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Household Risk Management Strategies in the Semi-Urban and Rural Area: A Literature Review

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ABSTRACT

Background: It is a truism that every household in developing countries are vulnerable to different types of risks. Therefore, risk management is crucial for sustaining and repelling the detriments of risks. For instance, *Ex-ante* strategy mitigates the detriment of risk and hinders the occurrence of risk, while *Ex-post* strategy is employed aftermath of risk occurrence to resolve the consequence of the risk effect. **Objective**: This paper conceptually reviews the relevant issues on household risk management. It also presents a meta-analytic review of possible strategies of risk management employable in both pre and post risk occurrence in the households of developing countries. **Results**: This paper concludes that different strategies are employed by households to resolve different risk events. Misemployment of a particular strategy to manage an inappropriate risk will result in the ineffectiveness of the strategy. **Conclusion**: This paper encapsulates recommendations, implications and suggestions for policy makers and governmental agents in grasping the different risk management strategies for households management with negative risk in developing countries.

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INTRODUCTION

It is a truism that every household in developing countries are vulnerable to different types of risks. Risk can be defined as any sudden or unprecedented change in the livelihood condition of a household that bares severe detriments such as welfare loss (Kozel, Fallavier&Badiani, 2008). Negative income or welfare loss can be contained with the use of different risk management strategies. Sigel and Alwang (1999) describe the household risk management to be numbers of tactical moves by households to prevent or contain expected or spontaneous risk occurrence and outcomes. There are numbers of variable that inform the selection of a particular risk management strategy to resolve a particular type of risk. These variables include household intrinsic characteristics in terms of diversity, stability, sources of income assets and standard of education (Rashid, Langworthy, &Aradhyula, 2006). For instance, farmers conveniently manage the risk of agricultural income loss with off-farm or unemployment, asset sales and borrowing (Kochar, 1999; Newhouse, 2005; Kijima, Matsumoto, &Yamano, 2006). These are examples of risk management strategies that are peculiar to agricultural loss and farmers' households.

Additionally, a study done by Takasaki *et al*, (2006) reveal that farmers' decision on selecting an appropriate strategy to contain or prevent the occurrence of risk is determined by either local environmental endowments or households asset holdings. Precisely for peasants, containing the occurrence of risk such as crop losses from flood, and labour adjustment is considered most suitable and predominantly common among farmers (Takasaki *et al*., 2010). Meanwhile, households with comfortable assets mitigate the consequence of risks such as income loss by disposing assets and exhaust savings. On the other hand, poor households will mitigate similar loss by retaining savings and actuate borrowing in order to sustain themselves against income loss (Berloffa& Modena, 2009; Hoddinott, 2006).

However, literatures are replete with the scores of strategies exalted by households in developing countries to tackle different types of risk. Meanwhile, each and every risk management strategy has a peculiar utilitarianism in which if it is not employed correctly can be ineffective. This paper summarizes the limitations and strengths of each and every available risk management strategies with respect to their functionalities in household risk management and emphasizes their effectiveness and ineffectiveness in mitigating and preventing different types of risk event. Objectively, this paper is organized in three different sections to pursue three

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different objectives. Section 2 is to articulate conceptual discussions of different risk management strategies and their functionalities in household risk management. Section 3 presents the critical reviews on different adoption of several types of risk management strategies in managing household risks and the limitations and strengths of their functionalities. Lastly, section 4draws a constructive and conclusivesummary of the study.

Concept of Risk Management Strategies:

All actions taken in order to prevent or curtail risk occurrence is considered as risk management or risk responses. The preventive measures employed to reduce or control the impact of risk is often determined by the probability of the risk occurrence and the severe possibility on household wellbeing. Subsequently those preventive measures in the phase of managing risk have their own impact on household consumption and welfare. In most cases, it changes their incomes and investments, depending on the available asset. Risk impact is also dynamic in nature insofar as it affects household investment and asset acquisition. McCord (2001) classified the types of risk control and management into five distinctive classes. Figure 1 presents the five classes of risk management and control.

