

AMERICAN UNIVERSITY OF BEIRUT

The RELATIONSHIP OF DEBT WITH RESPECT TO FARMERS'  
PERSISTENCE IN FARMING DESPITE THE MASSIVE  
CHALLENGES THAT FACE THEM AND RENDERS FARMING  
UNPROFITABLE

by  
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# AMERICAN UNIVERSITY OF BEIRUT

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# ABSTRACT OF THE PROJECT OF

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Major: Rural Community Development Program

Title: The Relationship of Debt with Respect to Farmers' Persistence in Farming Despite the Massive Challenges that Face them and Renders Farming Unprofitable

For thousands of years, farmers, especially in developing countries, have suffered debt. A phenomenon that has affected farmers' livelihoods in one way or another. The purpose of this paper is to discover the reason behind farmers persistence in farming, through understanding the relationship between types of farmers and farming in respect to accumulated debt, in addition to understanding farmers' coping mechanisms and the effect of debt on their livelihoods and food security. Relevant secondary data was collected as a literature review to clarify the linkage between farm debt and farmers' persistence in farming. Referring to studies that tackle this issue, it is sufficient to consider that there are many reasons that contribute to farmers' persistence in farming. Debt comes as a result of political, sociological and psychological reasons. Besides, it was evident that debt and farmers' food security status have a causal relation formed in a cycle. Debt led to food shortage among indebted farmers by reducing their food intake to lower expenditures, leading them to reach a high rate of food shortage which contributed to having more tendency to get into higher debt and it goes on and on in an endless vicious cycle.

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# CHAPTER 1

## INTRODUCTION

The agricultural industry is varied and has many contradictions. Despite making up a relatively small portion of the global economy, this sector continues to play an important role in the lives of many people. According to the World Bank Report (2012), out of the 7.1 billion people living on the planet in 2012, an estimated 1.3 billion (19%) were engaged in farming, while agriculture (including the relatively tiny industries of hunting, fishing, and forestry) only accounted for 2.8% of the global GDP (as cited Alston & Pardey, 2014).

Most developing countries rely on rural areas for their survival and depend on them as a development source. Indeed, agriculture is the main activity in rural areas and employs most of the working population. (World Bank, 2007). Lebanon, for example, enjoys a climate better suited to agriculture than many neighboring countries, this sector only makes up 5 percent of the total GDP. Given that 5 per cent of the population works in agriculture on, at least, a part-time basis, there must be a rationale for the willingness, or obligation, for these people to remain in a relatively unproductive sector (Verner et al., 2017). This is usually explained by lack of employment opportunities and openings in urban regions. However, this justification, which depicts the situation of labor demand between the industrial and agricultural sectors, is insufficient to compensate for the agricultural producers' incorporation into global value chains. By providing access to credit and capital inputs, these new agricultural production relationships—which are supported by those in NGOs, governments, and international economic organizations who use pro-smallholder rhetoric—appeal to desperate farmers. These debt relationships are then used to effectively control how the land



is used, and sometimes even the land itself, further impoverishing smallholders (World Bank, 2007).

Having briefly introduced the background and context surrounding the research question, it is important to introduce the research questions that will be analyzed throughout the paper.

There are three guiding research questions that this study aims to address:

The main question is:

Why do smallholder farmers persist in farming, despite the massive challenges that face them and render farming unprofitable?

The two sub-questions are:

- 1- What is the relationship between different types of farmers and farming in respect of accumulated debt?
- 2- What are the farmers' coping mechanisms and how are they affecting their livelihood and their food security?

Therefore, this research aligns closely with the priority theme indicated herein, as it conducts research that tries to address the challenge of smallholder farmers struggling to survive, in an area that needs them the most to achieve food security.

## CHAPTER 2

### RESEARCH METHODOLOGY

This paper will follow a qualitative methodology and observe several case studies to understand the relationship between debt and farmers' persistence in farming regardless of the massive challenges encountered. Qualitative data is unmeasurable; it is descriptive, categorical, and conveys information regarding attributes, giving the researcher a greater depth of understanding, and broad knowledge about the phenomenon of study (Clark et al., 2008). The advantage of the qualitative method is that it goes beyond mere associations revealed by statistical analysis and digs deeper into the motivations of various types of behavior underlying farmers' livelihood strategies.

The research methodology is directly informed by observing the gaps and shortcomings in previous attempts and research on the topic. Thus, the methodology is based on desk review and secondary data analysis. However, since fieldwork is not possible, data will be gathered and analyzed accordingly. This project will employ a secondary data collection approach to answer the research questions indicated above and which this study seeks to answer. A thorough literature review will be conducted about farmers' debt in developing countries perpetuating farmers' existence, along with some case studies from different countries tracing the origins of the individual debt crisis. We will use case studies from a group of neighboring farming villages in addition to other case studies from developing countries.

