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KEY FACTORS AFFECTING THE LEVEL OF RURAL HOUSEHOLDS'S INCOME DIVERSIFICATION IN VIETNAM

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The study examines the effects of different factors on rural households' income diversification via regression analysis method, basing on the VHLSS data in the period of 2012-2016 published by The General Statistics Office of Vietnam. The study revealed that there are 3 groups of factors affecting the level of rural households' income diversification in Vietnam including: (i) household leader's features such as age, education level and ethnicity; (ii) household features such as: the household's size; employment rate; human capital; assets; household income per capita; expenditure for food consumption and medical services; (iii) regional factors such as communes under Program 135, communes with markets, communes with craft villages and distance from the communes to the nearest agricultural promotion center.

Keywords: income diversification, household, rural area, Vietnam.

1. Introduction

The diversity of rural households' income in developing countries is a topic receiving increasing attention of researchers and policy makers (Damite and Negatu, 2004; Ellis, 2000; Benard et al, 2014; Raphael O. Babatunde and Matin Qaim, 2009). Income diversification refers to the distribution of production resources to farm and non-farm activities (Abdulai and Croleress, 2001). According to Barrett, Reardon, Webb (2001), very few households collect all their income from any single source, or use all of their assets in just one activity. Researchers have mentioned several reasons explaining the diversification of household income including (i) to raise the income when the

resource for main activities is limited or insufficient (Minot et al); (ii) to minimize the risks from climatic hazards or other unexpected factors; (iii) to take advantage from the strategy of combining different activities (Raphael O. Babatunde and Matin Qaim, 2009); and (iv) to earn more cash for investing in agricultural activities when they have limited access to credit market (Reardon, 1997; Ruben Vandenberg, 2001).

All of the published studies about income diversification of rural households are based on data of poor countries with low income per capita and all aim to find out a solution for families in these nations to escape from the poverty trap. The factors affecting the income diversification mentioned in those studies com-

monly relate to the characteristics of the household's leader, the household itself and the region, varying according to the database and the research locations.

Previous studies mainly focused on analyzing the principal factors influencing the diversity of rural households' income in developing areas in Africa and Asia such as Ghana, Ethiopia, Mali, Zimbabwe, Nigeria, Indonesia or Vietnam. The results are various and inconsistent in the determinants and their level of influence on the diversification of income (Ellis, 1998; Schwarze and Zeller, 2005; Abdulai and Crolerees, 2001). However, deeper understanding of those determinants and their role in increasing income and improving living standards is not only important for each household but also useful for policymakers in formulating policy for the purpose of poverty reduction, and sustainable development. Therefore, studying the determinants and their effects on income diversification of households in rural areas in Vietnam is extremely urgent and significant in both theoretical and practical aspects.

The next sections of the paper are organized as follows: after an introduction of the theoretical and analytical framework in section 2, detailed method of data analysis is described in section 3. The next part of this paper is for presenting research findings and the final part is for conclusion and policy recommendations.

2. Conceptual and analytical framework

2.1. Definitions and measurements of income diversification

Income diversification generally refers to income strategies of rural households in order to increase income from different economic activities (Start, 2001; Sarah and Céline 2017). The income strategies may involve diversification of farm activities only, combining both within - farm and off - farm activities, or completely diversifying out of farming (Reardon et al, 2006; Sarah and Céline, 2017). According to Minot and others, 2006; Ronning and Koveried, 2006; Bernard et al., 2014, income diversification is defined

as a situation in which rural households earn money from a number of resources, both agricultural and non-agricultural.

The income diversification is normally measured basing on income because this factor clearly reflects the results of economic activities (Barret and Reardon, 2000). The degree of income diversification is usually analyzed through the percentage of income from different activities on total household's income. The study employs the Herfindahl Hirschman index (HHI) to estimate the degree of income diversification. The HHI formula is as follows:

$$HHI = \sum_i P_i^2$$

Where P_i is the proportion of the "i" income source to the total household income.

HHI is calculated basing on the proportion of income sources so it is highly sensitive with changes in these factors. It is the most appropriate measurement because it takes into consideration both the number of income sources and the contribution of each source to the total household income.

HHI index ranges from close to zero (0) to one (1) and it reaches its maximum value (equal to 1) when the household only has only one income source.

