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# DETERMINANTS OF ECONOMIC EFFICIENCY OF TWORICE CROPS IN CHAU PHU DISTRICT, AN GIANG PROVINCE

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*The aim of this study is to measure economic efficiency of two rice crops in Chau Phu District, An Giang Province. Additionally, the study examines the determinants of economic efficiency of such the pattern by using OLS regression. Using data interviewed directly at farmers producing two rice crops per year in Chau Phu District, An Giang Province. The results reveal that if farmers invest 1.977.156 VND/1000m<sup>2</sup>, their return will be 4.234.273 VND/1000m<sup>2</sup>. Labor, fertilizer, productivity and harvest costs and rice price strongly affect the economic efficiency of the two rice crops.*

**Key words:** *tworice crops, economic efficiency, Chau Phu, An Giang.*

## 1. Introduction

Mekong Delta is the region providing the largest rice production of Viet Nam. According to the General Statistics Office of Viet Nam, in 2016, the total of the region's rice production obtained 24,990 tons, accounting for 56.7% of the total of the country's rice production. Depending on the local production conditions, each area has its own advantage to grow rice or apply different production models. Areas with suitable conditions is able to grow three rice crops per year. However, many studies have shown the negative impact of continuous crops-rice cultivation per year. According to Nguyen Bao Ve (2003), the monoculture of rice has caused arable land to be inundated almost all year, thereby making poor nitrogen mineralization and the fixation of potassium in the soil. In the long term, the soil environment in these areas will be changed. Therefore, pests often increase and decrease rice yield. For that reason, to stabilize productivity, farmers must increase the use of fertilizers and pesticides, which increase production costs and reduce the farmers' profits.

Chau Phu district, An Giang province has the most density acreage of two-crop rice production in the Mekong Delta region. However, very few studies have shown that this pattern provides the most opti-

mal economic efficiency for farmers. Therefore, the objective of this study is to examine and measure determinants of the economic efficiency of the two rice crops to propose some relevant solutions to improve productivity and increase profit for farmers. This contributes to a part of the new rural development plans in Chau Phu district, An Giang province in the near future.

The rest of the paper is organized as follows: Section 2 presents the theoretical background, hypothesis development and research methods; Section 3 presents the results of research and discussion; and finally, conclusions and implications are enclosed in Section 4.

## 2. Theory and research methodology

### 2.1. Theory and theoretical model

Production restructure is an objective requirement of social production development. Since production restructuring is a constant process of economic reform. In other words, economic reform is a Process that is carried out through increasing or decreasing (spontaneously or self-consciously) the growth rate of sectors in the region. The government and market mechanisms are involved in adjusting the economic restructuring process of a region. One of the criteria to consider production restructure is

economic efficiency because the economic efficiency criterion is actually a value. This means that when the production restructure increases value and thus is effective; otherwise it is not effective.

The concept of production restructuring is monoculture. Monoculture is to grow only one or very few types of plants on a plot of land to gain as much profit as possible. Monoculture is likely to increase diseases, natural disasters. Some studies have shown that monoculture has many consequences (Nguyen Bao Ve, 2003; Nguyen Tien Dung & Le Khuong Ninh, 2013). First, epidemics would destroy when cultivating only one type of plant because each worm has its own nutritional habits. Second, pests reduce genetic resources of seeds of new high-yielding varieties and hybrids have been brought to the countryside. Third, growing one type of plant increases economic risk because pests or natural disasters can destroy everything, thereby farmers will completely lost. Even high productivity, the price of the agricultural product is easily depreciated because supply of such the product is often larger than demand. Thus, monoculture is one of the key factors that has caused farmers's unstable income.

In order to propose the appropriate solutions to increase income for farmers, the paper examines the determinants of economic efficiency of the two rice crops. Previous studies have shown that many factors could affect the economic efficiency of two rice crops production. Hoang Van Long (2011) argued that production costs (soil preparation, seed, fertilizer, drugs for three pesticides, harvest, labor), price and productivity should be taken into account. The author also stressed that economic efficiency is often measured by net income. In addition, according to Mariano et al. (2012), experience is also considered to assess the economic efficiency of production. In addition, according to Nguyen Tien Dung & Le Khuong Ninh (2013), the size of cultivated area also affects the economic efficiency of the two rice crops pattern. As size of the cultivated area increases, economic efficiency of farmers' two rice crops production is likely to increase accordingly, because farmers enable to control workers (mostly family labor) and selection of inputs with guaranteed quality. At the same time, the larger the size of cultivated area, the easier it is for farmers to apply new farm-

ing techniques to increase productivity and economic efficiency in production. The findings of the study also revealed that the cultivated area size has a positive effect on farmers' income. Therefore, this study expects that cultivation area is positively associated with economic efficiency.

