; this was noted to limit the size of remittances sent home. This was taken further by Yang and colleagues in a study by Ashraf, Aycinena, Martinez, & Yang, (2011) where they showed that giving a migrant control over the amount of remittances to be diverted to a savings account in their country of origin lead to an increase in the amount of savings remitted to the country of origin (Ashraf et al., 2011).

2.2.6 Expanding remittance

The motivations for a migrant to remit to extended family within the same country and in a country of origin were found to be similar to international remittance, although frequently smaller in value (Carling, 2008; Hagen-Zanker & Siegel, 2007; Lucas & Stark, 1985). No previous scholarly literature was identified that attempted to establish if additional remittance of a non-monetary nature, such as insurance policies in favour of the receiver, could be used to encourage remittance from employers to domestic

workers. The same approach could be applied to family members living close by who are not as high on the economic pyramid as the donor household.

Some work on charitable donations was found that investigates motivations for relating to giving to non-family members. The literature identified peer pressure as one mechanism, where friends and colleagues giving donations encourages others to follow suit. A second mechanism is tax matching schemes where government donates a portion of the tax paid by the donor to the charity, increasing the donation by effectively making it tax free (Smith, 2012).

Not surprisingly, similar altruistic motivations were found to encourage charity, but this was tempered with the “warm glow” (Rutherford, 2010). This may be explained by need to be the recipient of others' positive emotions, a need displayed by many, and so is a driver of our internal state (Holländer, 1990). The result is the seemingly altruistic action. However, when unpacked, these motives are more often found to be the result of enlightened self-interest.

From the work on remittance and charity discussed above, it is clear that the argument by Carling (2008) that the reasons for remitting are grey and that it is difficult to conclusively identify the root reason for an individual to decide to remit or donate is correct. The fact that it happens at all might be more important. Looking for factors that trigger remittance, rather than definitively identifying an individual remitter's ultimate motivation, might be of greater use when trying to understand remittance (Carling, 2008) for practical applications.

Charitable behaviour that maximises social welfare has been shown to increase in situations where an individual can identify with a group and has a sense of belonging to that group (Chen & Li, 2009). This effect is not as strong as the context of family or kin, but is still stronger than that of a complete stranger (Ben-Ner & Kramer, 2011). If the general motivators for remittance and charity are similar, then triggering this sense of belonging should allow additional remittance to occur.

2.2.7 Crowding effect and control

As discussed in section 2.2.3, Domestic remittance, Maitra & Ray (2003) found that local remittances or private inter-household transfers are crowded out by pensions. This effect can be extrapolated with the expectation that public grants, like pensions, would crowd out local remittance. Providing the remitter with control over the utilisation of the funds as described in section 2.2.1, Pure altruism, where an increase in the amount of remittance sent home occurs when additional control over the remittance use is experienced (Ashraf et al., 2011); such an effect could be used to counter the negative effects of grants on remittance.

2.3 Non-financial remittance

Section 2.2.2 introduced a concept whereby family provides a form of informal insurance to each other in times of need (Carling, 2008). In this context, informal insurance is effectively risk-sharing within a family. In the event of a crop failure, family working overseas would send money that can be used to sustain the family members remaining at home. Conversely, family moving overseas could be supported by the family remaining in the country of origin during the early stages of settling.

This concept could be expanded beyond the family situation, by using formal insurance products as a means of providing security in addition to the basic salary paid to a domestic worker, perhaps in return for long-term loyalty or to avoid a large obligation expenses resulting from a domestic worker experiencing a loss. While no literature was identified that looked at this from the perspective of remittance, a recent study showed that fringe benefits such as insurance were considered less important by lower paid workers. Managers on the other hand rated insurance benefits more highly and it was speculated that this was due to better understanding around the function of insurance (Kasper, Kodydek, Schilcher, & Hochreiter, 2013). Low income workers will not initially value this form of remittance, most likely due to the limited understanding mentioned above. However, the level of control this affords the remitter should encourage uptake by the remitter (Ashraf et al., 2011). This benefit to a low-income family member or domestic worker can help absolve the remitter of financial burden or responsibility in the event of the low-income individual experiencing a loss covered by such a policy. This is an extension to the idea of the currently compulsory retrenchment cover in South Africa in the form of the Unemployment Insurance Fund (Bhorat & Tseng, 2012) and takes the

informal insurance concept, proposed in the remittance literature (Carling, 2008; Lucas & Stark, 1985; Yang, 2011) into the formal arena beyond inter-family risk transfers.

2.4 Dictator games

2.4.1 Introduction to dictator games

Dictator games are a type of game in experimental economics that were first developed in 1986 (Kahneman, Knetsch, & Thaler, 1986) as a way of translating theory from text books into practice. The dictator game is therefore ideally suited to examine how individuals would react when presented with a specific scenario. The use of this tool allowed this study to investigate people's reactions when presented with requests for remittance under scenarios discussed from the literature above. This is in line with current work using dictator games and there has been a lot of work surrounding how people give using this experimental method. (Ben-Ner & Kramer, 2011; Bohnet & Frey, 1999; Brañas-Garza, 2006, 2007; Charness & Gneezy, 2008; Engel, 2011; Franzen & Pointner, 2012; Guala & Mittone, 2010; Pradel, Euler, & Fetchenhauer, 2009). A dictator game is, in its most basic form, a one period economic game in which one of the two participants, the dictator, has all the power and the other, the recipient, has none. The dictator is asked how much of a pie, windfall or other type of economic unit to give to the recipient and how much to retain for themselves. The recipient has no form of recourse over the decision made by the dictator (Engel, 2011).

When a respondent received a windfall, dictator games have shown that the respondent will usually be willing to give up some of that windfall. In some cases, this has gone as high as 37% of the windfall (Pradel et al., 2009). Carling (2008) notes that it is difficult to determine the true motives of an action. However, in Carling's (2008) dictator games all other motivations were stripped away. The amount allocated is anonymous and no one will be able to determine what you kept or donated and there is no recourse or chance of reciprocity (Guala & Mittone, 2010). So those donating above the mean are likely operating from a more altruistic framework and those giving below the mean from an egoistic (self-interested) framework.

An early example of the dictator game was conducted by Kahneman, Knetsch and Thaler (1986) in an attempt to take theory out of text books and into testable behavioural hypotheses. It was determined that "[m]any subtleties become evident when the

assumption of perfect information is dropped, allowing ignorance and risk, and when the costs of searching and transacting are considered. Much current research in economics is in this vein.” (Kahneman et al., 1986, p. 298) and therefore economic rationality cannot be held as an assumption. The conclusion was that “judgments of fairness are influenced by framing and other factors considered irrelevant in most economic treatments” (Kahneman et al., 1986, p. 299). The dictator game has since become a common tool when examining human economic behaviours and in assessing an individual’s likelihood of giving to others under various conditions. The factors that have been found to influence giving in dictator games are discussed in detail below.

2.4.2 Nash solution

Game theory states that a rational person will move towards a position that provides the best possible outcome for that person, frequently expressed in the form of the Nash equilibrium (Besanko, Dranove, Shanley, & Schaefer, 2009). In a dictator game scenario, the other side has no ability to influence the outcome. Therefore the Nash equilibrium would be for the dictator to not give anything and retain the full amount for his or her self. As the dictator game is a one period game, the Nash equilibrium assumes there is no self interest in assisting others *per* Lucas and Stark’s (1985) work. Additional information or motivation needs to be provided to influence the dictator’s perception and provide benefit to the dictator in return for remitting. This will then move the Nash solution towards an more egalitarian division (Brañas-Garza, 2006). Moving the Nash solution towards a more egalitarian position where both parties benefit, despite the lack of control on the part of the recipient, is vital if remittance is to be expanded beyond the point of pure self-interest on the side of the dictator. The additional information, in the form of circumstantial information about the receiver, provides a lens or frame for the dictator to view the recipient situation and realign the Nash equilibrium in the dictator’s mind (Brañas-Garza, 2006).

2.4.3 Anonymity

Several studies aimed at determining the willingness of individuals to give away part of a windfall have used dictator games (Ben-Ner & Kramer, 2011; Brañas-Garza, 2007; Charness & Gneezy, 2008; Guala & Mittone, 2010; Pradel et al., 2009). However, it has been noted that anonymity is essential and the possibility of discovery by either the experimenter or the recipient can influence the amount of money given away in a dictator game to ensure the dictator appears socially desirable or to potentially derive

reciprocity (Franzen & Pointner, 2012). The level of anonymity associated with any remittance is also a driving factor behind the amount being remitted and should be considered if the theory results seen in prior experiments can hold beyond the windfall experiments conducted (Ben-Ner & Kramer, 2011; Brañas-Garza, 2007; Charness & Gneezy, 2008; Guala & Mittone, 2010; Pradel et al., 2009).

2.4.4 Social distance

Social distance is defined by Hoffman, McCabe, & Smith (1996) as "the degree of reciprocity that subjects believe exists within a social interaction" (p. 654). The level of reciprocity is driven by many factors. The transfer from the rich to poor, when voluntary, is most frequently driven by a desire to follow social norms involving social solidarity. This is based on the presumption that being excessively selfish is not beneficial to the collective and individual good (Platteau, 2012), and is in line with Lucas and Stark's (1985) third supposition regarding enlightened self-interest. The concept of social distance is based on the presumption that an individual is aware of social norms and that reciprocity should exist between individuals (Hoffman et al., 1996). By making an individual's plight known and identifiable to the donor or in the case of an experiment, the dictator, the amount remitted has been shown to increase (Bohnet & Frey, 1999; Brañas-Garza, 2006). This has been seen in multiple cultures ranging from the countries in the West to sub-Saharan Africa where culture will sanction individuals who do not follow redistributive norms and in extreme cases has resulted in physical attacks to property and person (Platteau, 2012).

The transfer of wealth can be linked to two identified types of altruism that can be categorised within enlightened self-interest discussed above. These are kin altruism and reciprocal altruism. Kin altruism implies assisting ones blood relatives to increase the likelihood of success. Reciprocal altruism entails making a sacrifice to an unrelated party in the hope of receiving some future benefit (Ben-Ner & Kramer, 2011). This is normally measured, at least in the field of economics, by an amount of money. The amount varied depending on the level of association of the donor to the beneficiary. Association might be kin, friends, strangers or enemies (Ben-Ner & Kramer, 2011). However, when a transfer occurs, the transfer may be driven by non-economic considerations like social prestige, political power or loyalty (Platteau, 2012). This is in alignment with the discussion on non-financial remittances where, again, loyalty was a motivating factor

(Platteau, 2012) for the remittance and could reduce the social distance as more “common ground” between the two individuals is forged.

In reciprocal altruism, the greater the social distance between the donor and the recipient, the lower the value of the transfer, with the converse also being true (Osiński, 2009). Therefore, decreasing the social distance by creating a sense of a shared fate within a network can increase solidarity (Gilchrist & Kyprianou, 2011) and, in turn, increase the remittance of wealth to “in crowds” (Ben-Ner & Kramer, 2011; Chen & Li, 2009), bringing remittance to non-family members more in line with that to family members. This could be a result of greater knowledge regarding the likelihood of reciprocity that could be gained, resulting from enlightened self-interest, causing the increase in remittance. Depending on available resources, this might result in an increase in remittance to non-family members with no effect on family members. Alternatively, the gap could be reduced with non-family receiving more or the same and family receiving less if the benefit from such an arrangement is sufficient.

Prior studies (Burnham, 2003; Charness & Gneezy, 2008) have shown that reducing the social distance in a dictator game by testing scenarios where increased familiarity or awareness of the other party increases the average contribution to the recipient in a dictator game. Combining this with Osiński’s (2009) results, that lower social distance leads to higher contributions to recipients, it can then be hypothesised that increasing awareness of another’s circumstances changes the frame through which an individual assesses a situation when deciding on how much to donate. It has been shown that adding a simple sentence to a scenario is enough to dramatically alter the amount donated in a dictator game (Brañas-Garza, 2007) typically by creating awareness of another person’s situation and thereby increasing empathy with that individual. Empathy plays more on the emotions of the remitter and would increase remittance resulting from pure altruism or as a result of the warm glow. It differs from the family scenario where reciprocity plays an important role in the flows.

2.4.5 Framing

Framing in dictator games is the act of adding additional information about the circumstances of the recipient. An example of this was given in 2.4.4 above, where the sentence “*Note that your recipient relies on you*” highlighted the receiver’s circumstances, altering the results of the dictator game (Brañas-Garza, 2007, p. 480).

So a frame can be as simple as the example given here, namely providing personal information about the recipient (Edele, Dziobek, & Keller, 2013).

However, in the meta study on dictator games, frames were found to vary in significance, with the frame used by Brañas-Garza (2007) being significant but overall, the effect of frames being very dependent on the circumstance presented by the frame (Engel, 2011). A frame's effectiveness is very dependent on the circumstance in which it is used. The validity of a frame may vary as the context of an experiment changes. Frames hold a lot of potential for stimulating remittance flow; however, the wording of the frame must be carefully considered, as there is the potential for the frame to fail to trigger a reaction or instead trigger an unintended reaction.

2.4.6 Identified issues with dictator games

Some limitations have been identified with the work done using dictator games. Firstly, the majority of the experiments (Ben-Ner & Kramer, 2011; Bohnet & Frey, 1999; Brañas-Garza, 2006, 2007; Charness & Gneezy, 2008; Engel, 2011; Franzen & Pointner, 2012; Guala & Mittone, 2010; Pradel et al., 2009) give the dictator a windfall of money for nothing or very little "cost".

This potentially makes the cost of giving unrealistically small, and so produces more generous results than would probably occur under normal circumstances (Engel, 2011). This is reinforced by studies showing that when money had to be earned rather than just being given, lower remittance to the receiver was recorded (Cherry, Frykblom, & Shogren, 2002; Hoffman et al., 1996).

Attempts at reducing social distance have shown promise at increasing the percentage of a windfall that is shared with a stranger, mainly in controlled experiments involving student populations (Brañas-Garza, 2007). Studies looking beyond the lab have been carried out (Johannesson & Persson, 2000) but they still relied on a windfall to drive the donation. No study was found that moves away from the windfall design to examine the effects when the remitter's own money was required.

2.5 Summary

The literature has shown that there is a lot of work on the motivating factors for remittance, mainly between family members. The motivations range from pure altruism to self interest in securing inheritance. There is also disagreement as to whether remittance actually helps or hinders a community's efforts to escape poverty.

Domestic remittance has been shown to be more important to poorer households. This is important for wealth redistribution in high Gini coefficient countries; the amount of remittance has been shown to be reduced when government grant schemes are initiated. Therefore, identifying a mechanism to prevent this decline in line with grants should assist the poorer households in gaining a foothold in the climb out of poverty.