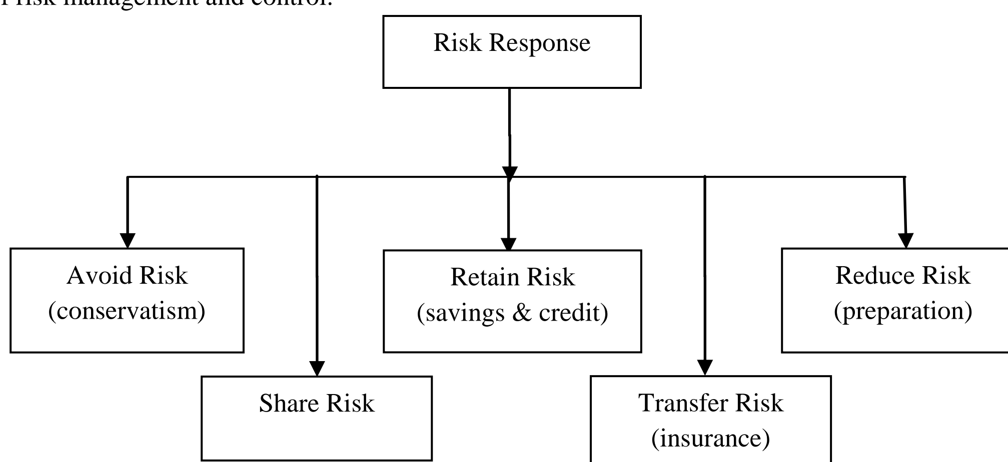

Fig. 1: Risk Response Options (McCord, 2001).

On the upper row are three out of the five types of risk management. The three strategic risk responses (*risk retains, risk avoidance, and risk reduction)*focus on the fall back strategies that provide sustenance for the affected household after the occurrence of risk. These preventive strategies involve different actions in order to successfully curtail risk. *Risk reduction* for instance, involves action like multiplying source of income, increasing assets through personal savings, food stocking, and making an aggressive investment in house and health services. It can also involve maximizing social network such as lending and borrowing to associates purposefully to be reciprocated. Money management can also help in *risk reduction*, such as developing prudent budget, and cutting down expenditures and credits. Funeral services together with some other social or municipal services and informal services can also help in *risk sharing*, while former services like insurance are eradication motives under *risk transfer*.

The chronological dimension of risk management also contributes to the characterization of risk management. There are some risk management measures or strategies that are extremely preventive, and are implemented even before the occurrence of risk.This is known as *ex-ante* risk management. Some management strategies are only adoptable after the risk hasoccurred. Such strategies are known as *ex-post* risk management. These two types of risk management strategies will be discussed in the following section.Table 1 illustrates the category of risk management strategies.

Table 1: Risk management strategies.

Ex ante risk management
a. Risk prevention or reduction – strategies intended at preventing or reducing risk
b. Lowers exposure to risk – strategies intended towards lowering risk exposure.
c. Risk mitigation - strategies intended towards providing compensation against expected loss
Ex post risk management
a. Risk coping – strategies intended to manage with the realized losses affected by shocks

Source: Heitzmann *et al*. (2002)

Ex-ante Risk Management Strategies:

Basically, ex-ante strategies are employed proactively to hinder the occurrence of risk or rather to contain the impact of the risky events. There are some individualistic preventive strategies such as migrating from a vulnerable location to a safer place, which can be implemented individually. Meanwhile, in most cases,

governments render their available supports in implementing individual strategies. Interpersonal interactions also play a courageous role in mitigating the impacts of risk on individual and households. Lack of interaction has been one of the dangerous elements of vulnerability found in poor people. They are naturally deprived from meeting and interacting with other people. Hence, poverty denies them the benefit of constructing a solid and efficient social network. Lack of social networks would complicate the level of poverty on households (Holzmann *et al*. 2003). There are three major types of *ex ante* risk management:

a. *Risk Prevention or Reduction*. These are managerial actions implemented to prevent the impact of risky events.

b. *Prevention or Reduction of Exposure to Risk*. It a management strategy implemented after the occurrence of risk in order to reduce the aftermath of risk impact.

c. *Risk Mitigation*. It is the type of risk management strategy implemented to mitigate the impact of risk, such as social service, alleviation supports, personal saving, and insurance terms. It is theoretically known as fall-back strategy. These strategies can also prevent the reoccurrence of risk in the future if they are well implemented.

Ex-post Risk Management Strategies:

Ex post are implemented actions or measures that are channelled to control the impact of risk. Risk coping must be able to exonerate victims from actual losses. Such actions include assets disposal, quick loans from commercial institutions and from informal sources like friends and family, and by cutting down the expenditures. In some cases government comes to assist the individual to facilitate their risk coping actions. Additionally, Ex-*post* coping actions typifya series of strategies, such as asset selling, relocating households, diversifying income and creating labour forces with the members of household (Balisacan&Fuwa, 2007). Below are detailed explanations of each and every category of risk coping activity:

a. *Savings/Asset Holdings:*cutting down expenditure and or curtailing consumption are part of the renowned measures of sustaining and obtaining assets which would subsequently serve as a backup for them in case of crisis and risk challenges. Assets is not necessarily tangible commodity or solid money, it can be inform of deposit, jewellery, animal rearing, crop farming or land investment.

b. *Reallocation of Household Resources:*amongst the risk management strategies is the relocation of household resources in order to create better chance to cope with the aftermath of the risk. This can be implemented in different ways such as reducing the consumption of luxuries and unimportant commodities or entirely change the household labour force.

c. *Informal Risk-Sharing Arrangement/Institutions:*credit services from cooperatives and associations, insurance terms and informal credit services are included among risk sharing strategies. Additionally, risk can also be shared through rotational savings, social contacts and network aides, and neighbouring helps.