To facilitate the estimation of income diversification by income sources, several studies using IHI as the inverse index of HHI. IHI is formulated as follows:

$$IHI = 1/HHI = 1/(\sum_i P_i^2)$$

IHI index receives its minimum value (equal to 1) when the household generates income from one source as it has its maximum value (equal to the number of its existing income sources) when it reaches its highest degree of income diversification. In other words, the higher the IHI index, the greater the level of income diversification. Therefore, it is more suitable and obvious to use the IHI index rather than the HHI index.

2.2. Determinants to income diversification of rural households

The incentives for rural households to diversify income primarily base on "push" and "pull" factors

(Barrett, Reardon et al., 2001; Haggblade et al., 2007; Tran Tien Khai and Nguyen Ngoc Danh, 2014; Sarah and Céline, 2017). The "push" and "pull" theory on diversity is based on the principles of neoclassical economics such as benefits maximization, rational choice, and cost of production which may vary depending on regions, countries and labor migration (Singh, Squire, and Strauss, 1986; Taylor and Adelman, 2003).

The "push" factors are harsh conditions which draw farming households into finding a substitute farm or non-farm activities. They may include risks from seasonality, land scarcity driven by population pressure, urbanization and fragmented landholdings, or imperfect markets of factors such as land, capital or labor, difficulties in market expansion due to poor infrastructure and high transaction costs (Barrett, Reardon et al., 2001; Ellis, 2000b).

The "push" factors have a tendency to affect the agricultural environment such as drought, flood and environmental degradation (Haggblade, Hazell and Reardon, 2010). The fact that "push" factors lead to diversification mainly occurs when poorer rural households engage in low-return nonfarm activities to ensure survival, to reduce vulnerability or to avoid falling deeper into poverty (Haggblade et al., 2007).

On the other hand, "pull" factors are favorable conditions that provide advantages for people to expand their livelihood activities in and/or outside agricultural activities. There are some advantages to mention such as agriculture commercialization, improvement of infrastructure, proximity to an urban area, labor market development or improvements in education and technology (Barrett, Reardon et al., 2001; Haggblade et al., 2007; Losch et al., 2012). Such "pull" factors tend to affect a less risky and more dynamic agricultural environment (Haggblade et al., 2010). These "pull" factors create opportunities for income diversification and usually "pull" households to involve in high-income non-farm activities in order to earn more and maximize the benefits from their assets (Haggblade et al., 2007).

Furthermore, ensuring a better standard of living through diversification is a cumulative process that requires an ability to earn money and invest to diversify production activities (Ellis and Freeman, 2004).

According to the theory of "pull - push", we hypothesize that income diversification behavior of rural households in Vietnam is mainly related to "push" and/or "pull" factors. We expect households living in underdeveloped rural areas, where "push" factors are more common (such as poor market access, poor farming conditions and lack of non - farm opportunities) (Haggblade et al., 2007, 2010) to engage in income diversification as a means of survival. In contrast, households living in rural areas which are relatively dynamic and where "pull" factors are more common (such as better infrastructure and more access to markets, more opportunities to engage in off - farm activities), can have the opportunity to engage in attractive income diversification activities (Haggblade et al., 2007, 2010).

3. Data and Method of data analysis

3.1. Data and variables

The study uses the survey data set of Vietnam Household living standards Survey - VHLSS 2012, 2014 and 2016 conducted by The General Statistics Office of Vietnam under the support of United Nations Development Programme - UNDP.

The dependent variables represent for different groups such as household leader's features, household features and regional factors. These variables are used basing on experiences withdrawn from theories and published studies about income diversification.

Basing on previous research, in this study, we propose some dependent variables in the regression model of factors affecting income diversification as follows:

The results of statistical analysis describing the value of the quantitative variables from the data are presented in Table 3.

