

# **A SYNTHESIS OF THEORETICAL CONCEPTS FOR ANALYSING NON-FARM RURAL EMPLOYMENT**

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## **1. Introduction**

Employment diversification is a major livelihood strategy in rural areas and is thus a focal point in the ongoing rural development debate. It is important for policy making to understand this livelihood strategy, i.e. to understand why an individual enters the non-farm sector. The issue of non-farm diversification is undoubtedly complex and its determinants are difficult to identify. Increasingly, there is a need to address, clarify and bring together theoretical concepts for analysing non-farm rural employment (NFRE). With this in mind, the objective of this paper is to summarize and link existing theories and to introduce some new aspects with regard to modelling NFRE and diversification.

NFRE dynamics are closely interrelated with the institutional framework and its incentives and constraints. The behaviour of rural decision-makers also depends on fundamental determinants such as norms and attitudes. The Sustainable Livelihood Framework (SLF) and the demand-pull and distress-push concept focus on the motives and the context in which diversification strategies evolve. To depict economic incentives we will introduce a welfare model which explains the respective labour allocation processes. We will show that benefits do not only arise for demand-pull shifters, who take up better paid non-farm employment, but also for distress-push shifters, whose incentive to engage in low-paid non-farm activities is to raise aggregate household income. Finally, the decision-making process itself will form the focus of a behaviour model. It also follows the logic of rational choice and can thus be integrated into the discussion of a synthesis of concepts for the analysis of NFRE in the third section.

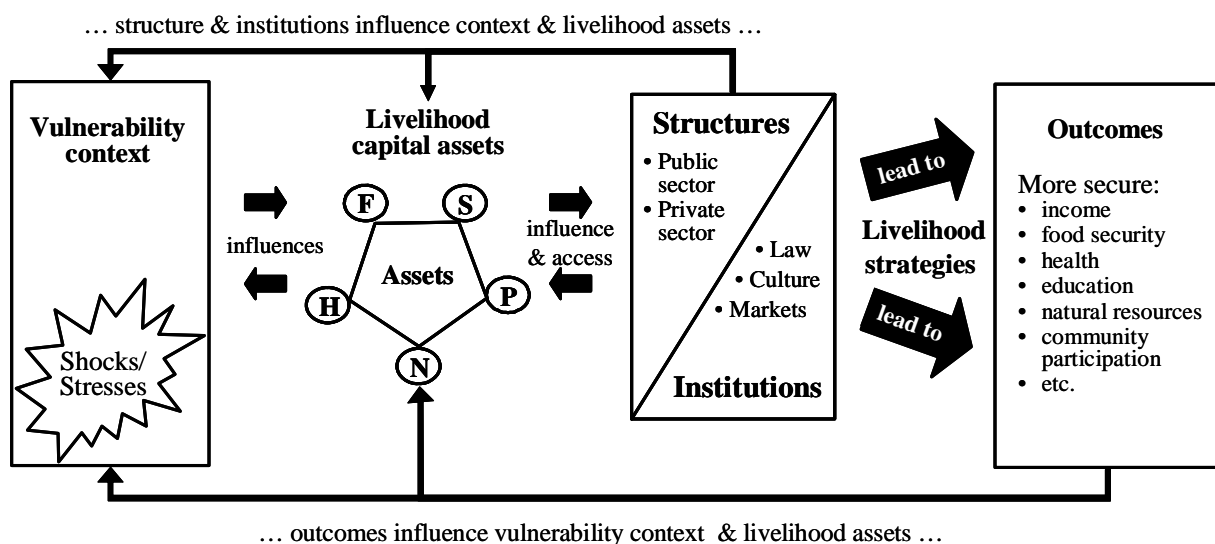
## **2. Theoretical concepts to compose a framework for the analysis of NFRE**

To explain employment diversification it is necessary to consider both the context in which livelihood strategies evolve and the individual determinants of behaviour. The theoretical concepts discussed here are all based on the rational choice approach, but differ in their foci. While the welfare model has its focus on monetary incentives, the Sustainable Livelihood Framework (SLF), which will be discussed in the next section, sheds light on action alternatives and constraints arising from structures, the institutional environment and access to capital.

## 2.1 The SLF and demand-pull and distress-push driven diversification strategies

Chambers and Conway (1992, pp. 7-8) were among the first to give a scholarly definition of livelihood, defining it as comprising “the capabilities, assets and activities required for a means of living.” They further state that “a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”. The SLF theoretically describes employment and vulnerability management strategies. It looks into livelihood strategies in a given context defined by access to capital, structures and institutions (Figure 1). Within the SLF, diversification is defined as one action alternative to reduce poverty and vulnerability or to maintain or enhance the capabilities and assets of a household.