Proceeding from the point mentioned, the methodology that guides this research focuses on

literature and case studies to understand the relationship between debt and farmers' persistence in farming. The data collected from the literature will map out and analyze different reasons behind farmers' persistence in farming. By surveying the existing attempts at such programs and methods, we can make use of previous research conducted. In this study, we try to understand the reason behind farmers' persistence in agriculture despite its unprofitability hypothesizing that debt plays a role in keeping these farmers in the agriculture sector, focusing on the relationship between different types of farmers and farming in respect of accumulated debt and farmers' coping mechanisms, in addition to understanding how debt is affecting their livelihood and their food security.

## CHAPTER 3

### LITERATURE REVIEW

#### **3.1. History of Debt & the Green Revolution**

#### ***3.2. Overview of the History of Debt***

Debt has been a debatable and crucial issue of international politics. Ever since the concept has emerged, many definitions have tried to explain what debt is. Although the idea of debt is easily understandable- debt is an obligation or liability to owe something for someone-, the flexibility of the concept and the way people have been using it, as much as it helped and facilitated the lives of many, it also complicated the lives of many others. The obligations that debt poses on the indebted, make them subjected to forms of oppression or violence had they not been able to repay that debt. According to Schmid, “for thousands of years, the struggle between rich and poor has largely taken the form of conflicts between creditors and debtors, [similarly for the] arguments about the rights and wrongs of interest payments, debt peonage, amnesty, repossession, restitution, the sequestering of sheep, the seizing of vineyards, and the selling of debtors' children into slavery” (2014).

Microcredits have been invented to grant a better future, to facilitate the business and work life of borrowers. Thus, getting out of the miserable consequences and to thriving was considered a problem to be mitigated through micro-crediting despite all the negative outcomes it entails. However, according to Lerman et al., “debt is a risky financing instrument, as borrowing always involves a contractual obligation to repay after an agreed period” (2001).

Under the poor conditions in rural areas and the absence of governmental support and social protection for farmers, the microfinance industry started to proliferate in an aim of aiding the farmers. Farmers were trying to make use of micro-crediting to expand their careers until they found themselves falling into an indebtedness realm that they can no longer escape. Many farmers were stripped out of their lands by lenders as a way to cover their debt, others had to persist in farming to be able to repay their debts and many others had to work off-farm activities to be able to cope with their miserable state. This raises the question whether the microcredit industry is trying to aid farmers or to make use of their conditions to set the grounds for profits at the expense of the farmers who mainly depend on farming as a means of living. The microcredit industry has been introduced in many countries, one of them is Cambodia. Cambodia witnessed an astonishing rise of the microcredit sector in expectation of making a major contribution in rebuilding and developing the country after a civil war.

- Case Study: Cambodia

Cambodia's case will explain how the microfinance industry started and how the farmers interacted and coped with its outcomes.

Early in the 1990s, a "humanitarian NGO driven model" of microfinance was implemented in Cambodia with the goal of giving demobilized soldiers the chance to launch small businesses as a form of social reintegration after decades of war (Bateman, 2017). However, by 2000, a single profit-oriented institution had taken over the state-run regional microfinance initiatives. This entity formally changed its name to a private commercial bank in 2009. Microfinance had to have interest as a result of the switch to a profit-driven business, therefore loans were reworked to raise the amount of interest that could be taken from the borrowers (Natarajan et al., 2019).

This had put the Cambodian farmers into a financial distress that they could no longer bear. Cambodians had to consider working in the kilns, since the owners of the kiln offered loans without interest, so they had to work under harsh conditions, for a period of time, to be able to repay their debts and then go back to farming (Natarajan et al., 2019). Indebted farmers suffered drastic consequences as a result of trying to expand their farming careers and increase their production. The above undoubtedly sheds light too on the resilience of farmers throughout the agrarian change, and the mechanisms they use to mitigate their harsh conditions. Also, it highlights the ties that link rural laborers to their lands despite all the challenges they face and the micro-credit finance industry that puts them under direct or indirect irredeemable financial burdens.

Another country in which its farmers have suffered the micro-credit industry consequences, is Lebanon. Farmers in Lebanon are struggling to repay their debts which is becoming a very far-reaching goal and puts them under great financial distress. Lebanon's case study will explain how the micro-credit industry was introduced and the reasons behind it.

- Case Study: Lebanon

In Lebanon, after the 2006 Israeli war, many Lebanese farmers found themselves in dire need of funding. With the lack of governmental aid, and post conflict recovery plan, farmers were obliged to look for aid elsewhere (The New Humanitarian, 2006). After the 2007 food price crisis, there was a shift to structural readjustment programs away from austerity (World Bank, 2007). The value chain laid its basis in the lives of these smallholders, and left them bearing most of the risk. Thus, Lebanon with many indebted farmers, who chose to stay in agriculture, experienced a rural debt crisis perpetuated by uneven contracts.