*Hypothesis 1: Cultivated area is positively related to economic efficiency*

The cost of seed rice from households is able to directly affect economic efficiency. This cost is measured by the average number of rice per hectare multiplied with the selling price of seed rice per kg. However, according to the findings of Hoang Van Long (2011), it is shown that the cost of seed rice does not affect farmers' net income. In this study, it is expected that the costs of seed rice has a negative effect on net income because several expertises show that in practice farmers pay attention to investing in quantity but not interested in seed quality. In particular, they have usually bought exoteric seeds, did not use certified or original breeds provided breed organizations and seed centers.

*Hypothesis 2: Source of seed rice is likely to negatively affect economic efficiency*

The labor cost is also another important factor, which may affect economic efficiency. This cost includes labor hiring costs plus family labor costs. This is measured by the average labor cost of each crop per hectare. Hoang Van Long (2011) argued that this labor cost is inversely proportional to economic efficiency. For that reason, we expect that labor costs would negatively affect economic efficiency.

*Hypothesis 3: The higher the labor cost of household, the lower the economic efficiency*

The cost of fertilizers and plant protection drugs have negatively associated with economic efficiency (Hoang Van Long, 2011). This means that farmers spending much the cost of fertilizers and plant protection drugs decrease economic efficiency. Therefore, we argue that the costs of fertilizers and pesticides have negative effects on economic efficiency.

*Hypothesis 4: Fertilizer and plant protection costs have negative effects on economic efficiency*

Expenses of plowing, harrowing, hoeing, etc. for the process of rice cultivation are also important

with respect to economic efficiency. We argue that the cost of plowing, harrowing, hoeing, etc. has a positive effect on economic efficiency because of good soil preparation. Therefore, soil becomes more compact so that rice can easily absorb nutrients from the soil.

*Hypothesis 5: Expenses of plowing, harrowing and plowing are positively related to economic efficiency.*

The cost of harvesting of farm households is related to hire machines and equipment to harvest rice. In the past, these costs are very high in the total of rice production costs, but today these costs significantly reduce due to development of science and technology, in particular the emergence of combine harvester. We suggest as follows

*Hypothesis 6: Harvesting costs have a negative effect on economic efficiency.*

The selling price of rice is calculated by the average selling price of one kg of rice. Hoang Van Long (2011) addressed that rice prices have the same impact on net income. That is, the higher selling price of rice, the higher farmers' net income. In this study, it is expected that the selling price of rice is also expected to bring about the same impact with net income.

*Hypothesis 7: The selling price of rice has a positive effect on the economic efficiency of the model.*

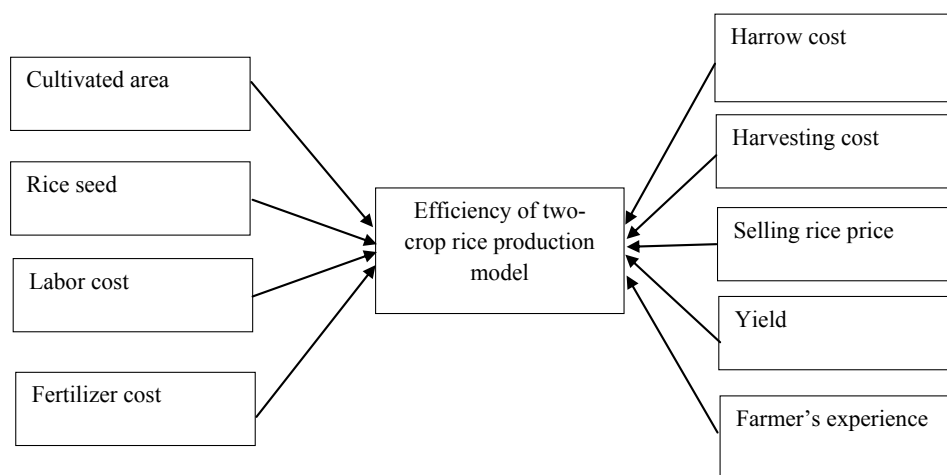
Several studies show that productivity has a positive effect on the economic efficiency of production models (Nguyen Tien Dung & Le Khuong Ninh, 2013; Hoang Van Long, 2011). This implies that the higher the productivity, the higher the net income. We propose the following hypothesis