This project aimed to pull together the academic literature on remittance theory with that on experimental dictator games to investigate if a desire to remit exists beyond the family situation under real world scenarios. This was ultimately aimed at stimulating remittance in a domestic setting by framing the request for remittance to examine the effect of social distance from the remitter to the receiver to see if remittance varies significantly when requested for family, specific known individuals or communities.

If the desire to remit exists and can be encouraged, increased revenue flow down the economic pyramid from higher earning individuals to family, friends and communities can be stimulated. Expanding remittance beyond the established family ties to encompass non-family members with whom the remitter has a close relationship or to entire communities will aid in bolstering development of lower income families in countries with a high Gini coefficient.

Reducing the social distance by providing additional situational information has been shown to increase the amount shared in controlled experiments. For this theory to be expanded into the real world, with the aim of increasing remittance, further understanding is required. If true anonymity is present, does the additional information being provided really translate to an increase in the amount an individual is willing to remit. Also, the work reviewed mainly tested the sharing of a windfall, or money that was not earned by the individual. This is in contrast to the money involved in remittance flow, which is hard earned. For someone to give up earned resources is less likely than a

windfall, and so further investigation is required to determine if framing can stimulate a regular flow of remittance beyond the family unit. Finally, to prevent issues associated with crowding out and lack of control, the remittance needs to be modified from actual money changing hands to something of a non-monetary nature such as insurance to meet unfulfilled needs and ensure complete control by the remitter over the usage of the additional remittance.

Chapter 3 : Research questions and hypotheses

The aim of this research was to examine proposed alternative flows of remittance that were non-financial in nature to the receiver down the economic pyramid. These were targeted at assisting either a family member, friend / domestic worker or the community at large. The conditions represented an increase in the social distance between the remitter and receiver in each subsequent condition. For this experiment, a family member inferred whom you had a close relationship with and not distant relatives.

The first objective was to answer the question raised in chapter one regarding whether the desire to help others is actually present and if remittance flow beyond the family members can be encouraged. The second objective was to determine the effect of social distance on the amount of remittance of the remitters own money as social distance was found to play a role in windfall experiments discussed in the literature. The third facet of the experiment was to determine if the addition of a social frame would increase any remittance flows discovered in objective one and two. These objectives were investigated by asking the research hypothesis outlines below.

3.1 Research question one: presence of willingness to remit

The research hypothesises that a greater proportion of individuals further up the economic pyramid are willing to remit to those further down if a suitable opportunity is presented.

3.1.1 Hypothesis H1_a

Alternate Hypothesis (H1_a): There are a significantly greater proportion of individuals further up the economic pyramid that are willing to remit to those further down.

Null Hypothesis (H1₀): There are not significantly greater number of individuals further up the economic pyramid that are willing to remit to those further down.

p_1 = proportion of the population willing to remit.

H1₀ : $p_1 = < 0.5$

H1_A : $p_1 > 0.5$

This hypothesis is expanded to determine whether there is a significant willingness to remit under each of the conditions presented. The objective was to determine if the willingness to remit extended beyond the family, as prior research has shown this to occur; see section 2.1 and 2.2 in the literature review, to determine whether remittance could be extended to domestic workers or community schemes. Therefore, the following additional hypotheses were proposed.

3.1.2 Hypothesis H1_b

Hypothesis (H1_a): There are significantly greater numbers of individuals further up the economic pyramid that are willing to remit to either 1.1 family members, 1.2 domestic workers or 1.3 community relief schemes further down the pyramid.

Null Hypothesis (H1₀): There are not significantly greater numbers of individuals further up the economic pyramid willing to remit to either 1.1 family members, 1.2 domestic workers or 1.3 community relief schemes further down the pyramid.

3.1.2.1 Hypothesis H1.1

H1.1₀ : $p_1 = < 0.5$

H1.1_a : $p_1 > 0.5$

3.1.2.2 Hypothesis H1.2

H1.2₀ : $p_1 = < 0.5$

H1.2_a : $p_1 > 0.5$

3.1.2.3 Hypothesis H1.3

H1.3₀ : $p_1 = < 0.5$

H1.3_a : $p_1 > 0.5$

3.2 Research question two: effect of increasing social distance

The research examined whether increasing social distance significantly decreases the amount of remittance an individual is willing to remit down the pyramid. This was determined by testing the following hypothesis.

3.2.1 Hypothesis H2

Alternate hypothesis (H_{2a}): There is a significant decrease in the amount an individual will remit to a domestic worker (condition 2) compared to family members (condition 1).

Null Hypothesis (H₂₀): There is no significant decrease in the amount an individual will remit to domestic worker compared to family members.

$$H_{2_0} : \mu_1 = \text{ or } < \mu_2$$

$$H_{2_a} : \mu_1 > \mu_2$$

3.2.2 Hypothesis H3

Alternate hypothesis (H_{3a}): There is a significant decrease in the amount an individual will remit to a community (condition 3) scheme compared to family members.

Null Hypothesis (H₃₀): There is no difference in the amount an individual will remit to a community scheme compared to family members.

$$H_{3_0} : \mu_1 = \text{ or } < \mu_3$$

$$H_{3_a} : \mu_1 > \mu_3$$

3.2.3 Hypothesis H4

Alternate hypothesis (H_{4a}): There is a significant decrease in the amount an individual will remit to a community scheme compared to a domestic worker.

Null Hypothesis (H₄₀): There is no difference in the amount an individual will remit to a community scheme compared to a domestic worker.

$$H_{4_0} : \mu_2 = \text{ or } < \mu_3$$

$$H_{4_a} : \mu_2 > \mu_3$$

3.3 Research question three: effect of using a frame

The research investigated whether framing the request for remittance with information about the circumstances of the receiver reduces social distance and increases the amount remitted to a domestic worker or community scheme.

In the hypotheses below, F = frame and is the condition with the framing information and NF = no frame, and is the condition without the information.

3.3.1 Hypothesis H5

Alternate Hypothesis (H5_a): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does increase the amount remitted to family.

Null Hypothesis (H5₀): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does not increase the amount remitted to family. H5₀ :

$$\mu_{5F} = \text{or} < \mu_{5NF}$$

$$H5_a : \mu_{5F} > \mu_{5NF}$$

3.3.2 Hypothesis H6

Alternate hypothesis (H6_a): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does increase the amount remitted to a domestic worker.

Null Hypothesis (H6₀): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does not increase the amount remitted to a domestic worker.

$$H6_0 : \mu_{6F} = \text{or} < \mu_{6NF}$$

$$H6_a : \mu_{6F} > \mu_{6NF}$$

3.3.3 Hypothesis H7

Alternate hypothesis (H7_a): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does increase the amount remitted to community schemes.

Null Hypothesis (H7₀): Framing a request for remittance to reduce social distance by creating a sense of a shared fate does not increase the amount remitted to community schemes.

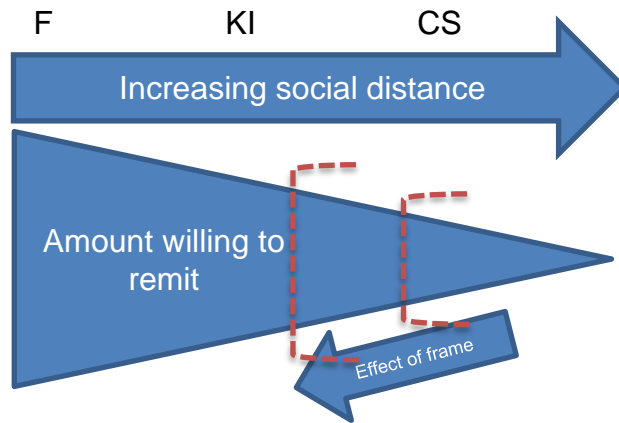
$$H7_0 : \mu_{7F} = \text{or} < \mu_{7NF}$$

$$H7_a : \mu_{7F} > \mu_{7NF}$$

3.4 Conceptual model

To investigate the hypothesis, a conceptual model derived from the literature review was proposed. This model, shown in Figure 2: Conceptual model, illustrates the decreasing willingness to remit as social distance increases. A frame is shown to increase the amount remitted by reducing the social distance.

Figure 2: Conceptual model



F = Family

KI = Domestic / Friend

CS = Community Scheme

Chapter 4 : Research methodology

4.1 Research design

The research was based on a quantitative design, as numerical information was required to allow for observation of a measurable increase or decrease in the willingness to remit. To simulate different conditions an individual might experience, an experimental design was used to allow the observation of results after the manipulation of one independent variable. The experiment followed a factorial design where two variables, the social distance and the presence / absence of a frame, were manipulated in a stepped fashion to allow the effect of each step to be assessed. To achieve this, the research was designed as a two by three factorial experiment similar to the one conducted by Kleyn and Chun (2012) to allow the effect of each condition to be measured while keeping all other factors constant. A double blind protocol was followed to ensure both the respondents and the researcher had no prior knowledge of the treatment a respondent received or the results until after the experiment was completed.

The research was done by a questionnaire, split into two sections. Section one contained the different treatment conditions. Section two collected basic personal information, but no question allowed the person's identity to be revealed.

4.2 Section one

A two by three factorial experiment was used with responses measured using several fixed points along a hypothetical value range (Table 2: Willingness to remit). The experiment present six scenarios (Table 1: Experimental conditions) that were used to test the respondent's likelihood to add an additional sum of money to short term insurance product, to assist a family member or domestic worker in a lower income bracket. In addition, a second scenario was presented asking for a contribution aimed at a community disaster relief scheme. The request was either framed by a strictly factual preamble as a frame or with a scenario designed to change the individual's frame of reference to reduce social distance between the remitter and the receiver.

Table 1: Experimental conditions

	Family Member	Domestic Employee	Stranger
Positive frame	How much would you pay to add a Family Member to your insurance policy with a frame	How much would you pay to add a Domestic Employee to your insurance policy with a frame	How much would you add to your insurance policy for a disaster relief fund with a frame
Neutral frame	How much would you pay to add a Family Member to your insurance policy without a frame	How much would you pay to add a Domestic Employee to your insurance policy without a frame	How much would you add to your insurance policy for a disaster relief fund without a frame

The experiment followed a dictator game style that has been used in several similar experiments aimed at determining the amount a person will share with a stranger under various conditions such as blind games, where the identity and actions of the dictator were hidden, or “un-blinded”, when a photo of the dictator or receiver was shown to the other party (Brañas-Garza, 2007; Brañas-Garza et al., 2010; Burnham, 2003; Charness & Gneezy, 2008).

This specific factorial experiment used was a dictator game experimental design, modified from the methodology utilised by Brañas-Garza (2007) where two identical sets of frame conditions were presented to the “dictators”. The only modifier in Brañas-Garza’s experiment was a final sentence stating “*Note that your recipient relies on you*” being added to the information presented to the dictator. This was aimed at providing a modifying lens, or frame as some authors refer to it, through which the dictator would view the proposal.

The participants in the Brañas-Garza (2007) experiment were asked to decide how to divide a USD10 amount between the recipient and themselves. Any division, including keeping the entire amount, was allowed. The recipient was randomly selected from the 20 subjects sitting in the row to the left of the dictator.

This experimental study built on the classroom experiment conducted by Brañas-Garza (2007) described above. Instead of using students, the research undertaken in this study was conducted by sending questionnaires to members of the South African population who earn in excess of ZAR 10,000 per month household income and who were able to access the internet. Simple instructions, explained below, were sent out to respondents

with one of the six scenarios described in Table 1: Experimental conditions, above, as the question. After the scenario was presented, see conditions below, the respondent was asked to indicate how much they would be prepared to add to their ZAR500 per month insurance policy.

A hypothetical scenario not involving actual money was compared to a one using money investigated by Yi, Charlton, Porter, Carter and Bickel (2011). Their study indicated that there is no difference between actual and theoretical financial decisions. Although there is some debate that some people could be more generous in a theoretical situation, the difference is not significant and the theoretical scenario used can be considered a valid proxy to actual behaviour (Johnson & Bickel, 2002).

Frame condition 1

On the two by three factorial experiments was the frame aimed at determining if the amount remitted can be increased by decreasing social distance as per hypotheses five, six and seven. The frame variations for condition one presented the neutral condition with the following two versions as a preamble. The different versions were required to adapt the wording to make sense when read in light of the conditions presented.

Version 1: Your insurance company has started offering an extension to your policy. For a fee you can extend your policy to cover the home and contents of a low income household. How much would you be willing to add to your monthly premium to extend your cover for a family member or domestic employee?

Table 2: Willingness to remit below shows the possible responses available to the respondent.

Table 2: Willingness to remit

The most I would add per month for this would be	R0	R20	R50	R100	More than R100
--	----	-----	-----	------	----------------

Version 2: Your insurance company is has started offering an extension to your policy. For a fee you can contribute to a disaster relief fund to help uninsured individuals after catastrophic events. How much would you be willing to add to your monthly premium for this fund?

Table 2: Willingness to remit above was also used to collect the responses to this question.

Frame condition 2

Frame condition two was worded in exactly the same manner, except this time the following was added before the version one and two explanations

“Levels of poverty are extremely high in South Africa. Those of us fortune enough to have the security of an insurance policy are in the minority. A small amount from you can assist in dramatically improving the security and living conditions of other family / friends or our communities”.

This was a bit more elaborate than the single sentence used by Brañas-Garza (2007). The reason behind the increased complexity in the frame was an attempt to build a sense of common ground by attempting to reduce the social distance between the parties in all three scenarios and increase the amount remitted in the complex South African situation.

Social distance was manipulated by varying the distance between the remitter and the receiver by changing their relationship. The possible options presented were that of a family member, domestic worker or community scheme. Family would have the lowest social distance with community scheme the greatest. These can be seen in the examples above and were used to answer hypotheses two, three and four.

The possible responses to all possible variations of the factorial question all used the options shown in Table 2: Willingness to remit, above. Only one of each of the six conditions was presented to each respondent to ensure the respondent remained naïve. All responses were then analysed to determine if a significant willingness to remit existed to answer the hypotheses. A willingness to remit is determined by any score greater than zero.

4.2.1 Sampling section one

As the experiment was factorial, every respondent had to be randomly assigned to one of the six conditions described above. This was achieved through the online Survey Monkey tool (<http://www.surveymonkey.com/> August 2013) used to deploy the experiment. Every time a respondent participated in the survey, one of the questions was randomly displayed by the survey engine. Each question was assigned a weighting to ensure roughly even numbers of response for each of the six scenarios. Due to a system limitation, conditions one, two, three, five and six had a 16.66% probability of appearing and condition four had a 16.7% probability. This can be seen in Question 1 (factorial questions). This sampling technique ensured the researcher had no control over the factor any specific respondent was exposed to. As no name or contact details were collected, the respondent remained totally anonymous. Survey Monkey also prevented multiple responses from the same computer to prevent re-takes.