According to Allam N. (2011), farmers in Lebanon are in debt and this debt makes them prone to have their lands stripped away from them. Understanding the process, procedures, and requirements that creditors enforce on the indebted, makes it easier to comprehend the short term and long-term consequences of debt. Lerman argues that “debt through its often-coercive nature, transforms or reinforces patterns of capital ownership and therefore the power structure” (2008.). He also gives an example that smallholders who rely largely on agrochemical corporations for the cultivation of their crops accrue debt to them. “These creditors have few limitations on the areas of the producer’s life and autonomy over which they are permitted to take; some argue that this was the goal from the start”, as Graeber (2011) puts it.

Lerman (2008), also gives a detailed explanation of debt processes by going back to the past. He argues that in the past, commercial banks and the government held a sizable portion of the farm debt. In recent years, government debt has overtaken farm debt as the proportion of bank lending has decreased to a minimum. The increase in the percentage of suppliers' credit, from 20% to 40%, is another glaring trend in the development of farm debt over the past ten years. Moreover, Lerman explains that in recent years, farms in the CIS have not made any profits and do not produce enough net cash flows to pay off their debts. Thus, farm debt must be repaid by asset liquidation or sale of assets if it cannot be repaid through operational profits. Which explains the business behind the microfinance industry and how it works.

According to Edelman (2011)”, after intensive study around debt relations and farmers, that the existing farming activities do not relate to the allocated capital. However, it is more accurate to say that capital issues lead the majority of peasantries to become of contract farming, he continues to explain that the existing farming activities do not relate to the allocated capital. He also gives

examples on food empires that tend to provide capital, usually take advantage of local enforcements and resources until they diminish them to invest in other sectors.

### ***3.1.2 The Green Revolution: Paving the way for farmers' debt***

The high amounts of grain production known as “the miracle of the green revolution”, led to an increase in production by 28 per cent over the period of fifty years (Melillo, 2012). This increase was considered a quantum leap in terms of the upsurge in production, and high hopes were built upon this strategy that pours in favor of food and financial security. However, despite this booming in grain production and all the apparent positive consequences it entails, it entitled small-scale farmers to get fertilizers and pesticides which was not easily affordable to them. “Small-scale farmers in Asia, Latin America, and Africa have found it difficult, if not impossible, to afford the fertilizers, pesticides, and irrigation systems needed to cultivate new high-yielding varieties” (Melillo, 2012) Thus, Small-scale farmers had to become indebted in order to be able to afford the fertilizers and in many times had no choice but to sell their farms to wealthy farmers. This had put so much pressure and big burdens on peasants which led many farmers to commit suicides. According to Melillo, several scholars considered that the incidents of farmers' suicides in various parts of India are linked with what is widely called the “agrarian crisis” (2012).

Ever since the Green Revolution started, the agrarian change in the political economy has caused a social and structural transformation. Although this transformation seemed to be positive at first, the peasants turned out to be not ready to hold its dire consequences. It was also noticed that not all farmers were mainly affected by the green revolution consequences. According to Melillo, it was mainly farmers of small and medium land-holders, who, in other words, had something to lose, where large farmers and landless ones were not significantly affected (2012).



### ***3.1.3. Scarcity and Rural Vulnerability***

Rural vulnerability is a concept that describes the problems and complexity of issues in rural areas. Considering that the problems that are identified in rural areas are mainly, unemployment, scarcity, illiteracy and low living standards make it hard for rural people to aim for a better future. Many farmers resort to debt as a way out of their poverty, yet the rise in indebtedness and their inability to pay back their debt return them to the misery circle, until they find no solution other than taking away their lives. According to Mohanty & Shroff, the expressions of rural vulnerability – suicide being an extreme form of it – are precariously hinging on the technological optimism oriented to the past, whose connection with the future is conflicted (2004). In other words, the hopes that were built upon the green revolution that gave peasants prospects of a better future full of abundance and their inability to accept that they ended up being trapped back in scarcity, gave no meaning to their lives anymore. Shah found that there is a connection between the present and the past episodes of scarcities and this connection was mainly between dearth, debt and death (2012). (Hardiman, 1996) explained it by stating that "during pre-colonial and colonial times, debt and dearth were two sides of the same coin, with dearth creating the need to borrow, whereas the high repayment requirements ensured that dearth was never far away. Hence, the peasants were trapped in a cycle of debt and dearth. Shah adds that "the experiences of food shortage and famine have left an indelible mark on the collective moral psyche" (2012). The author explains that there must be a relationship between the emotions felt during that period of time or even the stories heard by their families about the suffering that they witnessed which was directly linked to the present. To better explain the dilemma of famine and its implications, Shah quoted Paul Greenough in describing the five stages of famine-related victimization.