*Hypothesis 8: Rice yield has a positive effect on economic efficiency.*

Many studies have shown that the farmer's experience has a strong influence on the economic efficiency of the production model. The studies revealed that there is a positive relationship between farmer's experience and economic efficiency (Nguyen Tien Dung and Le Khuong Ninh (2013) Tran Duc Trung, 2017; Hoang Van Long, 2011). However, some studies found no empirical evidence for this relationship. In this study, we expect that the farmer's rice cultivation experience would have a positive impact on economic efficiency. The reason is that the longer farmers grow rice, the more experience they obtain over time. Thus, such the experienced farmers choose technique, seed as well as the type of inputs (especially fertilizers and agricultural chemicals), which are suitable to the characteristics of land and the local production conditions to ensure seasonality. Thereby, increasing economic efficiency in rice production (Mariano et al., 2012).

*Hypothesis 9: The more experience the farmer owns, the higher the economic efficiency.*

Adopting the aforementioned theoretical arguments, the theoretical model of the study is proposed as Figure 1.



**Figure 1:** Theoretical model

## 2.2. Research methodology

### 2.2.1. Data

In order to test the hypotheses, the paper uses data from direct interviews with farmers producing two rice crops in Thanh My Tay and Khanh Hoa

communes, Dao Huu Canh, Vinh Thanh Trung, Binh Long, O Long Vi, My Duc, and My Phu, which belong to Chau Phu district, An Giang province. To ensure representativeness, stratified random sampling methods were used to conduct data collection. In this study, the stratified basis was selected by the research group as communes with rice yields and areas of at least 1.5 hectera in communes recorded from communes. Based on the list of households provided by the People's Committees of the communes, the authors use random sampling methods to select the households of the sample according to the criteria of production and rice area. The total number of households growing rice in two crops is about 6,300 households with different sizes, the average area is 1.5 hectera per household.

Data were collected by directly interviewing 211 households cultivating two rice crops with the above criteria. Households in this production model were introduced by local authorities and invited to interview. Interview questionnaires were carefully

sources, as well as techniques applied by farmers, etc. After checking and processing the questionnaire, the total number of questionnaires reached 162 households producing two rice crops. The study used this observation number to analyze.

### 2.2.2. Variable measure and specification

Adopting previous studies (Nguyen Tien Dung & Le Khuong Ninh, 2013), the specification of the study is presented by the equation (\*).

$$Y_i (\text{THUNHAPRONG}) = \beta_0 + \beta_1(\text{DIENTICH})_i + \beta_2(\text{GIONG})_i + \beta_3(\text{LAODONG})_i + \beta_4(\text{SINHHOC})_i + \beta_5(\text{CBDat})_i + \beta_6(\text{THUHOACH})_i + \beta_7(\text{GIABAN})_i + \beta_8(\text{NANGSUAT})_i + \beta_9(\text{KINHNGHIEM})_i + \varepsilon_i (*)$$

where:

$Y_i$ : dependent variable is economic efficiency

$\beta_{1-9}$ : estimated coefficients of explanatory variables, respectively

$\beta_0$ : constant of the model

$\varepsilon_i$ : error term of the model

Measuring dependent and independent variables in the equation (\*) is enclosed in Table 1.