**Figure 1 The Sustainable Livelihood Framework (SLF)**



Source: Buchenrieder et al. (2004) based on DFID’s SLF

Note: The capital asset pentagon is explained in the text

The factors affecting people’s access to different forms of NFRE strongly relate to whether (and to which extent) or not, people have access to the five forms of capital assets depicted in the asset pentagon in Figure 1, i.e. natural, physical, human, social, and financial assets. The livelihood assets influence and determine access to the socio-economic structure of society at large and their formal and informal institutions. For instance, Kanbur and Squire (2001) clearly state that human capital, particularly health and education, are essential building blocks to help the poor increase their income and thus reduce vulnerability. Capital assets in

combination with the structure of the economy and its institutions determine the available set of livelihood strategies and the achievement of certain outcomes. Both these outcomes and the societal structure and institutions can have positive or negative impacts on livelihood, hence the feedback loops in Figure 1.

NFRE is very diverse; it is often “highly lucrative at the top end with mainly formal wage employment and modern capitalized enterprises, but very menial at the bottom end, where traditional artisan skills and poorly paid manual labour predominate” (Start 2001 p. 496). In accordance with this, two directions of non-farm diversification have been identified: demand-pull and distress-push processes (Efstratoglou 1990, Barrett et al. 2001).

The demand-pull/distress-push concept was first introduced by Everett Lee in 1966 to explain migration dynamics. In the context of diversification it is used to explain labour shifts from the agricultural sector to the rural non-farm sector. A set of factors determines whether an individual is capable of gaining access to demand-pull employment or whether he is forced to take up poorly paid non-farm employment due to distress-push dynamics (Table 1). The term demand-pull is used to describe a situation in which those employed in agriculture seize more lucrative employment opportunities in the rural non-farm economy. The term distress-push describes a situation in which inadequate agricultural incomes and other negative factors push workers into poorly paid NFRE. The demand-pull and distress-push factors reflect the asset pentagon outlined in Figure 1 above, as well as the institutional environment, and enable the different incentives and constraints experienced in obtaining NFRE in a given livelihood framework to be highlighted more specifically.

Obviously, households with a better endowed livelihood asset pentagon can more easily take up more lucrative demand-pull NFRE than the others. They react to demand-pull factors and benefit from a ‘positive selection’ concerning age, education, skills and motivation. Whereas pull-factors facilitate diversification processes, but are normally not sufficient to initiate them, push-factors could be seen as the essential driving force of diversification. Those who follow distress-push forces are typically subject to a ‘negative selection’ (Lebhart 2002). Often household members who feel pushed by factors associated with constraints in farming become pluriactive (Efstratoglou-Todoulou 1990). Pluriactivity is therefore seen more as a negative phenomenon characterized by poverty induced, ‘residual’ activities (e.g. Saith 1992). Distress-push NFRE may nevertheless have a positive effect on the rural population’s

livelihoods by increasing total aggregate household income, by reducing vulnerability, and by improving risk management (Start 2001).

**Table 1 Demand-pull and distress-push factors determining non-farm diversification**

	<b>Factors associated with the traditional agricultural sector and the household</b>	<b>Factors associated with the rural non-farm sector including other external constraints</b>
<b><i>Pull-factors</i></b>	<ul style="list-style-type: none"> <li>• Education level, skills, knowledge etc.</li> <li>• Positive attitude towards working and/or living in town</li> <li>• Existence of social networks facilitating diversification by reducing cost</li> </ul>	<ul style="list-style-type: none"> <li>• higher wage rate in non-farm sector</li> <li>• labour demand in non-farm sector</li> <li>• optimistic rural business environment</li> <li>• appropriate infrastructure, e.g. road, schooling and vocational training network</li> <li>• information availability</li> <li>• efficient land and credit market</li> <li>• existence of rural development plans/projects/programs</li> </ul>
<b><i>Push-factors</i></b>	<ul style="list-style-type: none"> <li>• Insufficient access to land and low land productivity, small farm size</li> <li>• Low farm labour productivity</li> <li>• Lack of self-financing capability for farm investments</li> <li>• Inefficient land and credit market</li> <li>• Large family size with many dependent family members</li> <li>• Negative attitude towards farming and rural livelihoods</li> <li>• Generation conflict</li> <li>• Natural disasters, shocks</li> </ul>	<p><b>Constraints to distress-push diversification:</b></p> <ul style="list-style-type: none"> <li>• Less favoured market structures and high unemployment rates</li> <li>• Lack of infrastructure</li> <li>• Inefficient institutions</li> <li>• Legal and cultural barriers, norms</li> <li>• Lack of livelihood capital assets</li> </ul>