According to Greenough, the five stages of famine-related victimization are: “ impoverishment – property sales and economic decline; unemployment – exclusion of patronage and income; abandonment – exclusion from domestic subsistence; beggary – forfeiture of social status; and starvation – resulting in physiological decline and illness” Shah, adds that when those responsible for their families feel threatened by food shortage, they consciously choose to abandon those who depended upon them: be it subjects, clients, wives, or children (2012). This explains that suicides are only a form of removing a burden that they can no longer bear especially when their memory takes them back to the emotions felt because of the fear of famine or pauperization. In many cases, the fear of pauperization was pushing farmers to take loans in hope for improving their conditions and make use of micro-credits disregarding its negative consequences.

The despair these farmers live is summed up by one of the interviewees who questioned: “How long should our lives be tied down with mud? Working with mud is not only lowly; it is not futuristic, “as cited in (Shah, 2012).

#### ***3.1.4. Contribution of farmers’ debt to their persistence in farming worldwide***

When considering the reasons behind farmers’ persistence in farming, a question that arises is whether debt plays a role in contributing to their persistence in farming, since their inability to repay their debts will eventually entitle them to work in order to be able to get out of the indebtedness realm. However, in a study on ‘Financial Strain among Farmers and Its Influence on Their Geographic Mobility’ showed that indebted farmers were considering a career shift. According to (Rathge et al.), indebted farmers are considering a career shift, however 75% of them indicated that they are not considering that in the next 3 years, 7% were unable to stay in the agriculture sector and 18% were uncertain of their future (1986). Some indebted farmers do not

see that there is a future in staying in farming, which explains a negative relationship between the level of debt and farmer's persistence in farming, as Rathge puts it, "the greater the level of debt, the less likely farmers perceive their chances of remaining in farming in the near future (1986). On the other hand, farmers of the same study, did not feel that their careers were in jeopardy or threatened although they were suffering from harsh financial conditions. "Many operators in North Dakota were being severely strained financially in 1984, yet only 7 per cent felt that they would be forced to leave farming in the near future Rathge, R. W. (1986)."

This questions whether these farmers are aware of the life conditions they're living through or not. It is confirmed that there is a positive correlation between economic stress, and farmers' tendency to consider a career shift. As for those who were not willing to make a career shift, Rathge labeled them as farmers who are not aware of their financial state or in denial of it. According to Rathge (1986), "many farmers with unrecoverable debt loads may lose established equity by waiting until foreclosure to quit farming. The ramifications of this denial process may include not only an economic tragedy but also potential psychological distress, family violence, and suicide".

Moreover, Rathge also argues that there is a reason farmers' reluctance to leave their rural areas and he explains it based on a study conducted. According to the study, the majority of farmers chose to remain in their area due to the ethnic composition of farming communities.

Moreover, according to (Foster & Rausser, 1991), if there is a significant disparity in on- and off-farm utility, the farmer will take action to continue farming. These efforts could result in decisions on farm management that might be ineffective.

In a study about Farmers' Economic and Sociologic Motivational factors in farming, (Kliebenstein et al., 1981) argue that in addition to income, farmers identified being their own boss

(independence), the feeling of accomplishment, security, and participation in the free market as benefits they receive from farming, which explains the feeling of independence that farmers cherish as a result of their work in farming.

Another reason why farmers might choose to persist in farming is that loans or contracts for a single crop limit farmers' possibilities for diversification and raise risks. With production risks left to the farmer, a variable production season could lead to a debt that keeps rising. Farmers may be forced into production treadmills as a result running the danger of being evicted (Hofman, 2017). Moreover, according to (Korir, 2011), older farmers with more experience in farming were less likely to own off-farm investments than younger farmers. This could be explained by the fact that older farmers are not very active economically and therefore do not seek out economic opportunities outside their families' farms.

### ***3.1.5. Different types of farmers and farming in terms of debt accumulation***

Types of farming play a significant role in terms of tendency to accumulate debt. In general farmers who seek to increase profitability, may consider credit as a way to expand their production. This strategy is mainly adopted by farmers who are business oriented (Howley & Dillon, 2012)

Also, farm size and farm system and age come into play. According to (Katchova, 2005) “individuals who are under 45 are 1.83 times more likely to accumulate farming debts than individuals who are over 45.” On the other hand, dairy farmers were 1.76 times more likely to have debt than other farm types, according to a study by the Institute for Fiscal Studies (IFS) and the Department of Agriculture, Environment, Food and Rural Development, as cited in (Katchova (2005). Aside from farm size and farm systems, other socioeconomic factors affect loan decisions. According to Natarajan et al., (2019), data from villages show that both households trying to

enhance production, primarily by increasing the number of harvests each year, as well as those looking to merely maintain current levels of production, incur such debt.

Thus, there are several reasons and factors for why farmers opt to take loans. This was also confirmed by a study done in Ireland to better understand the motives of farmers behind getting loans.

### ***3.1.6. Case Study: Ireland***

In a study done in Ireland, to understand the motives behind farmers' choices to get loans, by trying to study their attitudes and behavior. The results of the study showed that economic factors, and the overall attitudes and motivations come into play. The results showed that the social and psychological factors in addition to the economic variables influence farmers' decision-making when it comes to the accumulation of debt (Howley & Dillon, 2012).