**Table 1:** Measurement of variables in the model

Variable and measurement	Explanation	Expection
Net income THUNHAPRONG (VND/hectera)	Economic efficiency is calculated by the difference between total of income and of production costs	
Area DIENTICH (hectera)	Cultivated area of farmer per household	+
Seed GIONG (VND/hectera)	Seed of rice is measured by multiplying between the average volume of rice seed per hectera per crop and price per kg	-
Labour LAODONG (VND/hectera)	Average labor cost per hectera per crop	-
Biology SINHHOC (VND/hectera)	Fertilizer and plant protection costs per hectera per crop	-
Expenses CBDat (VND/hectera)	Expenses of plowing, harrowing, hoeing per hectera per crop	-
Harvesting THUHOACH (VND/hectera)	Rice harvesting cost per hectera per crop	-
Price GIABAN (VND/kg)	Average price of selling rice per kg	+
Productivity NANGSUAT (tons/hectera)	Rice yield per hectera per crop	+
Experiences KINHNGHIEM (the number of years)	The number of year since famers cultivated rice until 2017	+

designed and conducted a pilot before formal interviews were done. After training the survey method to check and clarify the information in the questionnaire, the official survey was conducted in the period from July to August 2017. Focus questionnaire on collecting data for research such as rice cultivation situation, production cost items and output

## 3. Empirical results and dicussion

### 3.1. The context of production and consumption of rice in Chau Phu District

a. *Winter-Spring crop*: According to the annual report of the Department of Agriculture and Rural Development of Chau Phu district, in the Winter-Spring crop in 2016 and 2017, the seedlings have

obtained an average of 35,572.5 hectera over the total of 35,895 hectares, reaching 99,1 percent of the plan. This decreased 881.5 hectera vis-à-vis the same period. The average yield of rice is 7.18 tons per hectera, 0.33 tons per hectera, which is lower than the same period, the average output is 255,482 tons. In the last two years, the rice varieties like OM6976, average prices from VND 4,900 to 4,920 per kg, Jasmine ranges from VND 5,400 to 5,500 per kg, sticky rice from VND 4,700 to 4,800 per kg.

*b. Summer-Autumn crop:* In 2016 and 2017, the Summer-Autumn crop in the whole district fell to an average of 33,119 over the total of 33,527 hectares, reaching 98.78% of the plan. This reduced 3,202 hecteracompared with the same period. The average yield was 5.45 tons per ha, down 0.33 tons per ha over the same period, the output was 180,531 tons. Regarding rice consumption, the price of OM 7347 fresh rice is from 5,000 to 5,300 VND per kg, OM4218 is from 5,000 to 5,300 VND per kg, OM 6976 is from 5,100 to 5,400 VND per kg, sticky rice varies from 4,300 to 4,500 VND per kg.

*c. Financial indicators of two rice crops model*

Table 2 shows that in the Winter-Spring crop of the two rice model, every farmers have to spend 1,977,156 thousand VND per 1,000m<sup>2</sup>, they receive 4,234,273 thousand VND and the profit is 2,257,117 thousand VND. Specifically, in the two rice crops model, if farmers spend one VND for production cost, they would receive 2.14 VND of income and 1.14 VND of profit.

**Table 2:** Financial indicators of Winter-Spring and Summer-Autumn crops

Items	Winter-Spring crop	Summer-Autumn crop
Production cost	1,977.156	2,000.615
Income	4,234.273	3,368.746
Net income	2,257.117	1,368.131
Income over cost	2.14	1.68
Net income over cost	1.14	0.68
Net income over income	0.53	0.41

Similar to the Winter-Spring crop, in the Summer-Autumn crop, if farmers spend 2,000,615 thousand VND per 1000m<sup>2</sup>, they would receive 3,368,746 thousand VND per 1000m<sup>2</sup>. In other words, if famers spend one VND, they would earn

1.68 VND of income and 0.68 VND of profit.

**3.2. Determinants of economic efficiency of two-crop rice model**

*3.2.1. Multicollinearity and heterokedastercity*

Using the variation inflation factor (VIF) of the variables in the model to test whether data suffer multicollinearity. If VIF is below the "threshold" value 10, which implies no multi-collinearity phenomenon (Mai Van Nam, 2008). The results show that the VIF value of all the variables in the model is below the threshold value, so there is no multicollinearity in the regression model.

In addition, White test results indicated that the P value of 0.3760 is greater than the significance level  $\alpha = 10\%$ . Therefore, accepting hypothesis null hypothesis (variance error of 2-crop rice model is uniform). Therefore, there is no variance change phenomenon in regression model. This means that heterokedastercity is no issue in the model.

*3.2.2 Results of estimating parameters for determinants of economic efficiency of two-crop rice cultivation model*

To examine determinants of economic efficiency from two-crop rice cultivation, we applied an OLS linear regression to estimate the parameters. The estimated results are presented in Table 3.