Table 1: Variables selected from related research

Group of factors	Variables	Related research
Household leader's features	Age of household leader	Abdulai and CroleRees, 2001; Agyeman, Asuming - Brempong and Onumah, 2014; Alobò and Bignebat, 2017; Escobal, 2001; Xu Thi Phuong Chi and Nguyen Minh Duc, 2016; Janvry, Sadoulet and Zhu, 2015; Minot, Epprecht, T.T.T. Anh and L.Q. Trung, 2006
	Gender of household leader	Agyeman, Asuming-Brempong and Onumah, 2014; Alobò and Bignebat, 2017; Escobal, 2001; Xu Thi Phuong Chi and Nguyen Minh Duc, 2016; Janvry, Sadoulet and Zhu, 2015; Minot, Epprecht, T.T.T. Anh and L.Q. Trung, 2006
	Education level of household leader	Agyeman, Asuming-Brempong and Onumah, 2014; Alobò and Bignebat, 2017; Escobal, 2001; Xu Thi Phuong Chi and Nguyen Minh Duc, 2016; Janvry, Sadoulet and Zhu, 2015; Tran Tien Khai and Nguyen Ngoc Danh, 2014
	Ethnicity	Minot, Epprecht, T.T.T. Anh and L.Q. Trung, 2006; Tran Tien Khai and Nguyen Ngoc Danh, 2014
Household features	Family size	Abdulai and CroleRees, 2001; Alobò and Bignebat, 2017; Xu Thi Phuong Chi and Nguyen Minh Duc, 2016; Minot, Epprecht, T.T.T. Anh and L.Q. Trung, 2006
	Average years of schooling	Escobal, 2001; Xu Thi Phuong Chi and Nguyen Minh Duc, 2016
	Physical asset	Agyeman, Asuming-Brempong and Onumah, 2014; Alobò and Bignebat, 2017; Escobal, 2001; Tran Tien Khai and Nguyen Ngoc Danh, 2014
Regional factors	Distance to the local market	Escobal, 2001; Minot, Epprecht, T.T.T. Anh and L.Q. Trung, 2006

Source: Author's study

Table 2: Independent variables

Variables	Explanation	Expected sign
Age	Age of household leader	(+)
Dt	Ethnicity of household leader (1: if Kinh or Hoa; 0: otherwise)	(+/-)
Edu	Average years of schooling of household's members	(+)
Sotv	Number of household's member: representing the household's size	(-)
Tlld	Employment rate: equal to the ratio between the number of laborers in the household and the number of household members	(+)
Dtnhabq	Average housing area (m ² /person) of the household	(+/-)
Thubq	Income per capita (Thousand dong/person/month)	(-)
Chiyte	Expenditure for medical services (Thousand dong/year)	(+/-)
Chicb	Expenditure for food consumption (Thousand dong/month)	(+/-)
Kcttkn	Distance between the commune and the nearest agricultural promotion center (Km)	(+/-)
Xa135	Communes under Program 135: (1: if in the program; 0: otherwise)	(+)
Choxa	Commune market (1: if commune has market; 0: otherwise)	(+/-)
Cssx	Production facility (1: if commune has production facilities that attract labor; 0: otherwise)	(+/-)
Langnghe	Craft village (1: if the commune has craft villages that attract labor; 0: otherwise)	(+/-)

Source: Author's study

Table 3: Descriptive statistics

Variable	Number of observations	Mean	Standard deviation	Min	Max
Age	46,211	35.2354	21.64444	0	105
Sotv	46,211	4.016793	1.593993	1	15
Dtnhabq	46,167	22.45484	17.27908	2	450
Thubq	57,266	2216.841	2192.288	-5918	110143
Chiyte	57,266	4089.336	9926.35	0	306965
Chicb	57,266	2928.815	2089.868	0	47158

Source: Group of authors calculated through STATA software on VHLSS 2012-2016

(Note: values in the table are written according to international standard)

3.2. Method of data analysis

In order to further analyze the determinants to income diversification, we use the linear regression model with the dependent variable IHI - the index measuring income diversification.

The IHI model is expressed in this study as follow:

$$\text{IHI} = \beta_0 + \beta_1 \cdot \text{age} + \beta_2 \cdot \text{dt} + \beta_3 \cdot \text{edu} + \beta_4 \cdot \text{sotv} + \beta_5 \cdot \text{tld} + \beta_6 \cdot \text{dtnhabq} + \beta_7 \cdot \text{thubq} + \beta_8 \cdot \text{chiyte} + \beta_9 \cdot \text{chicb} + \beta_{10} \cdot \text{xa135} + \beta_{11} \cdot \text{kcttkn} + \beta_{12} \cdot \text{choxa} + \beta_{13} \cdot \text{cssx} + \beta_{14} \cdot \text{langnghe} + \varepsilon$$

Where:

+ Dependent variables are as explained in Table 2;

+ ε is the error term with mean 0, constant variance.

After conducting the estimation procedures including the exclusion of non - statistically significant variables and the verification of the model for the detection of defects including (i) Breusch - Pagan verification in which probability p is less than 5%, proving that the model has a variable error variance. Thus, the model is re-evaluated by a robust standard deviation (with more robust) to overcome this phenomenon; (ii) Multi-collinearity shows that the covariance coefficient is less than 2, indicating that the model does not have multi-collinearity; (iii) Verify the correlation between residuals and independent variables (without endogenous phenomena) by estimating the model, generating residuals, and estimating the model between the residual and the independent variables. The results show that there is no correlation between noise and independent variables. The final model passed these mentioned tests.