### ***3.1.7. Farmers' Coping Mechanisms and How it is Affecting their Livelihoods***

There are several mechanisms that farmers are adopting in order to cope with their harsh conditions that debt put them into. Some farmers are resorting to off-farm employment which helps them maintain cash and develop profitable enterprises away from the uncertainties in the agriculture industry. Moreover, others resort to migration, as a means to manage risk, and build assets. "Younger male members undertake migration flexibly to repay seasonal and longer-term loans taken for agricultural inputs, the purchase of assets and to meet social obligations and emergencies" (Drollette, 2009).

As mentioned, there are several coping mechanisms that farmers resort to as a result of their financial distress. One of high importance is the off-farm activities. A study conducted in Ethiopia,

highlights the importance of such practices in rural areas as a way to mitigate the risks that farmers have to put up with as a result of their debts.

### ***3.1.8. Case Study: Ethiopia***

Ethiopia's smallholder farmers often face a scarcity of capital and are prone to livelihood risk. Irregular and uneven distribution of rainfall affects their farm production and productivity. Farming as a primary source of income has failed to guarantee sufficient livelihood for most farming households. In an effort to reduce the risk to their livelihood, the study finds that diversifying household income sources through diversification of off-farm activities has become crucial. Thus, the rural development strategy should not only emphasize increasing agricultural production but also give unreserved attention to the creation of off-farm employment in the rural labor force (Fentie & Rao, 2015).

## CHAPTER 4

### DISCUSSION AND ANALYSIS

#### **4.1. Implications of Debt: An endless vicious cycle**

The literature review reflected how the misery and despair of over indebtedness have reared their ugly heads in many parts of the world, yet the programs of financial inclusion and microcredit continue to thrive “(Guérin, 2014).

Farmers, who look to expand their production become victims to a system that seek to merely lay a hand on the lands of the farmers under the name of aiding farmers in increasing their production. The fear of pauperization and famine encourage farmers to take loans as a way to help their career flourish, yet this fear is taking them back to pauperization by being indebted where they have to work all their lives or even to sell their lands to be able to repay their debts.

Since it was clear that famine had a lot of side effects on the social and moral structure of the suffering social network because it is directly linked to exploitation, the findings of a study conducted by Shah (2012) showed there is a strong relationship between food shortage and farmers' well-being. The harsh conditions that farmers are living, cause them to commit suicide: For example, destitution results in asset sales and reduced economic growth; unemployment prevents funding and earnings; abandonment results in neglecting household upkeep; indigence results in a loss of social status; malnutrition causes poor physiological status and illness, which explains why a high number of farmers commit suicide in developing countries due to a fear of impending famine.

Sen's theory of famine explains that the primary cause of the food shortages among the poor is not food shortage, however it is dispossession. This was proven by moral economics and political economy that dispossession is the core reason behind food shortages among poor people. Appadurai explained this by taking example of Farmers' households in India who have experienced food shortages for a long time, although this is not due to a lack of food production or supply. However, it was primarily brought on by rulers of agriculture lands. Even the worst famines had little of an impact on the rulers of agricultural lands compared to the poor farmers (1984). This better explains how the system is working in favor of wealthy entities at the expense of the poor, and here comes the role of value-chain agriculture.

Value-chain agriculture allows some producers to make profits by modifying previous farming activities and taking charge of the capital allocation procedure. Without granting them any authority over their lands, these producers rely on farmers' labor to help them achieve their goals. Those landowners don't take into account the cultural and ego-ecological principles and ideals of poor farming, their main target is to maximize profit, which presents one pillar of the disadvantages of capitalism. (MCMICHAEL, 2013)

Having this said, understanding how the system of capitalism works is crucial for farmers to become aware, since long term gains will not be possible with this method of capital processing. , according to Edelman (2011). He also argues that it is impossible to see capital coming in from outside sources to support local agriculture; it always happens the other way around. All of this is done in the hopes of increasing profits, while local resources are used as collateral for such biased operations. At this point, debt is used to temporarily address the problem, which leads to farmers becoming caught in a vicious cycle.



Furthermore, (CARLOS OYA, 2012) adds to this discussion by arguing that many agribusinesses view contract farming among the best strategies these organizations employ to work with smallholder farmers, and by ensuring food security, this genuinely addresses the issue of food scarcity among peasants. Value-chain agriculture is defined as the process of supplying credit (capital) as a foundation for farming activities and regulating it through established debt connections with farmers, according to pertinent data. They came to the conclusion that debt is a tool used by credit providers to exert control over farmers by reducing their access to food.