Source: Möllers (2006)

## 2.2 A basic welfare model of demand-pull and distress-push processes

Wage differences explain both international and national or sectoral labour force shifts. Regions with relatively high labour resources compared to capital are characterized by lower average incomes. Thus there is an incentive to move to regions (or sectors) with higher wage rates. Labour allocation processes induced by demand-pull and distress-push dynamics are illustrated by a welfare model.<sup>1</sup>

<sup>1</sup> The initial idea for the model was deduced from Sinn and Werding (2001).

The welfare model demonstrates that both directions, i.e. demand-pull and distress-push, are beneficial for households and society. Figure 2 depicts the welfare gains emerging due to labour force shifts from the agricultural sector to the non-farm rural economy. It differentiates between: (1) the demand-pull direction motivated by a wage rate that is higher than the average wage rate in agriculture, and (2) the distress-push direction with a wage rate that is no higher or even lower than the average wage rate in agriculture. The motivation for distress-push shifts arises from an incomplete agricultural labour market as is typically found in most developing and transition countries, where high levels of disguised unemployment exist. In the model, it is therefore hypothesized that the income created in the non-farm sector by household members is fully added to the total household income in the early stages.

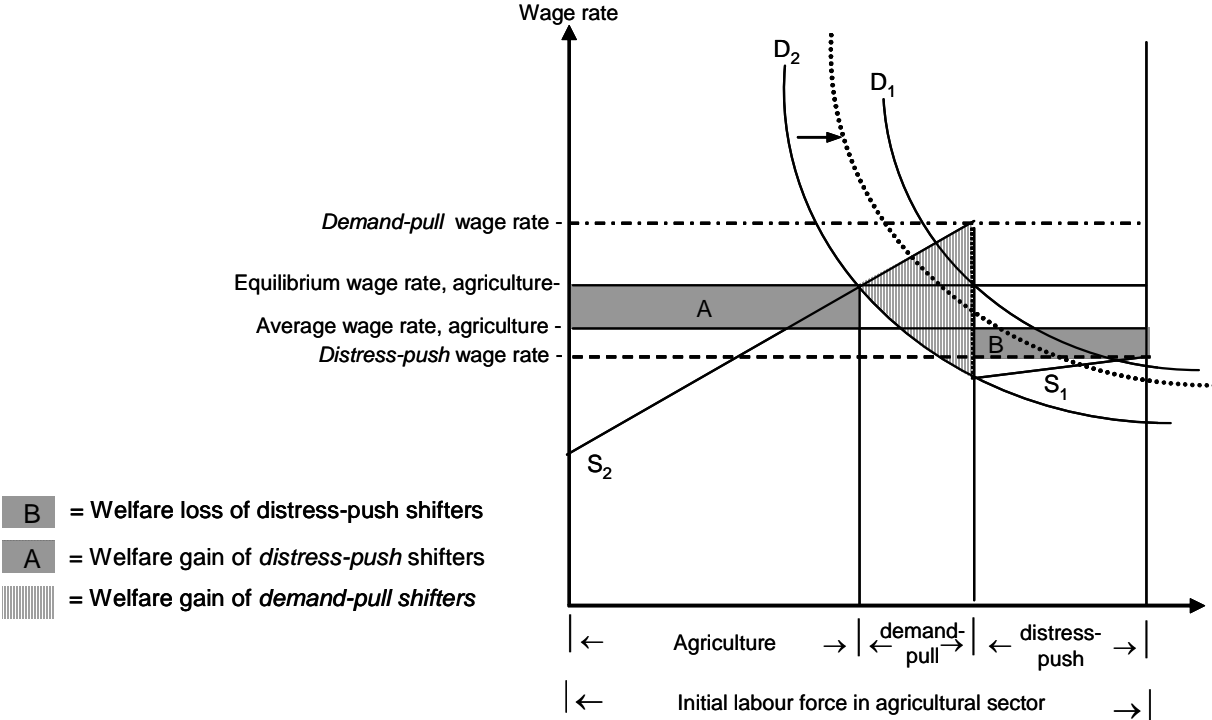
Two labour supply curves are drawn in the model.  $S_1$  is the labour supply curve of distress-push shifters, while  $S_2$  represents the demand-pull labour supply curve. This distinction arises due to differences within the rural population in terms of individual capital assets and, consequently, in terms of opportunity costs of agricultural labour (Schmitt 1992).