4. Research findings

4.1. Degree of income diversification of rural households in Vietnam:

The income diversification of farm households is measured using the IHI index. This index receives the minimum value 1 when the household has only 1 source of income and receives the highest value 9 when the household has all 9 sources of income as

mentioned below and all the sources equally contribute to the total income. 9 income sources are:

- Income from cultivation: from food crops, cash crops, fruit trees, industrial crops ...;
- Income from livestock;
- Income from hunting;
- Income from forestry;
- Income from aquaculture;
- Income from agricultural services;
- Income from non - agricultural - forestry - fishery business activities;
- Income from wage;
- Other sources: from land lease, house rental, from grants and other sources.

Table 4 provides a detailed view of proportion of income sources by economic regions in the country (Region 1: Red River Delta; Region 2: Northern Midlands and Mountains; Region 3: North Central and South Central Coast; Region 4: Central Highlands; Region 5: South East; Region 6: Mekong Delta).

In almost every region, the income from wage accounted for the largest portion, followed by the income from cultivation and non - agriculture - forestry - fishery business activities. Other income sources' portions vary depending on specific characteristics of each region.

Northern Midland and Mountains area comprise 33,53% in the total income from agriculture while this figure in Highlands area and Mekong Delta area accounted for 51,61% and 27,85% respectively, which were all higher than the figure of whole country (at 26,96%). This consequence is strongly influenced by favorable weather, soil and inhabitant conditions for the development of food crops, fruit crops and industrial crops.

In terms of income from livestock, Northern Midlands and Mountains with 12,36%; North Central and South Central Coast with 9,44% all higher comparing to the whole country with 8,96%. The diversity of topography, climate, water resources and the devel-

Table 4: Share of household income by region

Unit: %

Region	Cultiva- tion	Live- stock	Hun- ting	Forestr y	Aquacul- ture	Agricultural services	Non- AFF	Wage	Others
1	16.80	7.38	0.01	0.28	2.56	0.45	14.37	39.28	18.87
2	33.53	12.36	0.08	8.67	1.49	0.26	6.84	26.09	10.69
3	20.58	9.44	0.13	3.73	1.86	0.63	10.77	34.73	18.13
4	51.61	5.35	0.23	2.53	0.63	0.26	5.91	25.25	8.23
5	22.12	3.57	0.03	0.14	0.87	0.46	12.67	47.82	12.31
6	27.85	4.29	0.07	0.32	7.87	0.47	12.00	30.34	16.80
Whole Country	26.96	8.69	0.08	3.88	2.69	0.42	10.22	32.22	14.84

Source: Group of authors calculated through STATA software on VHLSS 2012-2016

(Note: values in the table are written according to international standard)

opment of grasslands in the Northern Midlands and Mountains, the North Central and Central Coast has a positive impact on raising income from livestock activities.

Thanks to the hilly topography which is suitable for the development of forest ecosystem, Northern Midlands and Mountains area ranks first in the proportion of income from forestry, accounting for 8,67% of the total income. On the other hand, with the advantage of the various river system of Mekong river, Mekong Delta region has the highest proportion of income from fishery, which triples this figure of the whole country.

For non - agriculture - forestry - fishery activities, the income from this source in Northern Midlands and Mountains area and Highlands area comprises only a small amount.

Degree of income diversification of rural households in Vietnam:

Table 5 indicates that, basing on observation of 37,331 households, the degree of income diversification receives its average value of 2,21; where the maximum value is 6,6277 and the minimum one is 0,1154.

Statistics about the annual degree of income diversification of households in 5 different income classes from low income to upper income are presented in Table 6.

According to the figures, poor households with low income per capita owns the highest IHI index (IHI = 2,53) comparing to other household groups. Households in low-middle income, middle income and upper middle income groups all have the degree of diversification higher than 2 while households with greatest amount of earning per capita has the lowest number (less than 2). The IHI index of the whole country is 2,21 which means that the income diversification level of low income and low middle income house-

Table 5: IHI index - Income diversification

	Number of observations	Mean	Std error	Min	Max
IHI	37,331	2,20682	0,846041	0,1153826	6,627732

Source: Group of authors calculated through STATA software on VHLSS 2012-2016

Table 6: Degree of income diversification by income classes

Year	Low income	Low middle income	Middle income	Upper middle income	Upper income	Whole country
2012	2,49	2,22	2,06	1,97	1,79	2,16
2014	2,54	2,35	2,18	2,08	1,95	2,23
2016	2,56	2,52	2,26	2,14	1,93	2,23
2012-2016	2,52	2,34	2,16	2,06	1,91	2,21

Source: Calculated using STATA software by authors basing data extracted from VHLSS 2012-2016

holds is higher than the average figure of the whole country.