#### **4.2. Farmers' Diverse Coping Mechanisms**

The literature review also showed how farmers are coping with their harsh conditions as a result of their indebtedness, as some considering off-farm activities which helps them mitigate the risks of pauperization due to the facilities that off-farm employment provide, like health insurance, in addition to maintaining "A significant number of farmers committing suicides in various parts of India are routinely attributed to agrarian crisis. The crisis is further related to the structural transformations induced by globalization and liberalization and the resulting forms of scarcities or shortages, for example, prices, growth, and resources. I contend in this essay that the framework of economic rationality is insufficient to explain why a disturbingly high number of middle farmers are taking their lives. This essay is an attempt to provide an alternative explanation of the suicides by undertaking a study of the affective histories of scarcities. It argues that for the suicides whether scarcity actually exists is less relevant than how the idea of scarcity is articulated in affective responses. The affective histories explain the way in which suicides and the wider feelings of rural alienation relate to the fear of pauperization. This fear relates to the bounded imagination of the self and the other, glued by a long history of deeply ingrained ideologies of hierarchy. If farmers'

suicides point to any crisis, it is the crisis of lack of alternative political and cultural imagination emerging from a rounded critique of all forms of social injustice and violence (Drollette, 2009). The literature also discussed that some farmers consider migration as a way out of their indebtedness, as a defensive coping strategy (Breman, 1985), and mainly younger male members are more encouraged to migrate in order to repay seasonal and longer-term loans taken for agricultural inputs. The case of Ethiopia, shows how farmers were resorting to off-farm employment since the services field is paid more than that in agriculture, which explains why farmers shift to other sectors in order to be able to cover their debts.

Thus, it has become crucial to diversify household income sources through a variety of non-farm occupations in an effort to reduce the risk to their way of life. Therefore, understanding the factors that influence farmers' involvement in off-farm activities is unquestionably important in terms of providing information to develop effective strategies for the sector's development.

#### **4.3. Attitudes and Behaviors Influencing Farmers' Tendency to Accumulate Debt**

The literature review also addressed the types of farmers and farming in terms of accumulation of debt and went in explaining the attitudes and behavior that influence the decisions of farmers to accrue debt. Age and education level have shown to have a significant impact on the likelihood of farmers to accrue debt. The size and type of systems as well, for example Dairy farms especially large farms have tendency to accumulate debt more than small ones, which explains that the higher the profit, the more is the tendency for farmers to accumulate debt (Katchova, 2005).

Natarajan et al., explained that farmers who have an entrepreneurial spirit, and want to expand their careers have also higher tendency to accumulate debt, as a way to enhance production and increase the number of harvests on a yearly basis (2019).

The literature review also addressed the contribution of farmers' debt to their persistence in farming worldwide, highlighting diverse mechanisms by how farmers were interacting towards their indebtedness and their financial state. In a study conducted by Rathege (1986), some indebted farmers were considering a career shift and found no future in the agriculture sector, whereas, in the same study, some farmers did not feel that their careers were in jeopardy and were not considering a career shift. In this study Rathege confirmed that there is positive correlation between economic stress, and farmers' tendency to consider a career shift. The farmers who were not willing to shift careers, according to Rathege, they were in denial of their financial state. Other explanations were given for why farmers would not consider a career shift were related to ethnic composition of farming communities, or the sense of independence that farming give them (being their own boss). According to (Korir (2011), older farmers are less encouraged to leave farming as they are not very active economically and therefore do not seek out economic opportunities outside their families' farms.

#### **4.4. The Green Revolution: Deviated from its purpose or achieved it?**

After explaining in the literature review how the green revolution paved the way for farmers to become indebted and put them under financial burdens that they could no longer endure, stating the rise in suicidal cases afterwards, we come to an understanding that the Green Revolution is not a solution, it is the problem. It has been set by the rich nations, which rush to better establish new technologies and practices for the poor countries to follow their new ways (Dembowski H., 2010).

Instead of using science to lead the world and solve the real problems, political-powerful and greedy countries rule the world, using starvation as a potent tool for slavery and to satisfy their opulent needs and short-term interests disregarding climate justice and human rights. This is the real-world problem: instead of learning from nature, we are working against it, destroying clean

natural resources. Which takes us to the question: How can will we be able to fix a global issue if the rulers and policy makers are those to be convicted?

## CHAPTER 5

### CONCLUSION

It has always been a struggle to know the basic causes of farm debt and how farmers end up being controlled by agri-businesses that are mainly looking for maximized profits. It ends up being a dilemma that doesn't only affect farmers' financial status, but also their food security status. When we get to this point, we find that there is a causal link between accumulated farm debt and food insecurity among peasantries. Farmers build contractual relations with these agencies, hoping to ensure capital for their business, yet they become part of the labor force and these organizations take over the lands and control farming operations. This is when farmers get trapped and try to cut off their expenses with many coping strategies and one of them is reducing food intake. Hence, farmers suffer from food insecurity which will lead them back to get into higher debt rates. The paper also highlighted that many other reasons contribute to farmers' persistence in farming, mainly the sense of security they get, the independence and their education level, which in many cases, leaves no room for them to think of alternatives. In this paper, we also argued that the green revolution was not based on any economic assessment, rather on increase in yields with no consideration to farmers. Farmers opted to debt to increase their production, to realize they were food insecure as a result of their debts. We also argued that small-holders farmers fail to understand the situation and some of them are in denial of their financial state until they reach a state where they commit suicide as a way out of their misery. Besides, lack of economic studies, whereby the economic interlinkages between yield and external factors are not assessed. Thus small-holder farmers are not aware of the right decisions to take in terms of their careers and production and how debt is jeopardizing their livelihoods.