It is argued that distress factors may push some of those employed in agriculture to take up NFRE at a wage rate that is no higher or even lower than the average wage rate that they could achieve in agriculture (Figure 2). This is depicted by  $S_1$ . Obviously, it is more attractive to work in the better paid demand-pull sector, but due to high shifting costs (e.g. caused by a lack of capital assets and inadequate state structures and institutions), distress-push shifters cannot move up to the better positioned  $S_2$ . Their only alternative to unproductive agricultural work is the low-paid distress-push sector.

The highest acceptable labour shifting costs are represented by the difference between the distress-push wage rate and the labour supply curve  $S_1$ , at the point where  $S_1$  intersects  $D$ , the labour demand curve in agriculture. For household members offering labour on  $S_1$ , it is impossible to move in the demand-pull direction because the shifting costs are insurmountably high. To raise aggregate household welfare, family members with zero or low opportunity costs of agricultural labour could work at the lower distress-push wage rate. The welfare gain of distress-push shifters is the difference between the shaded areas  $A$  and  $B$ . The shaded area  $B$  represents the wage loss for those who move out of the agricultural sector and  $A$  represents the wage gain for those who remain in agriculture. Hence there is an economic rationale for farm households to diversify, even if it means that one member of the household

receives a below-average wage rate from the farm activities because total household income will increase.

**Figure 2 Demand-pull and distress-push labour shifts: A basic model of welfare gains**



Source: Adapted from Möllers and Buchenrieder (2005)

Note: The wage rates in the non-farm sectors are fixed. The average wage rate in agriculture lies below the equilibrium wage rate because aggregate agricultural wages are divided among all household members, even those who do not contribute to the aggregate value added (disguised unemployed).

The labour supply curve  $S_2$  represents those who work in the agricultural sector and are potential shifters to the demand-pull sector.  $S_2$  results from the marginal productivity in the non-farm demand-pull sector minus the cost of shifting to it from agriculture (cf. Sinn and Werding 2001). Similar to the distress-push process, the shifting costs are zero where the supply curve  $S_2$  intersects the demand-pull wage rate. Given that the wage rate in the demand-pull direction is higher than the equilibrium wage rate in the agricultural sector, workers will move out of agriculture as long as the difference between the wage rate in the demand-pull sector and the wage rate in agriculture is larger than their shifting costs. The welfare gain from this labour market adjustment is the striped triangle indicated in Figure 2. The decision to move depends primarily on the difference in wages between the two sectors. Once the

shifting costs are greater than the difference between the wage rate in the demand-pull sector and the agricultural sector, the migration of labour in this direction will stop.

Labour productivity and thus the average wage rate of those remaining in the agricultural sector will increase due to the labour force shifts. Therefore, the incentive to work in the non-farm sector is reduced for those who remain in agriculture. This relationship is depicted by the dotted line in Figure 2.

### **2.3 Diversification decisions: Theoretical insights from behavioural research**

Neither the comprehensive theoretical approaches of the SLF and the demand-pull and distress-push concept nor the economic welfare model address the decision-making process itself. Therefore, we suggest complementing the insights of these concepts through a behaviour model based on the theory of planned behaviour by Icek Ajzen (1985). It integrates the complex environment in which decisions are made, i.e. the vulnerability context and the available capital assets and institutions, by concentrating on three main determinants of human behaviour: attitudes, norms and behavioural constraints. Nevertheless, the decision is still understood as part of a utility maximizing behaviour of the household as suggested by the rational choice theory.

According to Ajzen (2002), human action is guided by three kinds of considerations or 'beliefs': behavioural beliefs, normative beliefs and control beliefs. These beliefs are seen as pre-amplifiers expressing a subjective probability to behave in a certain fashion. They result in attitudes, subjective norms and perceived behavioural control (Figure 3). All influential factors of the theoretical concepts discussed above are implicit in these determinants of human behaviour.