4.3 Section two

General information like *does the household have a full time or part time domestic worker* or *does the household financially support other family members not permanently living with them* was collected. These questions can be found in section 8.3 Demographic questions.

4.4 Controls for issues identified in literature

The literature reviewed identified several potential issues involved in remittance flows and dictator games. This section discusses how the experiment was designed to avoid these issues.

4.4.1 Crowding effect and control

To control for the crowding out effect described in 2.2.7, the financial nature of the experiment was altered to be that of an insurance product. The reason for this is twofold. Firstly, it potentially avoids crowding as it is not direct financial assistance in terms of money and secondly it provided the remitter with greater control over the utilisation of the funds as described in section 2.2.1, where increasing the control by the remitter over the usage of the remittance caused an increase in the amount of remittance sent home (Ashraf et al., 2011).

4.4.2 Windfall effect

In order to counter for the effect described in 2.4.6 where Engel (2011) noted that in much of the prior work, the experiment gave the dictator money for nothing or very little. There is the potential that the cost of giving in such experiments would have been unrealistically small and so make the dictator more generous than he/she would be under more normal conditions. This experiment was designed to solicit a theoretical donation from the dictator's own earned funds rather than a windfall. Yi et al. (2011) indicated that there is no significant difference in observed behaviour between actual and theoretical financial decisions so, as both cases are based on an a share of the dictator's wallet, the concern over the windfall effect is avoided.

4.4.3 Anonymity

To ensure the concerns raised by Franzen & Pointner (2012) regarding a dictator increasing donations to appear socially desirable, no personal information was collected that could identify the respondent acting as the dictator and the subjects were aware that their information was anonymous. This was to ensure any remittance given in the dictator game would be true to how the dictator would respond in a real situation where they are similarly anonymous. In addition, the majority (82%) of the respondents were sourced through a third-party marketing company called Interact Direct and would be unlikely to have any connection with the individuals or organisation involved in the research. This also assisted in avoiding potential bias around trying to give a known researcher the results the respondent considered desirable to the researcher, on the chance that you could be identified and receive some benefit from a favourable response. The remaining (18%) respondents were sourced through Facebook and emails to colleagues. The only additional information provided on top of the introductory letter was that the survey was for a MBA thesis and there assistance would be appreciated. This was to reduce the chance of response bias as they did not know what was being investigated.

4.5 Population and sampling

The population for the research is broadly defined as all South African adults with sufficient disposable income to assist others and who are able to access the internet as the data gathering platform was internet based. Due to variation in cost bases and the amount of surplus cash that can be deployed to remittance, the survey will target all

individuals above the average South African income for 2011. This is households earning more than ZAR 10,000 per month (Statistics South Africa, 2012b).

The sampling method used for this research will be non-probability purposive sampling, under typical case conditions. This is when judgment is used to actively select individuals in a position to help answer the research hypothesis. It is the most commonly used form of non-probability sampling when a list of the entire population is unavailable (Saunders & Lewis, 2012, p. 137). To qualify for the survey, you need to earn above the average South African salary of ZAR 10,000. The household income was collected during the survey to allow for this screening. Professional and office networks as well as a marketing research company called Interact Direct were utilised to contact potential respondents. As naivety must be maintained, screening questions could not be placed at the beginning of the questionnaire. The income question was therefore part of the demographic questions at the end of the survey. Responses below the requirement were excluded from the analysed dataset. Due to the sampling method of using professional networks and a marketing research company, only nine responses fell below the required income and were excluded.

The questionnaire was available via the online survey engine <http://www.surveymonkey.com/> and was circulated to personal and professional networks via email or Facebook, with a request for participants to use their own social networks to increase the surveyed population. In addition, Interact Direct a market research company based in South Africa, were employed to distribute the questionnaire to potential respondents. As the above would have allowed access to a broad variety of networks in South Africa, the sample can be considered non-statistically representative of the population as described in Saunders and Lewis (Saunders & Lewis, 2012, p. 134). The sampling company utilised a broad database of over 250,000 individuals ranging from CEOs to junior management across all industry types (Interactive Direct, personal communication, 18 September 2013). This was to target those with sufficient income for the study. Due to the large number of required responses, Interact Direct was used to ensure the minimum targeted response per factor of 30 was achieved. In fact the least responses received for a condition was 56 and the most responses received for a condition was 85.

To prevent respondents filling out the survey multiple times, Survey Monkey was set to record the IP addresses of the computer used to respond to the survey. Only one response per IP address was permitted.

4.6 Pilot study

Prior to full rollout of the questionnaire, a two stage pilot study was conducted.

The first stage used fellow GIBS students to determine and resolve any flaws. This involved requesting three fellow students at GIBS to fill in the survey. After completion of the sample, each student was interviewed to ensure understanding was reasonably consistently across pilot respondents. Some minor concerns were addressed by rewording frames with the assistance of the three testers. All responses from this pilot were discarded and they were asked not to take part in the actual survey.

The second pilot involved launching the survey on Facebook. After the first response was received, the initial data were tested to ensure they would meet the analytical requirements. This second pilot stage uncovered an error in the factorial question setup. This was resolved and the survey redeployed with the unusable results being discarded. After this pilot, the surveys were deployed via email and Interact Direct for full data collection.

A copy of the Survey Monkey survey is presented as Appendix 1.

4.7 Analysis

4.7.1 Data preparation

The data were initially manipulated by removing non qualifying-responses. Nine responses were removed due to incomes being stated as being lower than ZAR 10,000. One additional response was removed as the location indicated was from outside South Africa.

The factorial questions were then used to populate two additional fields. The first was used to indicate if the frame was used or not. The conditions without the additional paragraph discussed in condition two were coded for no frame, and the three presented with the paragraph described in condition two as with frame. The second additional field

was used to indicate if the question put forward was aimed at analysis of the effect of the frame on family, domestic worker or community.

4.7.2 Level of significance

The level of significance level for this research project was set at a *p-value* of 0.05 and below. This was based on prior work using dictator games for similar experiments (Edele et al., 2013). Several other papers did not specifically mention the *p-value* they were using to establish significance (Brañas-Garza, 2007; Franzen & Pointner, 2012; Tan & Forgas, 2010), but seemed to apply the a significance at the *p-value* of 0.05. This is also in line with the typical value used for standard experimentation (Hair, Black, Babin, & Anderson, 2010, p. 193). All significant *p* values displayed in chapter five will be signified with a * next to the value.

4.7.3 Review of results

SPSS version 21 was used to conduct a review and conduct statistical analysis of the data collected. The initial data review was conducted using the cross tabulation function in SPSS to calculate a chi squared test. The chi squared test was used to establish if any significant variation between the expected and actual frequencies of responses was present (Hair et al., 2010, p. 587). All eight demographic questions listed in Appendix 1 were reviewed. The differences in a respondent's willingness to remit per demographic factor were investigated for significant variation from the expected responses. The factors were as follows; whether the household has insurance, whether the household has domestic help or supports other family members. In addition, gender, age, ethnic background and income were reviewed.

Significance was determined by the Pearsons Chi-squared test and was considered significant if the *p-value* was ≤ 0.05 . A willingness to remit was determined by coding all responses to the amount an individual was willing to remit: as one for an answer of nothing and as 2 for all other responses.

For Ethnic origin, the AMPS survey (2011), carried out by the South African Audience Research Foundation, was used to compare the insured population of South Africa against the experimental responses for ethnic origin. This was used to reveal differences in the responses received compared to the total population as a whole.

4.7.4 Research question one: presence of willingness to remit

This section looks at the method to investigate research question one and its hypothesis. Research question one was reviewed by simply comparing the number of respondents that were willing to remit something versus those that were not. Willingness to remit was measured by all responses that would pay any extra amount whereas unwillingness to remit was determined by a zero amount response.

Willingness to remit is a dichotomous variable, in that a respondent is either willing to remit or not willing to remit. A binomial test procedure was used to compare the observed frequencies of those willing to remit any amount greater than zero against those who were not willing to donate any money. If this result was random, like a coin toss, the distributions of frequencies are expected to fall under a binomial distribution as 50/50. Tong & Piotrowski (2010) used the same test to analyse return migrants versus non-return migrants. The results were analysed using SPSS to conduct the binomial test as the data were assumed to be a random sample, with the probability parameter set at 0.5.

For the sub-set of hypotheses (H1.1, H1.2 and H1.3), the same procedure was utilised, with just the data received relating to each individual condition. So the willingness to remit versus those not willing to remit was examined looking at only responses for family, the only responses for domestic worker's and finally only responses for community.

4.7.5 Research question two: effect of increasing social distance

This section looks at the method to investigate research question two and its hypothesis. Research question two examined the difference in willingness to remit as social distance increased. The three hypotheses (H2, H3, and H4) proposed an increase in the mean willingness to remit as social distance reduces.

These three hypotheses (H2, H3, and H4) were simultaneously tested using a one-way analysis of variance (ANOVA). An ANOVA is used to determine whether there is a significant difference between two or more independent samples (Weiers, 2011). The ANOVA was conducted using SPSS version 21. A one-way ANOVA (univariate analysis) was conducted using the condition as the factor and the response to the proposal as the dependent variable.

The three conditions were family, domestic worker and community. The social distance increases with each category. The questionnaire per

Table 2: Willingness to remit was used. Responses were coded as follows, ZAR zero = 1, ZAR20 = 2, ZAR 50 = 3, ZAR 100 = 4 and greater than ZAR 100 = 5. All responses per condition were then averaged and the means compared by the ANOVA.

The same test was then repeated to analyse the results of the data excluding those respondents who were unwilling to remit anything to further unpack the effect of social distance.

Finally, the binomial test used in 4.7.4 was again used with the expected proportion of those willing to remit set to the same proportion as the proportion of people not willing to remit to a family member at 17.6%, see Table 16: Descriptive results of willingness to remit per condition presented for the proportion calculations.

4.7.6 Research question three: using a frame to reduce social distance

This section looks at the method to investigate research question three and its hypothesis. Having used question one and two to firstly confirm the theorised desire to remit and further confirm the existence of differences in remittance due to social distance, Research question three now examines the effect of a social frame on the amount remitted down the economic pyramid. SPSS was again used to perform the statistical analysis/tests. An univariate ANOVA was again used.

4.7.7 Limitations

Some identified limitations with the methodology are as follows.

The sampling technique was a non-probability sample; conclusions cannot be drawn about the total population. Therefore, conclusions about the entire population cannot be statistically inferred from the results but just for the sample population (Saunders & Lewis, 2012 p. 139).

Another limitation was the difficulty in using a quota sample technique up front to determine motivators. This increased the sample size required to ensure sufficient

responses for the three categories and limited the value of additional response questions as breaking the results down further resulted in sample sizes too small to infer significant results.

The sampling method used was the internet and a market research company. The internet limited the population sampled as only individuals with internet connectivity and the inclination to use it will be exposed to the survey.

Chapter 5 : Results

Chapter five is a presentation of the results achieved using the methodology from chapter four. The data was downloaded from the Survey Monkey website in SPSS format. The discussion will go through the data cleansing, a review of the sample and then an in depth analysis of the hypothesis proposed in chapter three.

5.1 Data cleansing and review

As the results were outputted in a SPSS file, the data was clean and minimal clean-up was required. Three fields were added to the raw output. This first field was to denote the presence or absence of the lens. The second field was to denote the condition as family, domestic worker or community. These were derived from the factorial condition presented to the respondent. The third addition was a field to indicate a willingness or unwillingness to remit. The unwillingness was identified by selecting a zero response to the factorial question while all other responses indicated willingness.

The final survey received responses from 398 individuals. After removing those that did not meet the minimum criteria of ZAR 10,000 per month household income or not residing in South Africa, 389 were used in the analysis. The ZAR 10,000 level was used as this was close to the average income in South Africa according to the last census (Statistics South Africa, 2012a). An ability to remit is needed and to avoid negative responses due to inability rather than unwillingness, the average income was selected as the threshold. Of the 389 remaining, all answered the first question regarding how much they would be willing to remit. 359 responses or 92.3% had all questions to which they were exposed answered.

Non response bias was a concern for the experiment. People unwilling to remit would read the question and stop answering the questions. For this reason, the factorial question appeared first and limited information on what the experiment was trying to investigate was provided. Despite these attempts to control for it, response bias would have been present and this is discussed in detail in section 7.4 Limitations.

Once additional factors had been created and the responses that did not meet the criteria were removed, the data was analysed following the methods discussed in chapter four.

5.2 Data demographics

A review of the data revealed the following information about the responses. Cross tabulations were run in SPSS and used to determine if any of the demographic information collected was a cause for concern. Table 3: Case processing summary by demographic shows the completion rates for each demographic factor.

Table 3: Case processing summary by demographic

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Does your household financially support family members not living with you? * Factorial	366	94.1%	23	5.9%	389	100.0%
Does your household buy insurance? * Factorial	366	94.1%	23	5.9%	389	100.0%
What is your gender? * Factorial	366	94.1%	23	5.9%	389	100.0%
Which category below includes your age? * Factorial	366	94.1%	23	5.9%	389	100.0%
What is your ethnic Background * Factorial	366	94.1%	23	5.9%	389	100.0%
What is your approximate average monthly household income? * Factorial	359	92.3%	30	7.7%	389	100.0%
What is the highest level of school you have completed or the highest degree you have received? * Factorial	366	94.1%	23	5.9%	389	100.0%
Where do you live? * Factorial	366	94.1%	23	5.9%	389	100.0%
Domestic worker YN * Factorial	366	94.1%	23	5.9%	389	100.0%

All the demographic information, except household income, had a 94.1 percent completion rate. House hold income was slightly lower at 92.3 percent. The 94.1 percent was 23 of the 366 final responses, so completion rates were high. This completion rate was from a response rate of approximately five percent. Interact Direct sent 2000 emails per day for four days to achieve the 366 final responses. The expected response rate in the literature is anything from 2.2 percent (Sinclair, O'Toole, Malawaraarachchi, & Leder, 2012) to 52.4 percent (Medway & Fulton, 2012). The five percent was in line with predictions from Interact direct regarding the number of emails required to achieve the required responses.

Table's four to twelve below show the response count for each demographic category. The following discusses tables eight; nine and 11 as the frequency of responses were not in line with known frequencies in the South African population.