Policies have to be implemented to protect farmers, open for them more opportunities to grow without having to fall into the realm of being indebted. Moreover, farmers have to be more informed and aware of the implications of the decisions they take and extensive research on how debt is affecting the farmers' livelihoods is needed to address an issue that is becoming a threaten to small-holder farmer's livelihoods and their lives in specific.

## REFERENCES

- Allam, N. (2011). "Farming is like Gambling"; An Examination of the Decline of Produce Farming in Lebanon's Central Bekaa Valley (*Doctoral dissertation, The George Washington University*). -Search. (n.d.).
- Alston, J. M., & Pardey, P. G. (2014). Agriculture in the Global Economy. *Journal of Economic Perspectives*, 28(1), 121–146. <https://doi.org/10.1257/jep.28.1.121>
- Appadurai, A. (1984). How Moral Is South Asia's Economy?—A Review Article. *The Journal of Asian Studies*, 43(3), 481–497. <https://doi.org/10.2307/2055760>
- Bateman, M. (2017, June 1). *Post-war reconstruction and development in Cambodia and the destructive role of microcredit*.
- carlos oya. (2012). Contract Farming in Sub-Saharan Africa: A Survey of Approaches, Debates and Issues. *Journal of Agrarian Change*, 12(1), 1–33. <https://doi.org/10.1111/j.1471-0366.2011.00337>.
- Clark, V. L. P., Creswell, J. W., Green, D. O., & Shope, R. J. (2008). Mixing quantitative and qualitative approaches: An introduction to emergent mixed methods research. In *Handbook of emergent methods* (pp. 363–387). The Guilford Press.
- Drollette (2009)—*Managing Production Risk in Agriculture.pdf*. (). Retrieved September 4, 2022, from <https://ncfarmschool.ces.ncsu.edu/wp-content/uploads/2016/06/Managing-Production-Risk.pdf?fw=0>
- Edelman, M. (2011). Van der Ploeg, Jan Douwe: The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization. *Human Ecology*, 39(1), 111–113. <https://doi.org/10.1007/s10745-010-9372-9>
- Farmers seek government help to escape downward spiral of debt*. (2006, December 10). The New Humanitarian. <https://www.thenewhumanitarian.org/feature/2006/12/10/farmers-seek-government-help-escape-downward-spiral-debt>
- Fentie, D., & Rao, M. S. (2015). Factors Influencing Farmers' Participation On Off Farm Activities: A Case Study in East Gojjam Zone, Ethiopia. *International Journal of Life Sciences*, 5(2), 8.

- Foster, W. E., & Rausser, G. C. (1991). Farmer Behavior under Risk of Failure. *American Journal of Agricultural Economics*, 73(2), 276–288. <https://doi.org/10.2307/1242712>
- Graeber, D. (2011). Debt: The first five thousand years. *New York: Melville House.*
- Guérin, I. (2014). Juggling with Debt, Social Ties, and Values: The Everyday Use of Microcredit in Rural South India. *Current Anthropology*, 55(S9), S40–S50. <https://doi.org/10.1086/675929>
- Hardiman, D. (1996). usury, dearth and famine in western india\*. *Past & Present*, 152(1), 113–156. <https://doi.org/10.1093/past/152.1.113>
- Hofman, I. (2017). Soft budgets and elastic debt: Farm liabilities in the agrarian political economy of post-Soviet Tajikistan. *The Journal of Peasant Studies*. <https://www.tandfonline.com/doi/abs/10.1080/03066150.2017.1293047>
- Howley, P., & Dillon, E. (2012). Modelling the effect of farming attitudes on farm credit use: A case study from Ireland. *Agricultural Finance Review*, 72(3), 456–470. <https://doi.org/10.1108/00021461211277286>
- Howley, P., Dillon, E., & Hennessy, T. (2014). It's not all about the money: Understanding farmers' labor allocation choices. *Agriculture and Human Values*, 31(2), 261–271. <https://doi.org/10.1007/s10460-013-9474-2>
- Katchova, A. L. (2005). Factors affecting farm credit use. *Agricultural Finance Review*, 65(July).
- Kliebenstein, J. B., Heffernan, W. D., Barrett, D. A., & Kirtley, C. L. (1981). Economic and Sociologic Motivational Factors in Farming. *Journal of ASFMRA*, 45(1), 10–14.
- Korir, L. K. (2011). Risk Management Among Agricultural Households And The Role Of Off-Farm Investments In Uasin Gishu County, Kenya. In *Research Theses* (No. 117806; Research Theses). Collaborative Masters Program in Agricultural and Applied Economics. <https://ideas.repec.org/p/ags/cmpart/117806.html>
- Križman Pavlović, D., Paulišić, M., & Kostelić, K. (Eds.). (2017). *Conference proceedings*. Juraj Dobrila University of Pula : Faculty of Economics and Tourism “Dr. Mijo Mirković.”
- Lerman, Z., Csaki, C., & Sotnikov, S. (2001). *Farm Debt in the CIS: A Multi-Country Study of the Major Causes and Proposed Solutions*. World Bank Publications.