The estimated results in Table 3 show that the factors are strongly correlated with net income with R-squared of 0.599. This means that the variation in

net income of two-crop rice farmers is explained by the factors at 59.9 percent. In the other words, the variation of net income of farmers is explained by variation in productivity, selling price, land

preparation costs, fertilizer costs, labor rental costs and pesticide costs by 59.9 percent. In addition, the value of F is 1002.422, which corresponds to the significance level of 1 percent. This implies that the

**Table 3:** Regression results on the determinants of farmers' economic efficiency from two-crop rice cultivation model

Variables	Coefficient	Standard error
Constant	-	1.298,480.066
	34,389,241.372***	
DIENTICH	-14,065.038 <sup>ns</sup>	10,410.266
GIONG	-0.701*	0.295
LAODONG	-0.800***	0.090
SINHHOC	-0.940***	0.044
CBDat	-1.301***	0.201
THUHOACH	-1.504***	0.262
GIABAN	6,659.032***	258.488
NANGSUAT	5,098,036.503***	70,006.024
KINHNGHIEM	27,101.118 <sup>ns</sup>	16.764,075
Number of observations		162
R <sup>2</sup>		0.599
F value		1002.422
P		0,0000

(\*\*\*: statistical significance at 1%; \*\*: statistical significance at 5%; \*: statistical significance at 10%; ns: non significance)

application of the linear regression is applicable for the study.

Table 3 shows that the productivity of rice (NANGSUAT) is positively associated with the net income of rice production. This implies that when other factors are constant, the higher rice productivity, and the higher net income. The results revealed that when the yield of paddy rice increases by 1 unit per ha, the net income is likely to increase by 5,098,036,503 VND per ha with the statistical significant level at 1 percent. This result implies that the hypothesis 1 is supported.

Similarly, Table 3 shows that the selling price (GIABAN) is also positively related to farmer's net income at the 1 percent significant level. This means the hypothesis 7 is supported. When other factors are constant, the higher the rice's selling price, the higher the net income. This means that when the selling price increases by 1 unit (VND) per kg. The net income is likely to increase by 6,659,032 VND per ha with the statistically significant level at 1 percent.

The estimated results indicate that the cost of seed (GIONG) has a negative impact on the net income of the two-crop rice production at the 10

percent significance level. This implies that the hypothesis 3 cannot be rejected. This finding implies that when other factors remain unchanged, the cost of buying seeds increases by 1 unit (VND) per ha, two-crop rice production farmer's net income is likely to decrease by 0.701 unit (VND) per ha and vice versa.

Additionally, the study found that labor costs (LAODONG) have negative effects on net income at 1 percent statistically significant level. That is, when these expenses increase by 1 unit (VND), the net income is likely to decrease with the corresponding amount of 0.800 unit

(VND) per ha and vice versa. This result supported the hypothesis 3.

Fertilizer and pesticide costs (SINHHOC) also have negative effects on two-crop rice production farmer's net income at 1 percent statistically significant level. When other factors are constant, these costs increase by 1 unit (VND) per ha, which leads to farmer's net income to drop by 0.940 unit (VND) per ha and vice versa. This means that the hypothesis 4 is strongly supported.

Similar to other costs, harvesting costs (THUHOACH) are negatively associated with farmer's net income at the 1 percent statistically significant level. This means that the hypothesis 6 is supported. The result implies that when other factors are constant, the cost of harvesting increases by 1 unit (VND) per ha, the net income decreases by 1.504 unit (VND) per ha.

According to the enclosed results in Table 3, farmers' rice area (DIENTICH) and rice cultivation experience (KINHNGHIEM) do not affect their net income due to non statistical significance ( $p > 0.1$ ). These results show that the hypotheses 1 and 9 is rejected.

#### 4. Conclusion and policy implications

Based on the analysis of the economic efficiency of the two-crop rice cultivation model in Chau Phu district, An Giang province, it can be concluded that the Winter-Spring crop of the two-crop rice production model, farmers spend 1,977,156 VND per 1,000 m<sup>2</sup>, their income would be 4,234,273 VND, and the profit would be 2,257,117 VND. For Summer-Autumn crop, if farmers spend 2,000,615 VND per 1000 m<sup>2</sup> for the rice production, they will earn the amount of net income 3,368,746 VND per 1000 m<sup>2</sup>. In addition, the study found that the economic efficiency of two-crop rice production farmers in Chau Phu district depends on factors including seed costs, fertilizer costs, plant protection costs and labor cost, productivity, selling and harvesting cost. These factors play an important role and directly affect the economic efficiency of farmers. Therefore, these elements should be taken into account for two-crop rice production model for the purpose of enhancing the economic efficiency of the production model.