The 88 percent of responses were from individuals who indicated their ethnic background as white (Table 8: Ethnic background). This is inconsistent with the general South African population where the white population only accounts for 8.9 percent of the South African population (Statistics South Africa, 2012a). A comparison with the AMPS (*Audience Research Foundation [Data file]*, 2011) information indicated that, of the insured population of South Africa, 69 percent is white. A comparison of the two data sets can be seen in Table 13: AMPS (DATE) vs. experiment insured ethnic origin where the actual and expected counts are shown. The AMPS (2011) data gives results much closer to the recipients population than the general population as shown by the census (Statistics South Africa, 2012a). All other ethnic groups were under represented in the data, with the black population only at 4.8 percent instead of the expected 15.1% according to AMPS (2011)

Table 9: Household income also shows 49 percent of responses come from high income earners (greater than R50,000 per month) when compared to the average of R10,000 (Statistics South Africa, 2012b).

Table 11: Area of residence indicated cause for concern as the results indicated 68 percent of response were from Gauteng while only 23 percent of the population resides on Gauteng (Statistics South Africa, 2012a).

Table 4: Support of extended family

		Total
Does your household financially support family members not living with you?	Yes	197
	No	169
Total		366

Table 5: Insurance purchase

		Total
Does your household buy insurance?	Yes	332
	No	34
Total		366

Table 6: Gender

		Total
What is your gender?	Female	125
	Male	241
Total		366

Table 7: Age

		Total
Which category below includes your age?	20-24	3
	25-29	17
	30-39	66
	40-49	91
	50-59	106
	60 or older	83
Total		366

Table 8: Ethnic background

		Total
What is your ethnic Background	Black	19
	White	320
	Coloured	12
	Indian	14
	Other	1
Total		366

Table 9: Household income

		Total
What is your approximate average monthly household income?	R10,000-R20,000	25
	R20,001-R30,000	43
	R30,001-R40,000	51
	R40,001-R50,000	63
	Greater than R50,000	177
Total		359

Table 10: Education level

		Total
What is the highest level of school you have completed or the highest degree you have received?	Less than matric	5
	Matric	49
	Diploma	85
	Degree	93
	Honours	63
	Masters	59
	PHD	12
Total		366

Table 11: Area of residence

		Total
Where do you live?	Other (please specify)	1
	Eastern Cape	7
	Free State	5
	Gauteng	250
	KwaZulu-Natal	28
	Limpopo	2
	Mpumalanga	7
	North West	2
	Northern Cape	1
Western Cape	63	
Total		366

Table 12: Domestic employed

		Total
Domestic worker YN	Yes	333
	No	33
Total		366

Table 13: AMPS (DATE) vs. experiment insured ethnic origin

		POPULATION GROUP.				Total	
		White	Black	Coloured	Indian		
Source	AMPS	Count	1647	360	195	177	2379
	Expected Count	1701.5	331.7	179.9	165.9	2379.0	
	% within Source	69.2%	15.1%	8.2%	7.4%	100.0%	
	% within POPULATION GROUP.	84.9%	95.2%	95.1%	93.7%	87.8%	
	% of Total	60.8%	13.3%	7.2%	6.5%	87.8%	
	Std. Residual	-1.3	1.6	1.1	.9		
	EXPERIMENT	Count	292	18	10	12	332
	Expected Count	237.5	46.3	25.1	23.1	332.0	
	% within Source	88.0%	5.4%	3.0%	3.6%	100.0%	
	% within POPULATION GROUP.	15.1%	4.8%	4.9%	6.3%	12.2%	
	% of Total	10.8%	0.7%	0.4%	0.4%	12.2%	
	Std. Residual	3.5	-4.2	-3.0	-2.3		
Total	Count	1939	378	205	189	2711	
	Expected Count	1939.0	378.0	205.0	189.0	2711.0	
	% within Source	71.5%	13.9%	7.6%	7.0%	100.0%	
	% within POPULATION GROUP.	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	71.5%	13.9%	7.6%	7.0%	100.0%	

5.3 Research question one a: willingness to remit

Table 14: Count of willingness to remit shows that of the remaining 389 responses, 21.34% were not willing to donate some of their personal resources to help. The remaining 78.66% were willing to donate something. A stronger indication of this is that 61.44% of respondents were willing to donate R50 or more representing at least 10% of the total premium indicated in the question.

This result will be discussed further in section 7.4 Limitations, to address concerns over response bias towards individuals willing to assist.

Table 14: Count of willingness to remit

Willingness to remit	Number of responses	Percentage of total
R0	83	21.34%
R20	67	17.22%
R50	143	36.76%
R100	73	18.77%
More than R100	23	5.91%
Total	389	

The willingness to remit was further analysed using a binomial test. A binomial distribution relies on what is known as a Bernoulli process. This test only works where there are only two possible outcomes, in this case willing to or not willing to remit. There must also be multiple trials that are not dependent on prior trials finally the probability of success must be consistent (Weiers, 2011, p. 175). The binomial test was used to determine if a significant amount of respondents were willing to remit. The probability of success was set at 0.5 as this would indicate an even distribution between those willing to remit and those unwilling to remit.

The results of the binomial test are shown below in Table 15: Binomial test and support the initial observation that there is a significant difference in the number of people wanting to contribute something when compared to the expected 50/50 split that would indicate no difference. This is shown as the p is less than 0.000, less than the level of $p = 0.05$ set for the test. We are therefore able to reject null hypothesis (H_{1_0}), that there is not a significantly greater number of individuals further up the economic pyramid are willing to remit to those further down, in favour of hypothesis (H_{1_a}), that there is a significantly greater number of individuals further up the economic pyramid are willing to remit to those further down.

Table 15: Binomial test

	Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Willing to remit	Group 1	306	.79	.50	.000*
	Group 2	83	.21		
	Total	389	1.00		

5.4 Research question one b: willingness to remit per condition

Taking the analysis of willingness to remit one step further, the individual effects were reviewed for each of the conditions: family, domestic worker and community (Table 16: Descriptive results of willingness to remit per condition presented). We can see the proportion is similar for family (82.4%) and domestic worker (80.6%). Community is lower at 72.5% than the other two conditions.

Table 16: Descriptive results of willingness to remit per condition presented

		Condition Presented			Total
		Family	Domestic Worker	Community	
Willing to remit	Count	22	28	33	83
	Expected Count	26.7	30.7	25.6	83.0
	No % within Willing to remit	26.5%	33.7%	39.8%	100.0%
	% within Condition Presented	17.6%	19.4%	27.5%	21.3%
	% of Total	5.7%	7.2%	8.5%	21.3%
	Count	103	116	87	306
	Expected Count	98.3	113.3	94.4	306.0
	Yes % within Willing to remit	33.7%	37.9%	28.4%	100.0%
	% within Condition Presented	82.4%	80.6%	72.5%	78.7%
	% of Total	26.5%	29.8%	22.4%	78.7%
Total	Count	125	144	120	389
	Expected Count	125.0	144.0	120.0	389.0
	% within Willing to remit	32.1%	37.0%	30.8%	100.0%
	% within Condition Presented	100.0%	100.0%	100.0%	100.0%
	% of Total	32.1%	37.0%	30.8%	100.0%

A binomial test was also conducted for the subsets for all responses that were presented with the family, domestic worker or community condition as described in section 4.2. As these tests were conducted on a subset of the original tests data, the same reasoning and assumptions as stated in 5.3 were used to justify the test. Table 17: Binomial tests by condition shows the p value for each condition.

For H1.1, the p remains less than 0.000, less than the level of $p = 0.05$ set for the test. H1.1₀ that there is not a significantly greater number of individuals further up the economic pyramid are willing to remit to family further down, in favour of hypothesis (H1_a), that there is a significantly greater number of individuals further up the economic pyramid are willing to remit to family further down.

For H1.2, the p remains less than 0.000, less than the level of $p = 0.05$ set for the test. H1.2₀ that there is not a significantly greater number of individuals further up the economic pyramid are willing to remit to domestic workers further down, in favour of hypothesis (H1_a), that there is a significantly greater number of individuals further up the economic pyramid are willing to remit to domestic workers further down.

For H1.1, the p remains less than 0.000, less than the level of $p = 0.05$ set for the test. H1.1₀ that there is not a significantly greater number of individuals further up the economic pyramid are willing to remit to community schemes, in favour of hypothesis (H1_a), that there is a significantly greater number of individuals further up the economic pyramid are willing to remit to community schemes.

Table 17: Binomial tests by condition

Condition Presented			Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Family	Willing to remit	Group 1	Yes	103	.82	.50	.000*
		Group 2	No	22	.18		
		Total		125	1.00		
Domestic Worker	Willing to remit	Group 1	Yes	116	.81	.50	.000*
		Group 2	No	28	.19		
		Total		144	1.00		
Community	Willing to remit	Group 1	No	33	.28	.50	.000*
		Group 2	Yes	87	.73		
		Total		120	1.00		

5.5 Research question two: effect of increasing social distance

5.5.1 Entire sample

Research question two examined whether increasing social distance significantly decreases the amount of remittance an individual was willing to remit down the pyramid. This was done by comparing the difference(s) between the means of the different conditions representing increasing social distance. Social distance is defined by Hoffman, McCabe, & Smith (1996) as "the degree of reciprocity that subjects believe exists within a social interaction" (p. 654) and so is effected by perceived degree of remoteness between a remitter and a receiver. To test social distance the three conditions were presented between familiar and established relationships where the degree of reciprocity would normally gradually decrease from one condition to the next. These relationships were that between family member, a domestic worker and a community. Means were calculated from the responses to the presented question one in the survey (Appendix 1). For the condition of family, the sample size was 125 with a mean of 3.128 and a standard deviation of 1.28. For domestic workers the sample size was 144 with a mean of 2.7014 and a standard deviation of 1.06. Finally, for community, there was a sample size of 120 with a mean of 2.2750 and a standard deviation of 1.00.

An ANOVA was used to further analyse the data. A univariate or one-way analysis of variance examines two or more independent samples to determine if the population means are equal. The factors of the experiment need to be randomly assigned to the respondent (Weiers, 2011, p. 416). The assumptions for a univariate ANOVA require the dependent variable to be normally distributed, with independent groups in the response to regarding the dependent variable. Variances must also be equal for all treatment groups (Hair et al., 2010, p. 364). The experiment was designed with the ANOVA in mind and so participants were randomly assigned a group and responses were independent from other groups as only one condition was shown to each participant.

Table 18: ANOVA of family, domestic worker and community conditions shows the results of the ANOVA. The *p* value for family against domestic worker is 0.002 and the *p* value for family against community is less than 0.001. For domestic worker against

community the p value is 0.002. All results are less than the level of $p = 0.05$ set for the test.

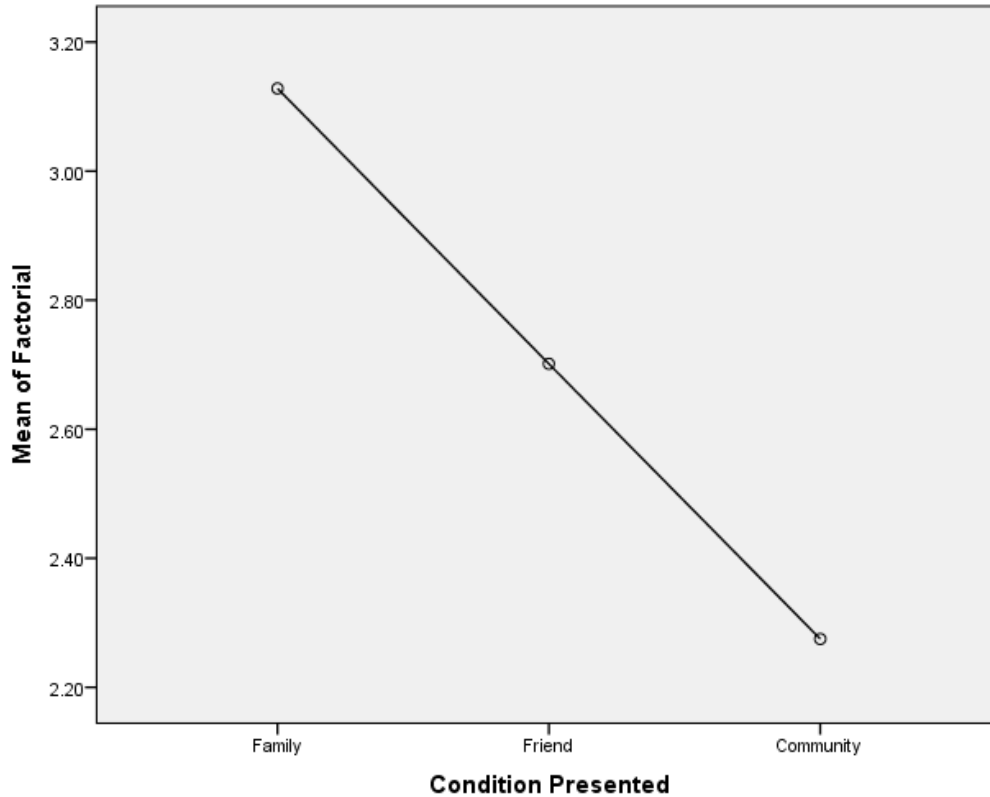
Table 18: ANOVA of family, domestic worker and community conditions

(I) Condition Presented	(J) Condition Presented	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Family	Domestic Worker	.42661*	.13718	.002*	.1569	.6963
	Community	.85300*	.14341	.000*	.5710	1.1350
Domestic Worker	Family	-.42661*	.13718	.002*	-.6963	-.1569
	Community	.42639*	.13870	.002*	.1537	.6991
Community Worker	Family	-.85300*	.14341	.000*	-1.1350	-.5710
	Domestic	-.42639*	.13870	.002*	-.6991	-.1537

*. The mean difference is significant at the 0.05 level.

Figure 3: Means per condition presented shows a graphical view of the means with family representing the smallest social distance, and community the greatest. A review of the direction of Figure 3 shows that increasing distance decreases the amount an individual would be willing to remit.

Figure 3: Means per condition presented



To review the above, hypothesis $H_{2_0} : \mu_1 = \text{ or } < \mu_2$ the null hypothesis is rejected in favour of hypothesis $H_{2_A} : \mu_1 > \mu_2$, we can therefore conclude that an individual will remit more to family than domestic worker's, which signifies that the closer the social distance, the greater likelihood of remittance.. This is because as seen in Table 18: ANOVA of family, domestic worker and community conditions, that the significance is 0.002 and therefore is significance at the ≤ 0.05 level. Also the mean difference is 0.42661, indicating that the amount an individual is willing to remit to family is greater than to a domestic employee.

$H_{3_0} : \mu_1 = \text{ or } < \mu_3$ the null hypothesis is rejected in favour of hypothesis $H_{3_A} : \mu_1 > \mu_3$, that an individual will remit more to family than a community. This is because we can see in Table 18: ANOVA of family, domestic worker and community conditions that the significance is less than 0.001 and is therefore significant at the 0.05 level. Also, the mean difference is 0.853 indicating that the amount an individual is willing to remit to family is greater than to community.