- mcmichael, p. (2013). Value-chain Agriculture and Debt Relations: Contradictory outcomes. *Third World Quarterly*, 34(4), 671–690.
- Melillo, E. D. (2012). The First Green Revolution: Debt Peonage and the Making of the Nitrogen Fertilizer Trade, 1840–1930. *The American Historical Review*, 117(4), 1028–1060. <https://doi.org/10.1093/ahr/117.4.1028>
- Mohanty, B. B., & Shroff, S. (2004). Farmers' Suicides in Maharashtra. *Economic and Political Weekly*, 39(52), 5599–5606.
- Natarajan, N., Parsons, L., & Brickell, K. (2019). Debt-Bonded Brick Kiln Workers and Their Intent to Return: Towards a Labour Geography of Smallholder Farming Persistence in Cambodia. *Antipode*, 51(5), 1581–1599. <https://doi.org/10.1111/anti.12564>
- Of Peasants, Migrants, and Paupers: Rural Labour Circulation and Capitalist Production in West India.* By Jan Breman. Delhi: Oxford University Press, 1985. Xviii, 472 pp. Rs. 195. - *Rural Labourers in Bengal, 1880–1980.* By Willem van Schendel and Aminul Haque Faraizi. Rotterdam: Erasmus University, Comparative Asian Studies Program, 1984. 146 pp. \$5.00. - *Chains of Servitude: Bondage and Slavery in India.* Edited by Utsa Patnaik and Manjari Dingwaney.

*Madras: Sangam Books, 1985. Viii, 380 pp. \$40.00. (Distributed by Apt Books) | The Journal of Asian Studies Cambridge Core.* (n.d.). Retrieved September 4, 2022, from <https://www.cambridge.org/core/journals/journal-of-asian-studies/article/abs/of-peasants-migrants-and-paupers-rural-labour-circulation-and-capitalist-production-in-west-india-by-jan-breman-delhi-oxford-university-press-1985-xxviii-472-pp-rs-195-rural-labourers-in-bengal-1880-1980-by-willem-van-schendel-and-aminul-haque-faraizi-rotterdam-erasmus-university-comparative-asian-studies-program-1984-146-pp-500-chains-of-servitude-bondage-and-slavery-in-india-edited-by-utsa-patnaik-and-manjari-dingwaney-madras-sangam-books-1985-viii-380-pp-4000-distributed-by-apt-books/5E5DE4F5A54F255E2028F082266BA9E7>

*Farm Debt in Transition: The Problem and Possible Solutions.* (n.d.).

Retrieved September 4, 2022, from

[https://www.researchgate.net/publication/241751238\\_Farm\\_Debt\\_in\\_Transition\\_The\\_Problem\\_and\\_Possible\\_Solutions](https://www.researchgate.net/publication/241751238_Farm_Debt_in_Transition_The_Problem_and_Possible_Solutions)

Rathge, R. W., Goreham, G., & Leistritz, F. L. (n.d.). *financial strain among farmers and its influence on their geographic mobility.* 28.

Schmid, K. (2014). Review of Debt: The First 5,000 Years [Review of *Review of Debt: The First 5,000 Years*, by D. Graeber]. *Anthropologica*, 56(1), 244–246.

Shah, E. (2012). ‘A life wasted making dust’: affective histories of dearth, death, debt and farmers’ suicides in India. *Journal of Peasant Studies - J PEASANT STUD*, 39, 1–21.  
<https://doi.org/10.1080/03066150.2011.653344>

*The Green Revolution is part of the problem, not the solution.* (n.d.). D+C. Retrieved September 4, 2022, from <https://www.dandc.eu/en/article/green-revolution-part-problem-not-solution>

Verner, D., Vellani, S., Klausen, A.-L., & Tebaldi, E. (2017). *Frontier Agriculture for Improving Refugee Livelihoods* (World Bank Publications - Reports No. 29753). The World Bank Group.  
<https://econpapers.repec.org/paper/wbkwboper/29753.htm>

World Bank. (2007). *World Development Report 2008: Agriculture for Development*. World Bank.  
<https://doi.org/10.1596/978-0-8213-6807-7>