Holzmann (2001) also categorized risk management into different groups in his own terms. The categorization
features the temporality of risk coping skills adoptable by households dealing with risk and shock.

a. *Self-help or self-insurance:* this is explained by the process of auctioning, promising or disposing assets in other to expand income, or by expanding the work frame of labours either by employing more or creating more work for the already employed ones.

b. *Informal insurance:* this is a strategy whereby household engage in credit acquisition informally, either from friends, associates or family or from workplace cooperatives. Basically, this strategy is implemented by soliciting capital from social network and informal connections.

c. *Market insurance or use of credit:* this is implemented by employing formal connection to generate capital. Basically by soliciting credit from financial institutions, or auctioning farm produce before harvest. *Government help:*this is a mechanism whereby household will totally rely on government bodies and allies structured to offer aides, support, insurance, care and consultations to survive through the aftermath of a shock.

d. *Help from NGOsor other private or international organizations:* This is basically the help received from the non-governmental institutions either in form of money, support, care and information that could be helpful, one way or the other to the households to sustain the impact of risk.

Litereture Review:

The different types of Risk Management Strategies:

One of the prevalent risk management strategies for household is self-insurance which is also known as informal insurance strategy. The self-insurance strategy is actuated through asset build-up or savings for the purpose of mitigating income loss. Jalan and Ravallion (2001) explained that precautionary savings is widely common among farmers. Savings is a measure of getting ready for expected or an unexpected risk event. Deaton (1991) corroborated that precautionary savings has been proven to be effective and worthwhile strategy to prevent and lessen the impact of income loss, although this strategy could also prove to be imperfect for household for all types of risk, particularly risk that is connected with income loss. Generally, self-insurance is

considered effective when the resource has been built sufficiently to consume the effect of risk event as an ex-ante strategy.

The self-insurance strategy is a multi-faceted strategy that can be implemented tactically with different methods. Self-insurance can also be actuated in a way that makes neighbors, relatives, and kinships to participate in the tactics, methods and arrangements of implementing the self-insurance strategy (Fafchamps, 1992). Theoretically, this kind of group-based self-insurance is implemented as collective reactions from members of community, family, association and even professional network to prevent or mitigate the effect of risk together. The individual and group-based method of self-insurance has been examined empirically by several studies, and it has been revealed to be holistically effective and efficient in preventing risk events as an ex-ante strategy (Lund &Fafchamps, 1997; Coate&Ravallion, 1993; Townsend, 1994).

Risk coping strategy is one of the risk management strategies applicable and predominant among poor households to sustain themselves through the occurrence of risk events (Alwang *et al*., 2001). In the period of risk events or shock that can consequentially affect the households incomes, the tactics is to balance the consumption, manage expenses and income maximally through holding assets and liquidating assets during the shock and risk events. In practical words, the risk coping strategy is explained as the strategy whereby households acquire “good” (such as; jewellery, houses, crop inventory, animals or land) before risk events and dispose them for money during risk events (Balisacan&Fuwa, 2007).

Several studies have justified the effectiveness of this kind of strategy particularly among the poor households. For instance, Lybbert and Carter (2009) reported that the effectiveness of risk coping strategy is determined by the level of asset threshold. This is because during the risk or shock events, if the households are below estimated asset threshold, they would be exposed to suffer the detriments of consumption volatility in order to preserve their goods. While those that fall above estimated assets threshold will dispose their goods to mitigate the consumption volatility.

Heltberg and Lund (2009), andDercon (2007) also corroborate the effectiveness of risk coping strategy among farmers. They review that farmers dispose assets and engage in income diversification such as off-farm employment in order to sustain their households and to cope during the event of risk. Velasquez and Bahadur (2007) reveal that there are several ways of implementing the risk coping strategy. Households can employ the risk coping strategy by disposing savings and paying with commodity, selling of animals, increasing working days or increasing workloads (increase their labour market participation and/or change jobs) and soliciting for assistance from governments or NGOs. Noticeably, well-educated households are found of implementing the risk coping strategy through disposing of savings and selling of animals.

Households can also implement the risk coping strategy by expanding the source of income through additional employment. There is a unanimous conclusion by several studies that extra earning of income is one of the most effective methods of coping with risk during its events. For example, Takasaki *et al*. (2001) conclude that farmers are found of employing risk coping strategy by engaging in labour supply and expansion of income. Similarly, Kochar (1995) reveales that farmers prefer implementing the risk coping strategy by increasing labour supply, earning additional income, temporary migration and gathering of wild food for either consumption or commerce.