Finally $H_{4_0} : \mu_2 = \text{or} < \mu_3$ the null hypothesis is rejected in favour of alternate hypothesis $H_{4_A} : \mu_2 > \mu_3$, that an individual will remit more to domestic workers than a community. This is because as seen in Table 18: ANOVA of family, domestic worker and community conditions, $p = 0.002$ and is therefore significant at the $p = 0.05$ level. Also the mean difference is 0.42639 indicating that the amount an individual is willing to remit to a domestic worker is greater than to a community.

Using the results of hypothesis two, three and four, we can confirm that the amount an individual is willing to remit decreases as the social distance increases.

5.5.2 Sample excluding those not willing to remit

The second part of the analysis repeated the ANOVA described above, while excluding the responses that indicated an unwillingness to remit anything. This was to determine if the decrease was being affected by a decrease in the proportion of respondents willing to remit as social distance increases. This resulted from the observation in 5.4 Research question one b: willingness to remit per condition that indicated a declining proportion as social distance increased.

Table 19: ANOVA of conditions for those willing to remit shows the p value for family against domestic worker is less than 0.001 and the p value for family against community is less than 0.001. For domestic worker against community the p value is 0.002. Again all results are less than the level of $p = 0.05$ set for the test.

This confirms that even with the responses for those not willing to remit removed there is still a significant decrease in the amount a dictator is willing to remit as social distance increases. The decreasing trend can still be seen in Figure 4: Means per condition presented for those willing to remit.

Table 19: ANOVA of conditions for those willing to remit

(I) Condition Presented	(J) Condition Presented	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Family	Domestic	.4705 [*]	.10736	.000 [*]	.2592	.6817
	Worker					
	Community	.8239 [*]	.11547	.000 [*]	.5967	1.0511
Domestic	Family	-.4705 [*]	.10736	.000 [*]	-.6817	-.2592
	Worker					
Worker	Community	.3534 [*]	.11246	.002 [*]	.1321	.5748
	Family	-.8239 [*]	.11547	.000 [*]	-1.0511	-.5967
	Domestic					
Community	Domestic	-.3534 [*]	.11246	.002 [*]	-.5748	-.1321
	Worker					

Analysis of the proportion of people willing to remit versus those not willing to remit as social distance increases determined the following. For the family condition, 17.6% of respondents would not remit anything. This increases slightly to 19.4% for those given the domestic worker condition and then increases by a greater margin to 27.5% for community condition. The rationale behind this was to determine is the proportion of people willing to remit changed significantly as social distance increased. Again a binomial test was used to determine significance. However the expected frequency of non-remittance set to 17.6%, the same as the proportion unwilling to remit in the family condition. Table 20: Binomial test comparison against observed using family proportions shows the domestic workers proportions are not significantly different from the 17.6% found in the family condition as $p = 0.315$, which is greater than the level of $p = 0.05$ set for the test. A significant difference was shown between the 17.6% found in the family condition and the community scheme as $p = 0.005$ which is less than the level of $p = 0.05$ set for the test.

The effect on the mean remittance for each condition is shown in table Table 21: Summary of means which is a consolidation of Figure 3 and Figure 4. This indicated that although the drop in value between family and domestic mean decrease of 0.474) appears the same as between domestic and community (mean decrease of 0.4426), when unwillingness to remit is removed the gap in mean remittance between domestic works and community smaller (mean decrease 0.3535).

Figure 4: Means per condition presented for those willing to remit

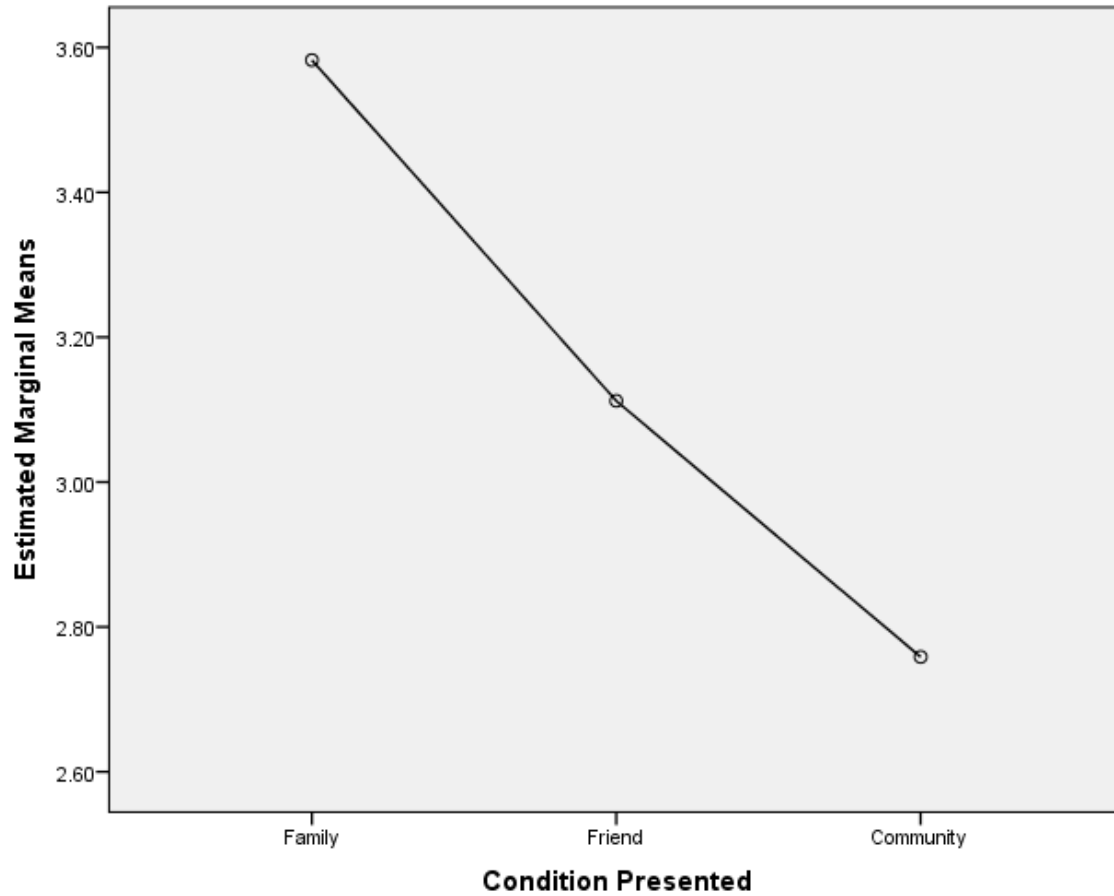


Table 20: Binomial test comparison against observed using family proportions

Condition Presented			Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-tailed)
Domestic Worker	Willing to remit	Group 1	No	28	.194444	.176000	.312
		Group 2	Yes	116	.805556		
		Total		144	1.000000		
Community	Willing to remit	Group 1	No	33	.275000	.176000	.005*
		Group 2	Yes	87	.725000		
		Total		120	1.000000		

Table 21: Summary of means

Condition Presented	Mean for total population	Mean for population excluding non-willing remitters
Family	3.1260	
Friend	2.6986	
Community	2.2560	

5.6 Research question three: using a “frame” to reduce social distance

5.6.1 Entire sample

The third research hypothesis investigated whether framing a request for remittance with information about the circumstances of the receiver reduces social distance and increases the amount remitted to a known individual or community scheme.

The frame was achieved with the addition of the following wording.

“Levels of poverty are extremely high in South Africa. Those of us fortunate enough to have the security of an insurance policy are in the minority. A small amount from you can assist in dramatically improving the security and living conditions of other family / friends or our communities”.

The aim was to provide information around the levels of poverty in South Africa in general and then to specifically point the benefit to the relevant condition, for example family, presented. The non-framed version did not include the above paragraph.

The 389 responses tested in this question were split 170 responses with no frame and 219 with the frame. The mean response for willingness to remit with no frame was 2.9118 with a standard deviation of 1.16. In contrast, the mean of those responding with the frame was 2.5479 with a standard deviation of 1.15. This shows a decrease in the willingness to remit with the frame, see Figure 5: Estimated marginal means .

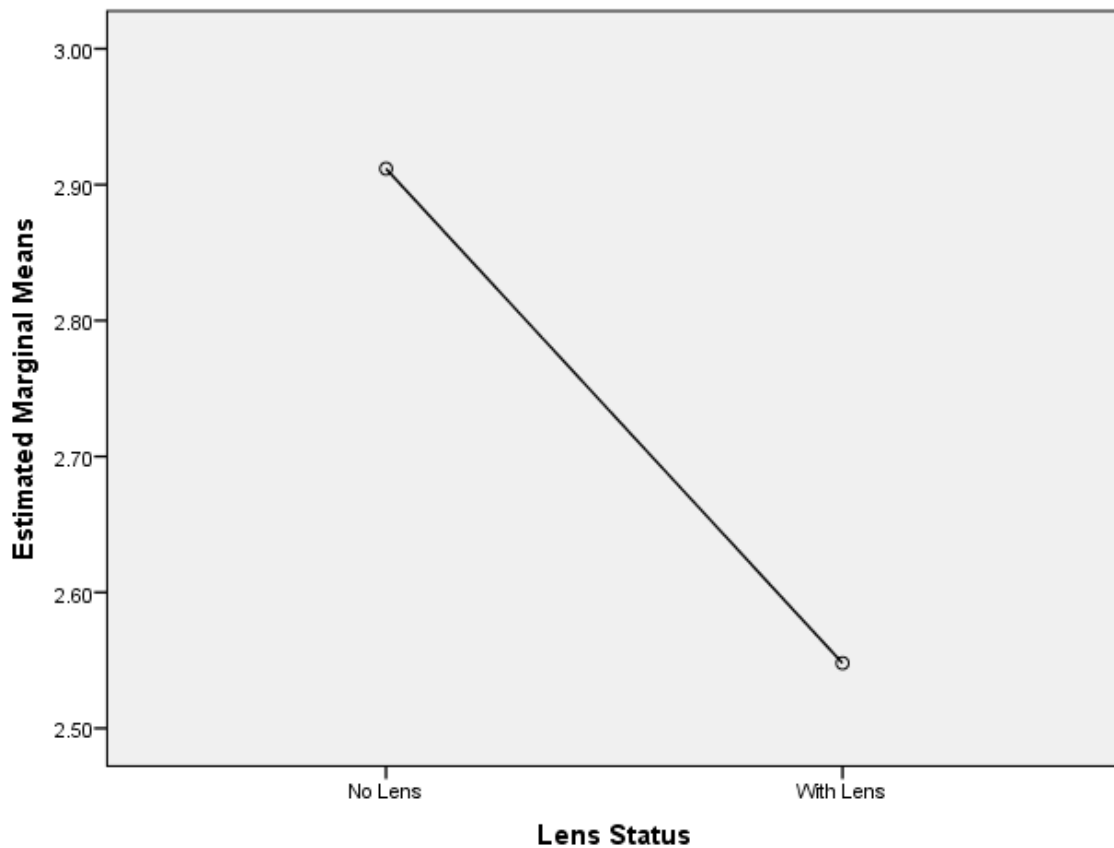
As the analysis now looked at the frames conditions, the data set was the same as for the social distance conditions, only now split depending on the presence or absence of the frame. Again to review the differences in the independent samples, a univariate ANOVA was used as all conditions described in section 5.5 remained valid.

Table 22: Univariate tests on frame shows the univariate output for all responses with and without a frame. The result is not significant, as a one tailed test and the effect is in the wrong direction as can be seen in Figure 5: Estimated marginal means by frame status.

Table 22: Univariate tests on frame

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^a
Contrast	12.668	1	12.668	9.466	.002*	.024	9.466	.866
Error	517.923	387	1.338					

Figure 5: Estimated marginal means by frame status



To establish the impact on the lens on individual conditions, the univariate ANOVA was again run on the frames versus unframed results for each individual set of results for family, domestic worker and community. Figure 6: Estimated marginal means by frame status for each condition shows the results of the ANOVA per social distance condition and indicates that most of the negative variance is being generated by the family condition. Table 23: Univariate tests on frames by condition shows the SPSS output of the univariate analysis looking at the effect of the fame on each condition. This output confirmed the earlier observation from Figure 6: Estimated marginal means by frame status for each condition; that there is no significant effect from the fame for domestic workers or community as the p values are both greater than 0.05. The p value for family is less than 0.05 but it is still in the wrong direction and therefore not significant.