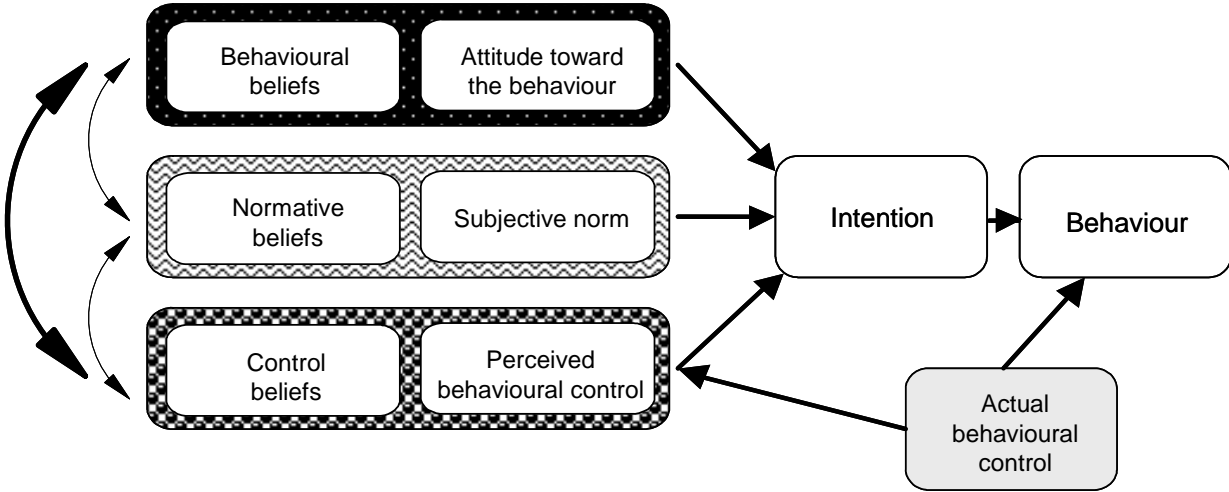
Behavioural beliefs concern the likely outcomes of a behaviour and the evaluations of these outcomes. The resulting attitude is thus a personal factor that considers the degree to which a person evaluates a specific behaviour positively or negatively. In the context of NFRE, the expectation of secure and high income from wage employment might be evaluated positively by the household when considering the possibility of non-farm diversification. Together with other beliefs about NFRE, this might lead to a positive attitude. In economic theory the term 'preferences' is used largely congruently.



Normative beliefs describe normative expectations of others and the motivation to comply with these expectations, for example the expectations of parents about their children succeeding them in their business. Accordingly, a subjective norm is a social factor that refers to the perceived social pressure to either perform or not perform the behaviour in question, e.g. to maintain the family business. This normative component of the theory deals with the influence of the social environment on behaviour. Basically, the subjective norm refers to an individual’s perception about his peers’, family’s or friends’ opinions and how this perception influences him to adopt a specific behaviour or not.

Control beliefs result from the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors. Perceived behavioural control refers to people’s perceptions of their ability to behave in a given way. Actual behavioural control refers to the extent to which a person has the skills, resources, and other prerequisites needed to behave in a given way. The diversification behaviour may, for example, be influenced by the conviction (or the actual fact) that one has or does not have the necessary financial means or skills to diversify. In other words, the performance of a behaviour depends not only on a favourable intention but also on a sufficient level of control. Thus control beliefs are directly affected by the capital assets pentagon depicted in Figure 1, but Ajzen (2002) also stresses the importance of perceptions which might differ significantly from actual conditions and between individuals.

**Figure 3 Theory of planned behaviour**



Source: Ajzen (2002)

The combined attitudes towards the behaviour, subjective norm, and perception of behavioural control lead to the formation of a behavioural intention. As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour in question (here: non-farm diversification). Finally, given a sufficient degree of actual control over the behaviour, people are expected to carry out their intentions when the opportunity arises.