The results show that, because of farmer's ignorance with respect to advices from experts in the rice production process, farmers take continuous rice cultivation. This leads to negative impacts on the productivity of the main two rice crops. Winter - Spring and Summer - Autumn. Although the two - crop rice cultivation model is profitable, it also provides jobs for farmers but this form of cultivation still brings several negative effects such as appearance of pests and diseases, non-sedimented land, environmental pollution, causing organic poisoning for rice, soil degradation. These decrease rice productivity in long time.

The research results show that the two-crop rice model has relatively high economic efficiency. Therefore, local authorities in the district need to plan production areas, recommend and instruct techniques for farmers to implement appropriate production to achieve highest productivity. In addition, it is necessary to advise and encourage people to use the time rest of the year to produce other agricultural products suitable to climate, soil and

market conditions in order to generate additional income for local farmers. Although the economic efficiency of the two-crop rice model in the area is relatively high, farmers are urged to participate in technical training, participate in local associations and organizations to exchange experience. Furthermore, the study proposes local authorities to strengthen the organization of technical training classes and continue to improve the quality of activities of local associations and unions. This generates good conditions for farmers to study and exchange experience together, thus creating conditions for rice-growing households to access scientific and technical applications and use suitable rice varieties for local soil, thus reducing high epidemic diseases. As a result, these contribute to improve productivity and higher economic efficiency of two-crop rice production households.

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#### References:

1. Mai Van Nam, (2008), *Econometrics*. Thong Ke Press.
2. Nguyen Bao Ve (2003), "Factors affecting the sustainability of triple rice production in the Mekong Delta". Report Workshop on rice improvement in three crops in An Giang.

3. Hoang Van Long (2011), "Evaluation of economic efficiency of rice cultivation model - tiger shrimp and rice - tiger shrimp - mud crab in U Minh Thuong in Kien Giang province", Master thesis. Can Tho University.

4. Tran Duc Trung, 2017, "Assessment of financial efficiency of rice production models: 3 rice crop models, two rice crop models - one color crop, two rice crop models - 1 fish crop in Phung Hiep district, Hau Giang province", Master thesis. Can Tho University.

5. Nguyen Tien Dung and Le Khuong Ninh (2013), "Factors affecting economic efficiency in rice production by households in Can Tho city", Scientific Journal of Can Tho University, 36, 116 - 125.

6. Mariano, M. J., Villano, R. and Fleming, E.(2012), "Factors influencing farmers' adoption of modern rice technology and good management

practices in the Phillipines". Agricultural Systems, 110, 41-53.

### Summary

Mục tiêu của bài viết này là đo lường các yếu tố ảnh hưởng đến hiệu quả kinh tế của mô hình sản xuất lúa hai vụ tại huyện Châu Phú, tỉnh An Giang. Sử dụng phương pháp ước lượng hồi quy đa biến và dữ liệu từ việc phỏng vấn trực tiếp các nông hộ đang sản xuất mô hình lúa hai vụ tại huyện Châu Phú, tỉnh An Giang để kiểm định các giả thuyết. Kết quả nghiên cứu cho thấy rằng, nông dân bỏ ra 1.977,156 ngàn đồng chi phí đầu tư/1000m<sup>2</sup> thì thu về 4.234,273 ngàn đồng và lợi nhuận ròng đạt được là 2.257,117 ngàn đồng/1000m<sup>2</sup>. Chi phí mua giống, lao động, phân bón, chuẩn bị đất, thu hoạch, năng suất, giá bán có ảnh hưởng mạnh mẽ đến hiệu quả kinh tế của mô hình sản xuất lúa 2 vụ tại địa phương.

## VO VAN DUT

### 1. Personal Profile:

- Name: **Vo Van Dut**
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### 2. Major research directions:

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- International Business Review
- Asian Academy of Management Journal
- Asian Journal of Business and Accounting