Figure 6: Estimated marginal means by frame status for each condition

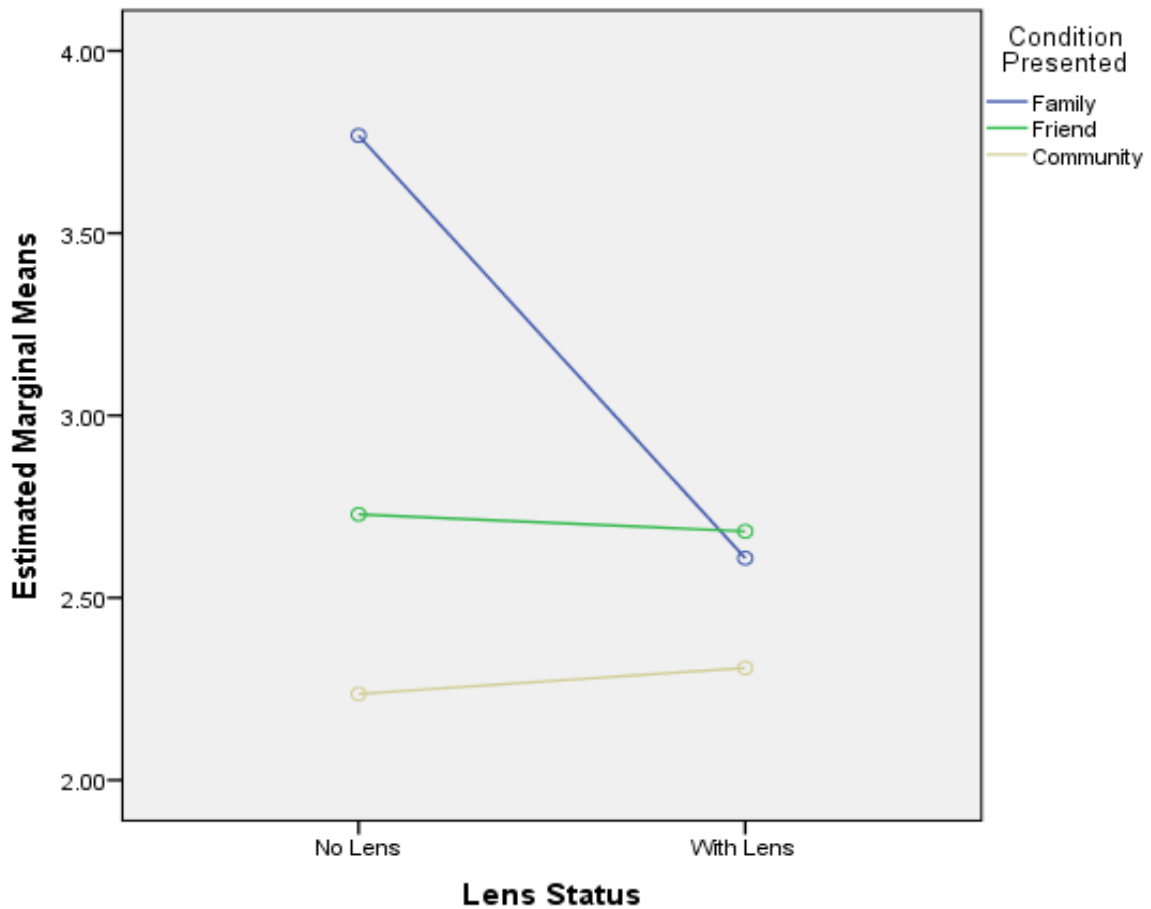


Table 23: Univariate tests on frames by condition

Condition Presented		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^a
Family	Contrast	41.535	1	41.535	31.455	.000*	.204	31.455	1.000
	Error	162.417	123	1.320					
Domestic Worker	Contrast	.075	1	.075	.066	.798	.000	.066	.057
	Error	162.085	142	1.141					
Community	Contrast	.152	1	.152	.149	.700	.001	.149	.067
	Error	119.773	118	1.015					

The F tests the effect of Lens Status. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Computed using alpha = .05

To review the above, the results fail to reject the null hypothesis $H5_0 : \mu_{5L} = \text{or} < \mu_{5NL}$ as even though the p value is less than 0.05, the direction is not in line with the alternate hypothesis. Therefore framing does not increase the amount remitted to family.

The results also fail to reject the null hypothesis $H6_0 : \mu_{6L} = \text{or} < \mu_{6NL}$ as p value is greater than 0.05; therefore, framing does not increase the amount remitted to known individuals.

Finally, the results also fail to reject the null hypothesis $H7_0 : \mu_{7L} = \text{or} < \mu_{7NL}$ as p value is greater than 0.05; therefore, framing does not increase the amount remitted to a community scheme.

5.6.2 Sample excluding those not willing to remit

The analysis was again repeated in the same manner as section 5.5.2 Sample excluding those not willing to remit, where the results above were rerun excluding the results for those unwilling to remit. Table 19: ANOVA of conditions for those willing to remit and Figure 7: Estimated marginal means by lens status for each condition (willing to remit only) show the results for this analysis. The removal of those not willing to remit anything did not alter the result provided above with the family condition still acting in the wrong direction. The variance for the lens effect on the domestic worker condition as $p = 0.358$, which is greater than the level of $p = 0.05$ set for the test. The variance for the lens effect on the community condition as $p = 0.085$, which is greater than the level of $p = 0.05$ set for the test.

Table 24: Univariate tests on lens by condition (willing to remit only)

Willing to remit	Condition Presented	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^b
Yes	Family	Corrected Model	12.770 ^c	1	12.770	18.353	.000	18.353	.989
		Intercept	1313.275	1	1313.275	1887.370	.000	1887.370	1.000
		Lens	12.770	1	12.770	18.353	.000	18.353	.989
		Error	70.278	101	.696				
		Total	1405.000	103					
		Corrected Total	83.049	102					
	Friend	Corrected Model	.456 ^d	1	.456	.852	.358	.852	.150
		Intercept	1095.905	1	1095.905	2045.178	.000	2045.178	1.000
		Lens	.456	1	.456	.852	.358	.852	.150
		Error	61.087	114	.536				
		Total	1185.000	116					
		Corrected Total	61.543	115					
		Corrected Model	1.582 ^e	1	1.582	3.032	.085	3.032	.406
		Intercept	659.053	1	659.053	1263.146	.000	1263.146	1.000
Community	Lens	1.582	1	1.582	3.032	.085	3.032	.406	
	Error	44.349	85	.522					
	Total	708.000	87						
	Corrected Total	45.931	86						

a. R Squared = . (Adjusted R Squared = .)

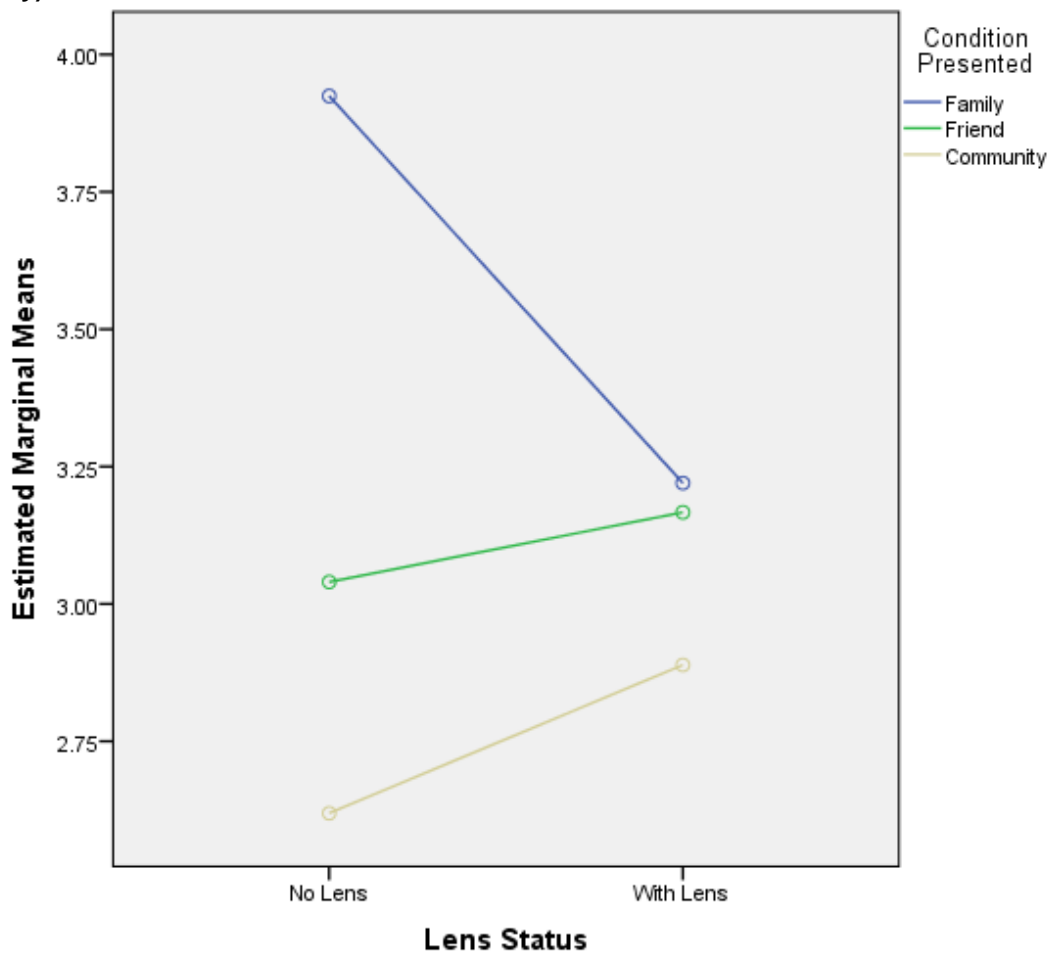
b. Computed using alpha = .05

c. R Squared = .154 (Adjusted R Squared = .145)

d. R Squared = .007 (Adjusted R Squared = -.001)

e. R Squared = .034 (Adjusted R Squared = .023)

Figure 7: Estimated marginal means by lens status for each condition (willing to remit only)



Even though the results of the lens are not significant, a review of Figure 6: Estimated marginal means by frame status for each condition and Figure 7: Estimated marginal means by lens status for each condition (willing to remit only) indicate a disordinal interaction and the lens effects the family condition negatively and does not affect the domestic worker and community scheme. Hair et al (2010, p. 377) states that this section of the study should be redesigned as the main effect varies across treatment and direction.

5.7 Results summary

Table 25: Summary of hypothesis results shows a summary of the results for each hypothesis presented in chapter three in light of the results interpreted/analysed using the methods described in chapter four and the results from these methods as per the information presented earlier in chapter five.

Table 25: Summary of hypothesis results

Research hypothesis	Hypothesis	Description	Result
1: Willingness to remit	H ₁	Willingness to remit	H1 ₀ was rejected
	H _{1.1}	Willingness to remit to family	H1.1 ₀ was rejected
	H _{1.2}	Willingness to remit to domestic worker	H1.2 ₀ was rejected
	H _{1.3}	Willingness to remit to a community disaster scheme	H1.3 ₀ was rejected
2: Social distance	H ₂	Family > domestic worker	H2 ₀ was rejected
	H ₃	Family > Community	H3 ₀ was rejected
	H ₄	domestic worker > Community	H4 ₀ was rejected
3: Effect of a Frame	H ₅	Frame > flow to family	Failed to reject H5 ₀
	H ₆	Frame > flow to domestic worker	Failed to reject H6 ₀
	H ₇	Frame > flow to community	Failed to reject H7 ₀

Chapter 6 : Discussion of results

Chapter 6 presents a discussion of the results from Chapter 5; it answers the research questions proposed in Chapter 3 using the literature review in Chapter 2 to provide context and assist in the interpretation of the results.

6.1 The Sample

6.1.1 Response rate

Medway and Fulton (2012) conducted a meta-analysis of response rates for web surveys and determined the average response rate for web based surveys to be 16.6 percent. The range of web based response rates identified in literature from the last two years was anything from 2.2 percent (Sinclair et al., 2012) to 52.4 percent (Medway & Fulton, 2012). The five percent achieved in this study was on the low side of the range, but was in line with indications from Interact Direct regarding the number of emails needed to achieve the required number of responses based on the company's prior experience.

6.1.2 Sample demographics

Section 5.2 identified several potential concerns with the sample population. The first one was that 88 percent of the sample identified themselves as white. Initially this looks to be totally unrepresentative of the South African population as the white South African demographic only accounts for 8.9 percent of the total South African population (Statistics South Africa, 2012a). A deeper analysis using the AMPS data (*Audience Research Foundation [Data file]*, 2011) however indicated that of the insured population of South Africa, 69 percent is white. When you consider that the aim is to get the current insured population to assist the uninsured population. The sample population still provides useful results, as the majority of insured households are still white. Future studies should target responses from other ethnic groups or ensure a more representative sample to allow any difference to be identified.

The household income was also much higher than expected, with 49 percent of responses coming from high income earners (greater than R50,000 per month) when compared to the average of R10,000 (Statistics South Africa, 2012b). As responses were only taken above the R10,000 level, a higher than average response is expected;

however more middle income responses would have given more depth to the study to determine if the willingness to remit linked to disposable income.

Finally the majority of responses (69 percent) were from Gauteng Province, while only 23 percent of the national population resides in Gauteng (Statistics South Africa, 2012a). Again, this limits the ability of the study to validly claim it encompassed the entire South African population, but allows a result for Gauteng to be identified.

6.2 Research question one: willingness to remit

Research question one set out to determine if there was a desire to remit to those further down the economic pyramid. Discussions with ordinary people in South Africa indicated that there was a potential willingness to help others, but short of giving money, people do not generally know how to help. The main issue with this supposition was it was based on general personal discussions and comments as identified in chapter one and not hard facts or systematic surveys.

To overcome this limitation, it was proposed in chapter one that this willingness, hinted at in personal discussions, should be investigated formally to determine if the stated desire was purely hypothetical, biased by perceived social pressures, or only present in a small group of like-minded individuals. The first research hypothesis was therefore aimed at determining if this willingness was present in a broader section of society than the anecdotal conversations held by the author.

The question was then taken a step further to determine if this willingness was restricted to occurring between individuals across a small social distance, or if the willingness to remit extended further, for example beyond close family.

6.2.1 Hypothesis one discussion

The literature review in chapter two established a body of evidence showing a willingness to remit to family members for reasons ranging from migrants trying to ensure protection of inheritance (Lucas & Stark, 1985) to internal arrangements in families to provide informal insurance in case of poor crop yields (Carling, 2008). The theory is built on remittance within international or internal migrant families as a mechanism to spread risk or increase income when insufficient amounts can be earned in the local area. Using this theory, it was hypothesised in chapter three that the desire

to remit down the economic pyramid is actually present in the South African population, provided a suitable mechanism could be identified.

The experiment provided a hypothetical insurance product to ensure the remitter had greater control over additional fund utilisation. The question was answered by simplifying the responses received from respondents aimed at answering research hypotheses two and three down to a yes or no answer regarding being willing to remit. A response of zero on the survey question regarding the addition of an extra cost to the insurance product indicated an unwillingness to remit, while any other response was seen as a positive response. This was after screening designed to ensure financial limitations were not a major factor in the respondent's decision-making.

The results showed that 78.7% of the sample population were willing to remit. These results are shown in section Research question one a: willingness to remit. This was put through a binomial test to verify if this variance was significant. The results of the binomial test are presented in Table 15: Binomial test and indicate a significant desire to remit within the sample population. The null hypothesis, that there are not a significantly greater number of individuals further up the economic pyramid who are willing to remit to those further down, was rejected with a significance p value of 0.05 or less.

Question 1 was then expanded to determine if the willingness to remit remained significant with increasing social distance. Again, a simple review of the data, shown in Table 16, revealed that 82.4% would remit to family, 80.6% to domestic workers and 72.5% to community schemes. In all three cases, the null hypothesis, that there is not a significantly greater number of individuals further up the economic pyramid who are willing to remit to family, domestic workers or community disaster schemes, was rejected with p value of 0.05 or less. This indicates that the willingness to remit exists in the sample population beyond the remitter's immediate family.

This research has added to the theory by investigating whether the reported willingness to remit found in migrant communities can extend to non-migrant communities and stretches beyond ties with kin. However, it was established that as social distance increases the strength of the willing to remit does decrease. This result supports the

findings of the literature (Bohnet & Frey, 1999; Hoffman et al., 1996) regarding decreasing remittance as social distance increases in dictator games.