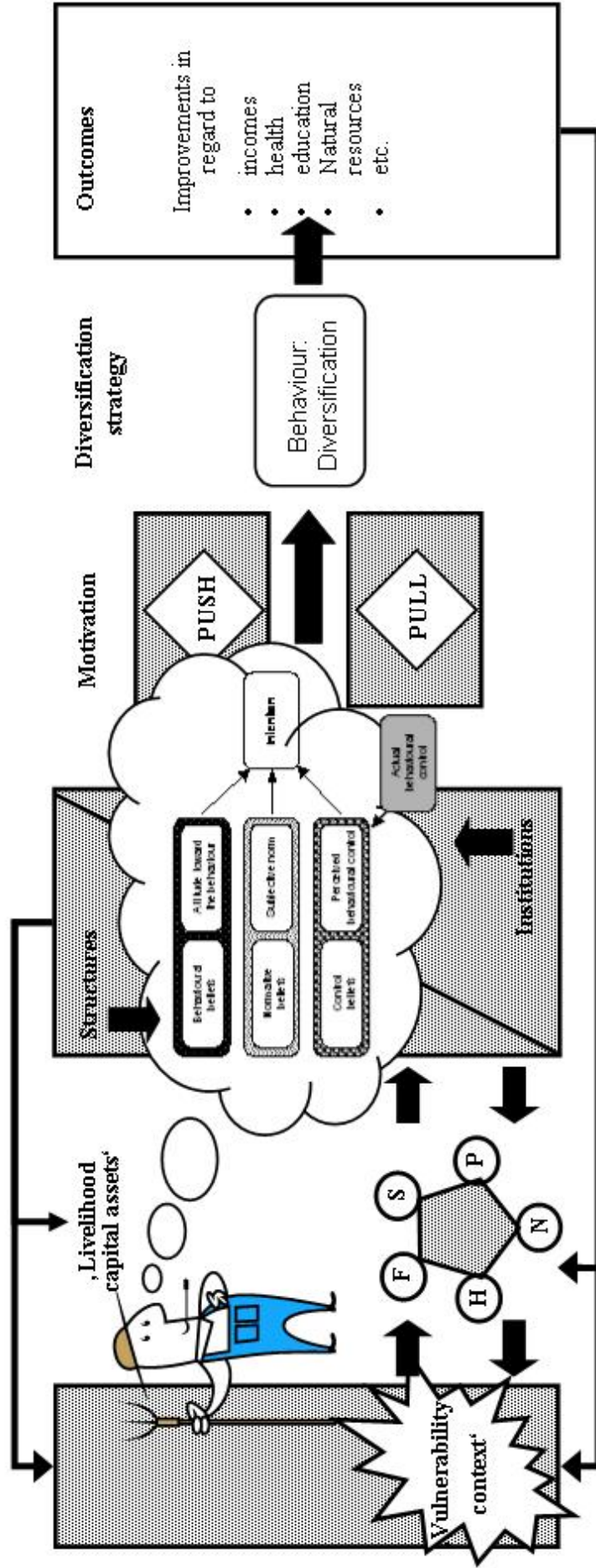
### **3. Discussion and conclusion**

The different aspects of the complex issue of NFRE dynamics can be approached using existing analytical frameworks. All concepts presented in this paper are, under certain circumstances, useful when trying to identify the determinants and possible outcomes of NFRE. In the light of the need for an integrated comprehensive analytical framework, Figure 4 portrays a synthesis of all concepts discussed here.

The behaviour model is symbolised by a thought bubble and represents the actual decision-making process. The SLF with its grey-shaded components represents the natural, social and institutional environment of the decision-maker. All components of the SLF influence the decision-making process and are reflected in the determinants of behaviour. Cultural and social institutions are essential for the formation of norms, while the capital assets, structures and market institutions often act as constraints on the subjective control. The distress-push and demand-pull concept is seen as an integral part of the SLF, which enables us to distinguish between different kinds of diversification strategies based on their main motivation. Reduced to a welfare model, it points to the rationale to increase household income as the main driving force for taking up NFRE. Figure 4 also depicts the overlap between 'motivation' and 'intention', as is used in the Ajzen model.

This integrated framework shows all the important elements which should be considered in the analysis of NFRE. If a qualitative overview of possible determinants of non-farm diversification is desired, a focus on the components of the SLF and the demand-pull/distress-push concept is most effective. On the other hand, when looking at individual survey data, it might be more useful to concentrate on the decision making process itself, since it is often difficult to decide which of the numerous possible institutional, individual and household-specific determinants offered by the SLF and the demand-pull/distress-push concept are

Figure 4 An integrated framework for the analysis of NFRE



Source: Möllers (2006)

critical and even more difficult to measure their impact. Thus the focus should then be on the behaviour model which integrates the manifold and complex factors influencing NFRE decisions by considering attitudes, norms and behavioural control as the fundamental determinants of behaviour.

This paper is meant to contribute to a better understanding of the complexity of diversification decisions in the rural non-farm sector. It provides a comprehensive overview and discussion of the relevant theoretical concepts. The synthesis of these concepts could serve as a basis for theoretically sounder empirical research and as a thought-provoking impulse for policymakers, particularly with regard to the importance that is given to non-farm diversification in the ongoing rural development debate.

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