Formal insurance is one of the risk management strategies for attending to the effect of risk events, although this strategy is a rarely accessed strategy particularly in the developing countries. Formal insurance are seldom available for rural dwellers and when available it’s rarely accessed because it lacks cost effectiveness. Cole *et al*. (2012) notethat formal insurance arrangement for preventing shock and maintainingthe livelihood of households against rick events is a costly strategy for the rural area dwellers and that this is the reason why victims of shock are reluctant to explore the formal insurance strategy. The source elaborates that the price elasticity of formal insurance is discovered to be unanimous. In this case, in order to entice the shocked victims towards accessing the formal insurance strategy, price must be reviewed by the authorities. However, victims are likely to be sceptical and reluctant to access the formal insurance if the price of the formal insurance is reviewed and subsidized by introducing greater competition or efficiency mechanisms because formal insurance is often not sufficient for the whole households benefit. Therefore, it is fair to say that the benefits of formal insurance purchase is less and expensive and this makes it not to be a very advisable strategy for poor households.

Critical Analysis:

Theoretically, there are loads of risk management strategies adoptable by households to manage risk events. Contrarily, researchers have recorded different limitations of adopting the theorized strategies through empirical examinations and validations. For instance, Rahmato (1991) reviews several strategies that are employable during famine and reports the pitfalls of most of the predominant risk management strategies, and their failures in rescuing famine victims. Additionally, Reardon, Delgado, and Matlon (1988) documented the shortfalls of the informal insurance and risk-coping strategies among rural area dwellers and poor households.

Kazianga and Udry (2006) conclude that risk coping strategy is not an effective strategy for poor households to prevent themselves from risk events and mitigate the effect of shock on their households

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completely. The source adds that even though risk-coping strategy is common among poor households and rural area dwellers because it is cheap and convenient, it is not sufficient to prevent the households from the detriment of income loss. For instance, a study by Rosenzweig (1988) reveals that, risk-coping strategy can only account for less than 10 percent of the overall rescue arrangement to management shock and risk event in India. Meanwhile, Townsend (1994) notes the pitfall of a self-insurance strategy by indicating that self-insurance is a partial insurance and can't be efficient as a full insurance arrangement.

Tai, Li, Feldman, and Gretchen (2010) examine the effectiveness of different risk management strategies among rural area dwellers in China. The study reveals that risk-coping strategy like physical assets are not effective during the period of risk events. However, some other facets of risk-coping strategies such as income diversification, precautionary saving, informal insurance, and risk sharing (such as informal support, market and community organization) are found to be sufficient and effective among rural households to mitigate the effect of income loss. While Czukas, Fafchamps, and Udry (1998) reveal the effectiveness of risk-coping strategies in their study, Dercon (2002) concludes that risk sharing or consumption smoothing tactics is not a sufficient strategy to manage risk for the poor households. They explained that both risk sharing and consumption smoothing are more or less a constrained strategy employed after every other strategy is failed.

Meanwhile, income-based strategy is considered to be an expensive strategy during risk events. This is because one of the detriments of risk events is that it preventsthe poor households of the opportunity of venturing into profitable or commercial activities for the purpose of increasing their income. Most often, poor households are limited to low risk and low income activities to sustain themselves during risky or shock events. Additionally, self-insurance also has an intrinsic pitfall due to the fact that poor households don't usually have a sufficient access to assets. In addition, the detriments of risk events could destabilize the assets market which consequently will limit the functionality of a self-insurance plan. More importantly, the use of self-insurance is extremely unsuitable for risk events that have to do with economy-wide shocks.

For practicality purpose, it is necessary to differentiate between common, aggregate, economy-wide, covariate risk and individual risk because different risk requires different strategy to manage it. More so, some risks are collective lost, while some are individual risk. Therefore, collective risks are managed collectively while individual risks are managed personally with suitable risk management strategies. Conclusively, understanding the nature of a risk event is as crucial as managing the risk (Alderman 1998).

Conclusion:

Conclusively, household risk management strategies are mechanisms and tactics employed by households to manage different types of risk events and to prevent or mitigate the detriment of risk. Household risk management strategies can be categorized into two phases namely; *ex-ante* and *ex-post* strategies. The former can be explained as the strategies employed before the risk events while the latter are strategies employed after the risk events. The predominant strategies for managing households shock and risk events include; precautionary savings/assets, borrowing, formal insurance and self/informal insurance.

This study presents detailed explanation of different risk management strategies applicable to managing household risk. From the foregoing, this paper concludes that different strategies are employed to resolve different risk events. Misemployment of a particular strategy to manage an inappropriate risk will result inthe ineffectiveness of the strategy.

The effectiveness of particular risk management strategies is an important discourse in the realm of household risk management research. This paper sheds more light on the household risk management strategies. This could be useful to provide invaluable information for policy makers and governmental agents on how to resolve risk impact and shocks effect more swiftly and accurately.

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