However, despite this decrease, social ties do exist across race and class, indicating that there is a willingness to help those less fortunate. It is likely that the cause of this willingness varies from remitter to remitter across the full range proposed by Lucas and Stark (1985) ranging from pure altruism where people want to help “just because”; through enlightened self-interest, where helping those less fortunate provides them with some benefit, perhaps in terms of Rutherford’s (2010) warm glow; or even pure self-interest where helping those at the bottom of the pyramid is just a means to ensure stability and protect the remitter’s person and assets.

Finally, the finding that over 70% indicated willingness to remit in some manner, despite social distance, is in line with the results of several dictator game experiments; such studies have shown that people are prepared to help others, despite what standard economic theory predicts. The results seem to agree with Brañas-Garza (2006); if additional information or motivation are provided to a remitter / dictator then their perception is changed, moving the Nash solution towards an more egalitarian solution.

6.2.2 Conclusion for willingness to remit

The main finding for research hypothesis one was that there was a significant willingness to remit in the sampled population and that, as in Carling’s (2008) conclusion, the fact that remittance happens is more important than identifying the factor or factors ultimately motivating the remittance. In addition, this willingness to remit was significant for all three conditions presented to the sample population. It must, however, be noted that willingness did decrease with increasing social distance. The gap in willingness between family and domestic worker was relatively small. However, the decrease for a community scheme was greater, showing, perhaps unsurprisingly, that more people are less willing to help those whom they do not know than those whom they do. This shows a remitter’s need to identify personally with a known “human face” on to an issue, rather than a mass of unknown individuals, particularly where the intended outcome of the remittance is uncertain. This speaks to the importance of familiarity with the receiver and indicates that circumstances such as greater confidence relating to the

ultimate usage of the funds and frequent inter-personal interactions result in greater willingness to remit.

6.3 Research question two: Effect of increasing social distance

Research hypothesis two was aimed at establishing the effect of increasing social distance on the amount of remittance a remitter would send to another further down the economic pyramid. In order for the issues evident in South Africa, described in chapter one to be addressed, remittance flow must come from and flow to a much wider group than just family members.

The aim of this section of the research was to complement research hypothesis one, by examining the difference in the amount a remitter is willing to give as social distance increases.

6.3.1 Research question two: discussion

The hypotheses for research hypothesis two were set up to test for the expected result: that as social distance increases, the amount a remitter is willing to donate decreases, by determining if this in fact occurs and establishing a link between social and economic distance. This was done through testing hypotheses H2, H3 and H4, which stated that greater amounts of remittance would be respectively given to family, then to domestic workers and the least amount to community schemes. The null hypothesis for each was that the amount donated was the same or more for increasing social distance. The data revealed a significant difference between the family conditions and the domestic worker case, as well as between family and community schemes. The final test between domestic worker and community scheme also revealed a significant decrease, see Table 18: ANOVA of family, domestic worker and community conditions. This would suggest an attempt to use remittance flow for broad-based project, like the community based insurance scheme, would be difficult and more focused initiatives would be more successful.

The finding, that increasing social distance decreased the amount the dictator was willing to remit, was consistent with the existing literature that demonstrates smaller social distance leads to increased remittance to the receiver (Burnham, 2003; Charness & Gneezy, 2008; Hoffman et al., 1996). Association types which have been shown to

produce an effect include family or kin, domestic workers, strangers and even enemies (Ben-Ner & Kramer, 2011). The experiment supported these findings, as dictators remitted the greatest amount to family, then to the domestic worker who is a collaborator and the least amount to strangers, represented in this study by a hypothetical community scheme noted to support disaster relief; see Figure 3: Means per condition presented.

Further investigation shows that as familiarity decreases and the social distance correspondingly increases, the amount a dictator was willing to remit decreased. This relationship is shown clearly in Figure 3: Means per condition presented. The result of this is that the null hypotheses H_{2_0} , H_{3_0} and H_{4_0} can be rejected in favour of hypotheses H_{2_A} , H_{3_A} and H_{4_A} . Again, this finding supports the findings of prior studies (Ben-Ner & Kramer, 2011; Bohnet & Frey, 1999; Brañas-Garza, 2006; Gilchrist & Kyprianou, 2011).

The decrease in the willingness to remit was a similar between the notional willingness to remit between family and domestic worker (0.427 decrease in the mean) and the between domestic worker and community (0.426 decrease in the mean). This analysis was conducted on the entire population for each condition regardless of the frame presented. This was to determine an overall trend for social distance for the sampled population. Work by Paskov and Dewilde (2012) revealed that as inequality rises, the growing social, mental and physical distances between a remitter and receiver grows. Therefore, in countries with increasing Gini coefficients, the increased inequality is also a signal of increased distance which could potentially hinder attempts at designing products to bridge the two worlds. This reduces the remitter's ability to identify the indirect benefits to themselves resulting from helping others. This fits into the model presented in Figure 1 and can be applied to either the pure self-interest or enlightened self-interest categories described by Carling (2008). The results clearly show this decreasing willingness to help, correlated with increasing social distance.

The literature also discusses reciprocal altruism being effected in such a way that the greater the social distance between the donor and the receiver, the lower the value of the transfer, with the opposite also being true (Osiński, 2009). The experimental findings support this and so indicate a potential motivating factor is an anticipated reciprocation in some form as a result of remitting additional funds.

Linking this section 6.2, the proportion of people willing to donate decreases as social distance increases. This means that the amount being remitted appears to decrease more than it should for those still willing to remit. While this makes no difference to the total amount being remitted, it does affect estimates of how much an individual is actually remitting. Looking at the marginal means shown in Table 21: Summary of means, we can see that the mean for domestic workers moves from 2.6986 to 3.1121 and the mean for community scheme moves from 2.256 to 2.7586. So the actual amount a remitter will give to a domestic worker and a community scheme is more similar than initially assumed.

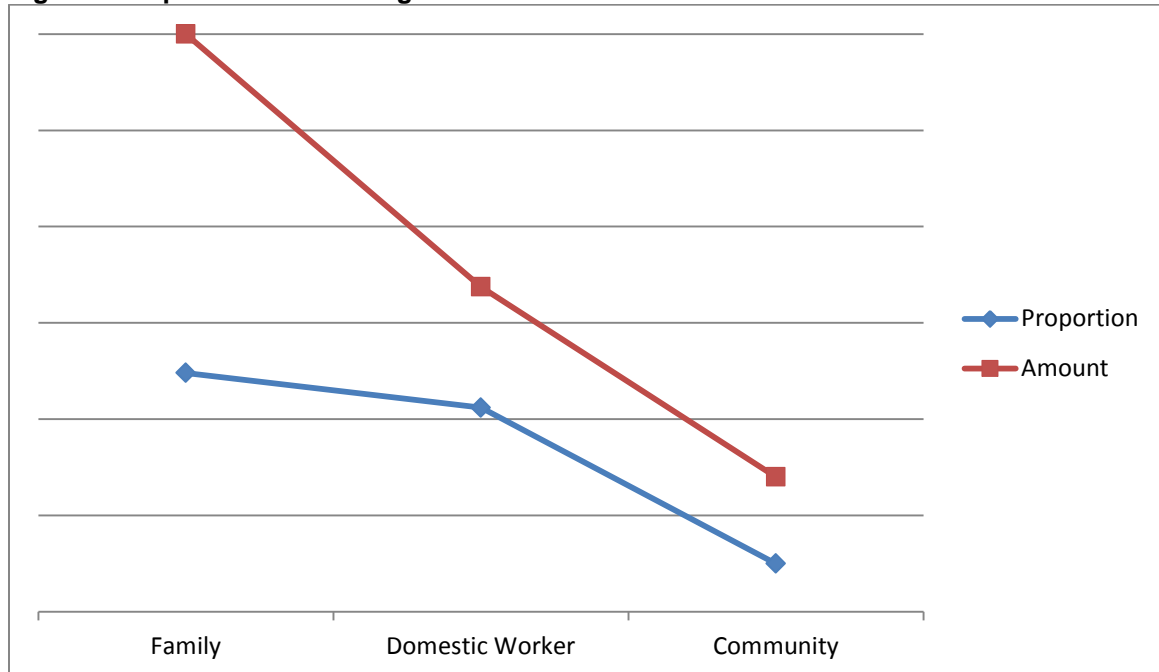
6.3.2 Conclusion for effect of increasing social distance

Prior experiments described in the literature examined social distance as a factor of knowing someone, in addition to the potential for reciprocity (Hoffman et al., 1996). This experiment expanded the current theory away from hypothesised linkages with, and concerns over, reciprocity by presenting known relationships of increasing social distance and establishing the impact of the increasing social distance on the amount an individual is willing to remit in South Africa. Figure 3: Means per condition presented, clearly shows this decreasing willingness to remit as social distance increase.

Linking this finding to 6.2, the results showed that as social distance increases, the proportion of people willing to remit decreases in a stepped fashion, as the proportion remains similar as long as there is a personal connection. Whereas the amount decreases in a more linear fashion as social distance increases; see Figure 8: Aspects of decreasing remittance.

This indicated that social distance has at least two effects: firstly, on the proportion of the population willing to remit and secondly, on the amount an individual is willing to remit. Having a personal connection with an individual maintains the proportion of individuals willing to remit; but as social distance increases, the amount remitted decreases. As the social distance increases and no personal connection is maintained, the amount an individual is willing to remit decreases even more and this is compounded by an increasing proportion of the sample population that are unwilling to remit anything.

Figure 8: Aspects of decreasing remittance



The evidence presented demonstrated that citizens at the bottom of the economic pyramid are not necessarily separated from interactions and assistance from family, friends and employers higher up. Correspondingly, product development for industries which traditionally struggle to gain a foothold in the lower levels of the pyramid (Ismail, Kleyn, & Ansell, 2012, p. 202) may use these insights to develop products to leverage the remittance to the bottom of the pyramid. Companies must be cognisant of these interactions and ensure personalisation to maximise the value remitted.

6.4 Research question three: using a “frame” to reduce social distance

The final research hypothesis examined the effect of a frame on reducing social distance in each situation. Brañas-Garza (2007) review several studies that used frames and determined that frames must provide information to the dictators to allow the dictator to develop a shared context with the receiver. Prior examples include work by Charness and Gneezy (2008) gave names, Burnham (2003) used photos and Brañas-Garza (2006) used a phrase. The frame for this study was based on Brañas-Garza (2006) phrase “*Note that your recipient relies on you*” as it had an effect both laboratory experiments and more real world experiments. The frame used provided the remitter with context about the receiver as a fellow South African, for whom a little help from the remitter would make a difference to the receiver. This paragraph was worded as follows:

“Levels of poverty are extremely high in South Africa. Those of us fortunate enough to have the security of an insurance policy are in the minority. A small amount from you can assist in dramatically improving the security and living conditions of other family / domestic workers or our communities”.

This aimed at establishing commonality by drawing on the fact that respondents all lived in South Africa and would therefore identify with other South Africans and recognise that a small amount of help from the dictator would make a difference to the recipient. This was in line with the work conducted by Brañas-Garza (2007).

6.4.1 Research question three: discussion

The hypotheses for research question three were established in section 3.3. Hypotheses five, six and seven aimed to determine whether framing a request for remittance with the frame provided above would increase the amount of remittance a dictator would remit to a family member, domestic worker or community member. Frames have been shown to increase donation in dictator games (Brañas-Garza, 2006; Burnham, 2003; Charness & Gneezy, 2008) and the study investigated whether this occurred under more realistic situations not involving windfalls.

Figure 6: Estimated marginal means by frame status for each condition, represents graphically the effect of the frame for each of the family, domestic worker and community conditions. The research failed to reject the null hypotheses five, six or seven as the p values were greater than 0.05 for hypothesis six and seven and the direction was wrong for hypothesis five, family members. This means that the frame actually caused a decrease in remittance to family members and had no effect on the remittance to domestic workers or community schemes. Therefore, the frame used in the study did not have the expected result. Possible reasons for this are given below.

Firstly, the power of the statistical test was 0.057 for domestic worker and 0.067 for community schemes (see Table 23: Univariate tests on frames by condition), suggesting that there is a chance of a type II error having occurred, as the power is not above the suggested level of 0.80 (Hair et al., 2010, p. 11). So while the frame effect was not statistically significant, a type II error cannot be ruled out. As the power is a component

of the effect size, Alpha and sample size (Hair et al., 2010, p. 9), the false negative could be the result of the effect being sensitive. A larger sample size might be required to correctly identify any positive effect.

Another possible reason can be drawn from the meta study by Engel (2011) which identified frames as being sensitive to specific circumstances and conditions inherent in each individual experiment and this study confirms this analysis. The unexpected reduction in remittance in the family condition agrees with the conclusion by Paskov and Dewilde (2012) that rising inequality decreases solidarity, potentially as a result of increased individualism at higher levels of the economic pyramid. Another explanation for the failure of the frame tested in the context of family could have been an effect of highlighting the inequality in society, which might have reduced the remitter's anticipation of a reciprocal benefit potentially being derived from helping less wealthy family members, perhaps resulting in the observed reduction in remittance.

Another possible cause could be because of the predominantly white respondents, whose families are more nuclear and fragmented. A larger sample size with a more representative demographic, such as young black executives who have to look after siblings and parents, might alter the result. This possibility is supported by Paskov and Dewilde's (2012) finding that migrant workers who perform domestic worker roles in Italy and Spain were positively affected by inequality as it resulted in increasing remittance.

To establish if the effect of the frame was being hidden by the decrease in the proportion to remit as social distance increases, the results were analysed excluding all responses that indicated an unwillingness to remit anything. Although the results then showed small increases for both the domestic worker and community conditions, see Figure 7, the increase was found to be not significant.

The results of this study with the context based on the expanded wording failed to have the positive effect for family members or any statistically significant effect on domestic worker or community conditions.

6.4.2 Conclusion for using a frame to reduce social distance

The frame did not result in the hypothesised reduction in social distance and the corresponding increase in willingness to remit. The frame resulted in a negative effect for the family condition, meaning that there was some interaction and the frame modified the perception of respondents under the family condition. Highlighting inequality potentially reduced the amount a remitter was willing to give to a family member, but had no significant effect on their disposition toward the domestic worker or community conditions. A likely cause of this might be that for these conditions, the remitter is already acutely aware about the inequality that exists and has already factored this into the remittance decision, so the frame has no effect. The reduction in remittance to family members possibly results from increasing awareness of the remitter of the inequality that exists in South Africa. This would not have been factored into the decision if the inequality in South Africa had not been pointed out to the remitter. After being reminded of the inequality within society as a whole, the family member the responder was considering might seem better off in comparison and not so deserving of the remittance.

The lack of an effect on the domestic worker condition could result from the fact that the benefit of increased contribution occurred regardless of the frame, as the remitter is acutely aware of the inequality in South Africa.