4.2. Determinants and their effects on income diversification of rural households in Vietnam:

As indicated in the Table 7, the older the household leader, the higher the IHI index and households headed by Kinh people tend to have a lower diversity of income sources comparing to households headed by people of ethnic minorities.

Household features: Education which is calculated by the average years of schooling of members in the household and household size which is the number of members in the household have significant and positive impacts on the diversity degree.

In terms of physical assets, housing areas negatively affect IHI index. It could be explained by the fact that the availability of physical assets helps rural households to invest and develop their current income sources in depth and not focusing on diversifying income sources.

Besides, the income per capita has a reverse effect on diversity degree when households in low and low middle income groups own a higher degree of diversity comparing to households in upper middle and upper income group. In addition, medical expenditures and basic expenditures for food consumptions affect the level of income diversification, but in different direc-

tions. To be more precise, households with higher spending on medical expenditures more likely look for more diverse activities while households with greater needs for food consumption have a lower diversity degree.

Regional factors: Households under Program 135 of the government have higher income diversification index. It could be possible because households taking advantage of the infrastructure in the Government's program 135 have more opportunities to generate their income from different activities. Besides, the farther the distance from households to the nearest agricultural promotion center, the higher the IHI figure. This could be explained by the fact that lacking instruction and support from agricultural promotion-center, households can not earn much from the agricultural activities, thus pushing households to look for more diverse non - farm activities.

The factors such as Communes with craft villages, with markets or production facilities negatively affect income diversification index. This is due to the fact that people living in communes with craft villages, markets or production facilities mainly focus on some of the main income - generating activities without distributing their resources to different jobs. Therefore, they have a lower diversity degree.

Table 7: Unrestricted model for determinants of income diversification

IHI	Coefficient	Std. Error	T-statistic	Prob. (>t)
<i>Household leader features</i>				
age	0.0016	0.0003	6.2100	0.0000
dt	-0.0763	0.0182	-4.1800	0.0000
<i>Household features</i>				
edu	0.0074	0.0018	4.1200	0.0000
sotv	0.0429	0.0043	9.8600	0.0000
tlld	0.3204	0.0200	16.0300	0.0000
dtnhabq	-0.0009	0.0004	-2.3900	0.0170
thubq	-0.0000	0.0000	-12.8500	0.0000
chiyte	0.0000	0.0000	6.6100	0.0000
chicb	-0.0000	0.0000	-5.1900	0.0000
<i>Regional factors</i>				
xa135	0.1951	0.0172	11.3300	0.0000
kcttkn	0.0015	0.0007	2.3500	0.0190
choxa	-0.0420	0.0112	-3.7500	0.0000
cssx	-0.0278	0.0167	-1.6600	0.0960
langnghe	-0.0661	0.0153	-4.3200	0.0000
<i>vung</i>				
2	0.2389	0.0166	14.3500	0.0000
3	0.0524	0.0148	3.5400	0.0000
4	-0.2573	0.0271	-9.4900	0.0000
5	-0.4263	0.0250	-17.0700	0.0000
6	-0.1233	0.0178	-6.9400	0.0000
Intercept	1.8226	0.0372	48.9600	0.0000
<i>Included</i>				
observations	22,112			
R ²	11.80%			

Source: Calculated using STATA software by authors basing data extracted from VHLSS 2012-2016
 (Note: values in the table are written according to international standard)

Taking the Red River Delta as a benchmark, the Northern Midlands and Mountains, the North Central and Central Coast have positive regression coefficients. This illustrates that the level of income diversification in Northern Midlands and Mountains and North Central and Central Coast is higher than that of the Red River Delta. It may be argued that the hilly and mountainous topography in the North with harsh natural conditions are major limitations for agricultural production. Therefore, households in these areas tend to be more diverse in income resources. The Central Highlands, the South East and the Mekong River Delta hold the negative sign, that is, the degree of income diversification in these three regions is lower than that of Red River Delta. This can be explained by the fact that the natural conditions in these areas are favorable for households to focus on a number of activities that generate high income or a major source of income for the household.