6.5 Summary

Chapter six reviewed the key findings of the study, demonstrating that there is willingness to remit to lower of the pyramid. The effect of social distance was established and strongly indicates the need to design products that maintain or highlight a relationship with the remitter to stimulate maximum value for the remittance flows by ensuring higher percentage uptakes of products as well as larger remittance values.

The market is definitely available and willing to buy suitable products to assist those at the bottom of the pyramid, specifically those that they know, but finding effective ways to frame a request to maximise these flows were not identified successfully in this study.

Chapter 7 : Conclusion

7.1 Introduction

Large disparities in wealth which exist within South African society, as indicated by the high Gini coefficient, need to be addressed in order to ultimately ensure stability and mutual growth for all citizens, this is indicated by reports over income disparity being rated as the likely to manifest over the next 10 years (Howell, 2013). Between the 1st of April and 10th May 2013, it was reported that 560 protest actions, mainly demanding service delivery, occurred in South Africa, with 40 of the protests being noted as “violent” by the police (Khadija, 2013). This indicates growing levels of dissatisfaction with the *status quo* and a growing willingness to take action to redress the situation. Part of the issue likely stems from the inequalities experienced in South African society, with a large recorded gap between the “haves” and “have nots”, as indicated by the South African Gini coefficient (World Bank, 2013). This research was conducted with the intention of playing a small part in redressing this issue by proving that a desire exists to help amongst many of those who have the means to do so; subsequently it attempted to determine a mechanism to allow this want to be triggered; it then suggested structural requirements for products and approaches that will enable a more inclusive financial sector which capitalises upon this desire.

7.2 Major findings

The major of this study can be summarised as follows. Firstly, that the hypothesised desire to assist others is indeed present and can be tapped into by providing a suitable channel to facilitate the “want to help”. For individuals with a strong interpersonal connection, more than 80% of the sampled population would remit something. Therefore, the desire is real and could be used to stimulate a degree of redress from the more fortunate to the less fortunate, possibly resulting in a small reduction in the Gini coefficient resulting from restoration after a losses event or just the reduced cost of service by piggybacking upon another financial product to meet this need.

The second major finding is that remittance theory holds beyond family units and that similar motivations are at play. We can see that the reasoning varies; from potential pure altruism for those willing to donate to community schemes where they can derive no or limited benefit, to enlightened self-interest and self-interest. Enlightened self-interest

could be derived from those willing to give to domestic workers, as it could relieve them from a potential moral obligation in the event of a claim. Self-interest represents a potential reason for family willingness to remit; purchasing risk mitigation tools, like insurance, for oneself or immediate family is similar, as they protect family assets that might one day be inherited, or from having to financially support dependent family members in the event of a loss. In the end, this study agrees with Carling (2008) that the motivation for remitting is less important than the fact that it happens. The motivations are likely to be quite complex and will vary from individual to individual, but the end result is often the same: remittance flows.

The third finding is that the willingness to remit is stronger to those with whom one shares smaller social distances. As one might expect, people are willing to remit more to family than to domestic workers and, in turn, more to domestic workers than a generic community scheme. The interesting extension to this finding is the fact that the proportion of people willing to remit remains relatively constant, as long as there is a personal connection. This is illustrated by the fact that there was no significant difference in the proportion willing to remit to family *versus* those willing to remit to domestic workers. Perhaps community schemes that are extremely focused would have a greater chance of success, but would be limited in their ability to pool risk. Both of these conditions involve a generally close personal relationship between the remitter and the receiver. The community scheme, however, shows a significant drop in the proportion of those willing to remit, from 27% to 17.6%. So mechanisms that channel remittance flow to known individuals will likely experience higher uptake and total flow than channels that direct remittance flow to more generic schemes.

What are the anticipated impacts of this study on society and business? Firstly, the various motivations identified in the remittance flow literature extend beyond family bonds and could be harnessed to play a part in giving those less fortunate “a helping hand”. This could also result in developing social entrepreneurship solutions where financial services can be rolled out in a more inclusive manner than is currently typically the case. Awareness of the two most crucial dimensions identified as making up social distance and any future factors identified will assist in the success of such venture. These are firstly, the physical proximity to the remitter, such as being in the same family or community; and secondly, having an existing interpersonal relationship, as in the

remitter knows the individual benefiting from the remittance. Tailoring product offerings to take advantage of these aspects will maximise the value of the remittance transferred as well as the uptake of the product. This may be summarised by the formula below:

$$PS \times PR \times AR = VR$$

Where:

PS = Population size

PR = Proportion willing to remit

AR = Amount willing to remitted

VR = Total value remitted

Potential future developments, utilising products such as a basic insurance cover aimed at this willingness to help include:

- Better integration of society, where the needs of those at the bottom of the pyramid are better understood as a result of engagement.
- The ability of the poor to deploy their modest funds more efficiently as unforeseen losses would be catered for.
- Education and understanding surrounding financial products and services resulting from interaction with this type of product.

In the longer term, this should lead to:

- Higher uptake of financial products, as people exposed to these products move up the pyramid.
- More inclusive products that evolve into standalone products fit for service, due to past engagement on the basic product.

7.3 Recommendations for stakeholders

The potential stakeholders who could benefit from this work include potential remitters, potential recipients, financial service companies providing the products and government. Each of these specific stakeholder groups are examined in more detail below.

7.3.1 Potential remitters

Potential remitters should actively seek out mechanisms to help others within the country. This would encourage companies to make use of the findings of the study in their development of suitable products to meet this unmet desire to help, utilising the “right conditions”, like the provision of increased control, to the remitter. The end benefit is that, should insurable events occur, a fund is already in place to ensure recovery without the potential moral obligation to assist after an insured event.

7.3.2 Potential companies providing service

Companies have been looking for ways to harness the untapped market potential of low income communities. At the recent annual insurance regulatory seminar that took place on the 31st October 2013 at the CSIR international convention centre, the closing question and answer session focused on the potential benefits of micro insurance and the need to reach, and difficulties in effectively servicing, such markets. This research suggests that changing the old approach (marketing directly to low income potential clients) in how to sell to and service this market (instead marketing to employers of low income earners) might be beneficial and lead to faster uptake in the medium term.

7.3.3 Potential receivers and government

Governments of developing economies need to provide infrastructure and incentives to both their population and business to drive the economy in the desired direction of growth, typically with the aim of bettering the position of society as a whole. The recent unrest recorded in South Africa is evidence that inequality causes discontent. Efforts should be made to reduce inequality in an organised manner; clearly, innovative solutions are required as existing mechanisms have yet to significantly affect economic disparity in the two decades since the first free and fair elections.

Government should therefore provide businesses and individuals with incentives to develop and participate in activities that enable the aim of redistributing wealth and reducing disparity. The result for government of insurance-type products is that the recipient is covered in the event of a loss, allowing them to rapidly rebuild. In the event of a large scale disaster, some of the burden could be lifted from government, as the private sector would to some degree take care of that proportion of the population

covered, allowing money to be deployed elsewhere. It is understood that on their own, these sorts of schemes will not work, but the combined effect of this and others like it will make a difference.

7.4 Limitations

The data analysis revealed several flaws in the experiment. These include that the population sample was skewed toward white respondents in higher income brackets. Another issue identified was potential response bias, where individuals not willing to participate, due to personal convictions such as this being the domain of the state, did not answer the survey. This is illustrated by an email received by the project supervisor which read as follows:

“I looked at the questionnaire and decided not to respond.” It continued *“Under present circumstances in our country [South Africa] I object even to the notion that tax payers should subsidize the plight of the poor. If I thought my tax, which is inordinately high, was being used to look after the poor and correct the inherited imbalance, I would be more than willing. I refuse to pay more to do what the government should be doing and is failing to do.”*

It is fortuitous that this email was sent, as ordinarily this information would not normally be easy to obtain. While the experiment gave very little information on the objective of the study upfront to minimise the effects of this bias, it is a concern. The high levels of willingness to remit in all conditions leaves plenty of room for relevance, but when it came to rolling this out at scale in a business situation, biases like the above might be more significant. Part of the reason for designing the experiment in the form of an insurance product was to avoid the crowding out phenomena described by Maitra and Ray (2003) and enhance the remitter’s control to stimulate a higher response per the findings of Ashraf et al. (2011). However extreme responses like the one above are essentially unavoidable in at least some individuals.

7.5 Future research

The research outlined above only scratches the surface of how remittance could be leveraged to assist less fortunate individuals while keeping the administrative overheads minimal. Other suggested lines of research that would complement this work include the following:

This study could be expanded to look at a larger sample size to allow more factors to be investigated, like the difference between white South Africans and black South Africans in their approach to supporting extended family. The study could be enhanced to categorise respondents on collectivist or individualist tendencies *per* Kleyn and Chun (2012).

An investigation of other factors that influence social distance. This study identified personal awareness as playing a role in the percentage of the population that will participate as a separate factor to the amount an individual will remit based on social distance. It is suggested that a subsequent study focuses on this area to determine what other factors can be found to have specific effects.

Another option would be to investigate if this theoretical study plays out in reality. This could be done by looking at participation rates of social initiatives like the Kentucky Fried Chicken “Add Hope” project (<http://www.addhope.co.za>), a program where the specific recipient is unknown, against the My School initiative (<http://www.myschool.co.za/>) where the recipients are effectively known and actively chosen.

As the frame in this experiment failed to achieve the intended result, future studies should also examine in much greater detail what “frame” or frames might be more effective in stimulating positive remittance flows, possibly in a more targeted approach where specific frames are found to be more effective for potential remitters from different DSM or demographic groups. A similar study might use a qualitative approach to interview people on their reactions to different frames under different conditions. Subsequently, a similar factorial experiment could be used to determine the most effective frame structures under those specific conditions. This is similar to many marketing studies and could be used to segment the market and allow the most effective frame to be used for each product.

7.6 Conclusion

The study achieved its objectives. The desire to remit was established. Increasing social distance was shown to decrease the amount of remittance. Finally, a frame was shown to alter the amount of remittance that flows, although in this case the effect was negative and only worked under the family condition. In addition to the primary objectives, social

distance was unpacked to show not only was the amount a person was willing to remit decreasing, but the proportion of people who would remit anything was also declining with increasing social distance.

The motivation for remittance as outlined by Lucas and Stark (1985) were all potentially identified as motivations for remittance beyond the family. However, this study is in agreement with Carling (2008) that identifying the reasoning is difficult as it will vary between individuals presented with the same situation. Even with the dictator game stripping away potential reciprocity, once you move into real world scenarios, such as this study, motivations involving reciprocity have to be considered as a reality. This study can assist in stimulating internal family remittance as well as remittance beyond kin relationships to allow the willingness to remit to be leveraged in the fight against poverty by purchasing risk mitigating products and services that are unlikely to be purchased by the recipient, due to poor understanding of such financial products and more pressing financial needs or luxury / aspirant purchasing goals.

The proposed business model emerging from this study is to provide low cost products by piggy backing on more established products that are aimed at known individuals. This will assist in gaining critical mass and education around low income financial products. The end result would be a product that motivates revenue to flow down the economic pyramid.

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Appendix 1: Demographic questions

8.1 Cover Letter

Good Day,

This should not take you more than 2 minutes.

I am doing research on remittance flow for a Masters from the Gordon Institute of Business Science (GIBS). To that end, you are asked to look at a website and complete a survey on the site. This will help us better understand remittance flow, and should take no more than 2 minutes of your time. Your participation is voluntary and anonymous. You can withdraw at any time without penalty. Your data will be kept confidential. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher name: Marcus Carter
Email: marcus_carter@hotmail.com
Phone: 082 526 4404
Research Supervisor Name: Kerry Chipp
Email: chippk@gibs.co.za

Thank you for your time.

Please note this is for research only. We are looking at how you would react to a hypothetical scenario and you will not be contacted in future regardless of your response. No contact or identifying information is collected. Please assist by answering honestly and completing every question to ensure your input can be used. Thanks for your time.

8.2 Question 1 (factorial questions)

*1. Your insurance company is starting to offer you the opportunity to extend your policy to cover the home and contents of a low income house hold. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium to extend your cover for a family member's home?

Respondents: 16.66%

*1. Your insurance company is starting to offer you the opportunity to extend your policy to cover the home and contents of a low income house hold. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium to extend your cover for a domestic employee's home?

Respondents: 16.66%

*1. Your insurance company is starting to offer you the opportunity to extend your policy to assist in a disaster relief fund for poor communities. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium?

Respondents: 16.66%

*1. Levels of poverty are extremely high in South Africa. Those of us fortune enough to have the security of an insurance policy are in the minority. Are you willing to do something small to improve the security of all of South Africa and living conditions of our less fortunate family members? A small amount from you means a lot to them. Your insurance company is starting to offer you the opportunity to extend your policy to cover the home and contents of a low income house hold. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium to extend your cover for a family member's home?

Respondents: 16.7%

*1. Levels of poverty are extremely high in South Africa. Those of us fortune enough to have the security of an insurance policy are in the minority. Are you willing to do something small to improve the security of all of South Africa and living conditions of our less fortunate domestic employee? A small amount from you means a lot to them. Your insurance company is starting to offer you the opportunity to extend your policy to cover the home and contents of a low income house hold. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium to extend your cover for a domestic employee's home?

Respondents: 16.66%

*1. Levels of poverty are extremely high in South Africa. Those of us fortune enough to have the security of an insurance policy are in the minority. Are you willing to do something small to improve the security of all of South Africa and living conditions of our less fortunate community members? A small amount from you means a lot to them. Your insurance company is starting to offer you the opportunity to extend your policy to assist in a disaster relief fund for poor communities. Assuming you currently pay R500 per month. How much would you be willing to add to your monthly premium?

Respondents: 16.66%

8.2.1 Response options

R0 R20 R50 R100 More than R100

8.3 Demographic questions

2. Does your household have domestic help?

Yes - Live In
Yes - Live Out
Yes - Part Time
No

3. How long has your domestic worked for you?

Not applicable
Less than 1 year
Between 1 and 5 years
More than 5 years

4. Does your household financially support family members not living with you?

Yes
No

5. Does your household buy insurance?

Yes
No

6. What is your gender?

Female
Male

7. Which category below includes your age?

19 or younger
20-24
25-29
30-39
40-49
50-59
60 or older

8. What is your ethnic Background

Black
Coloured
Indian
White
Other

9. What is your approximate average monthly household income?

- Less than R10,000
- R10,000-R20,000
- R20,001-R30,000
- R30,001-R40,000
- R40,001-R50,000
- Greater than R50,000

10. What is the highest level of school you have completed or the highest degree you have received?

- Less than matric
- Matric
- Diploma
- Degree
- Honours
- Masters
- PHD
- Other