5. Conclusion and recommendations:

General conclusion:

The data analysis above illustrates that all the three groups: (i) household leader's features (including age and ethnicity); (ii) household features (including size, education level, human capital, assets, income and expenditure); (iii) regional factors (including commune underprogram 135; communes with villages; communes with craft villages) can have influences on income diversification at different levels.

Policy recommendations:

From the above quantitative research, we would like to propose several policy recommendations as follows:

For household leaders and households

Human resources play a substantial role in improving income and helping households, particularly agricultural households to escape from poverty. The average years of schooling of household's member have a

positive impact on the degree of income diversification. For this reason, households should provide members with favorable conditions for improving their education level in order to gain knowledge and skills required for different income - generating activities.

Besides, the expenditure for food consumption and health care should be gradually increased for the improvement of household members' physical health. Additionally, rural households should also focus on assets accumulation, including fixed assets such as housing facilities in order to better equip the development of household economy. Another solution should be taking advantage of sources of grants to diversify income and improve the households' living standard.

For poor and poorest households:

Previous studies have indicated that poor and poorest households have a higher motivation to diversify income. For that reason, policy makers should issue more policies supporting agricultural households, particularly poor households for the purpose of income growth and poverty reduction.

The system of Vietnam Bank for Social Policies should develop their support programs for upgrading infrastructures for poor households and effectively maintain Program 135 or other similar projects to provide favorable financial conditions for these households to develop production and business activities.

For the communes:

Remote communes should continue to be supported with electricity infrastructure, roads, schools and stations in order to improve the "push factor", giving people access to non - agricultural income - generating activities, which sustainably improve the household's earning.

Local authorities should create a favorable environment for people to exchange goods by organizing markets as well as promoting similar retail distribution

network to replace the traditional market. In addition, developing trade promotion activities is another useful tool to help people commercialize agricultural products produced by households and buy household necessities in order to improve living standards, health condition and reduce medical expenses.

For communes with traditional craft villages, local authorities should continue their assistance to extend their business markets together with environment protection. Further more, these communes should also maintain their cultural value in their traditional products, creating brand recognition in order to make a unique value to their products.

Education and vocational training policy:

Education:

Regional factors and the academic level of household members are frequently mentioned as constraints to diversification. For this reason, the government should increase their investments in constructing schools, improving school facilities as well as teaching materials and teaching method in order to create the most favorable condition for the development of education in these areas. Local authorities should made greater efforts in encouraging people to send their children to school and maintain a long - term, continuous and regular learning process associated with the development of household business and local economy.

Vocational training:

In recent years, the development of technologies applied in agriculture has lowered the labor demand for this sector. Therefore, it is necessary for rural households in Vietnam to improve their agricultural skills and knowledge via vocational training in order to earn an advantage in this competitive job market.

Lack of knowledge and professional skills limit the households' opportunities to access to non-farm activities, restrict ideas and start-up projects by young people in rural areas, and thus prevent rural households to

diversify income sources to improve their earning in a positive and sustainable way. Investment in the developing vocational training centers is crucially important. The government should create favorable conditions for vocational training centers by adopting tax incentives, investment and land support policies, as well as support vocational teachers so that they can be assured of their teaching career. In addition, the government can also promote the connection between students and local enterprises and entrepreneurs as well as large corporations via vocational training; scholarship grants, tuition fee support, or credit accessibility... to encourage students. At the same time, it is necessary to apply information and communication technologies in training programs to support rural youths in choosing schools and jobs which will make them easier in access to career opportunities.

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Summary

Nghiên cứu sử dụng phương pháp phân tích hồi quy, với bộ dữ liệu Khảo sát mức sống hộ gia đình Việt Nam 2012-2016 do Tổng cục Thống kê điều tra

và công bố. Kết quả nghiên cứu cho thấy nhóm các yếu tố ảnh hưởng đến mức độ đa dạng hóa thu nhập của các hộ gia đình nông thôn Việt Nam bao gồm: (i) nhóm nhân tố về đặc điểm nhân khẩu của chủ hộ như tuổi, trình độ học vấn và dân tộc; (ii) Các nhân tố về đặc điểm của hộ gia đình như: quy mô hộ gia đình; tỷ lệ lao động; nguồn vốn nhân lực; tài sản; thu nhập bình quân; chi tiêu cho nhu cầu ăn uống thường xuyên và y tế; (iii) các đặc điểm của địa phương nơi cư trú của hộ gia đình như: xã thuộc chương trình 135, xã có chợ, xã có cơ sở sản xuất, xã có làng nghề và khoảng cách từ xã đến trung tâm khuyến nông gần nhất.

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