



Efficiency of Development Investment in Cần Thơ City

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Abstract

The paper aims at analyzing mobilization of investment and efficiency of the use of investment for economic development in Cần Thơ City. The Solow economic growth model and Incremental Capital-Output Ratio (ICOR) are used for analyzing the efficiency investment for economic development from 119 samples gathered in the years 1990-2006. The result shows that the investment and labor are two main factors contributing effectively to the economic growth and development of Cần Thơ City. In fact, full attention hasn't been paid to the agricultural sector with a view to developing the hi- tech agriculture; meanwhile, the manufacturing sector failed to act

as a dynamic of economic development; and the service sector has not met the market demand during the economic integration. In order to increase efficiency of investment, Cần Thơ City authorities had better take measures to attract more investments and use them more effectively; beef up vocational and technical training; and give priority to investment in and application of high technologies.

Keywords: efficiency of use of investment, development investment, growth, quality of labor, application of high technology.

1. Problem

In the globalization, investment, investment efficiency and sustainable development are

important problems to all provinces. Foreign investment has contributed a lot to the economic growth in Cần Thơ and the Mekong Delta as a whole. Besides certain industries that enjoy high growth rates due to effective use of investment, many others show poor performance in this field and fail to make the best use of local potentials and comparative advantages. So it's necessary to establish an overall view of local potentials and advantages in order to attract more investment and use it effectively to achieve a sustainable development.

2. Methodology

a. Time and space: Cần Thơ City is one of provinces in the Mekong Delta where many policies have been adopted to attract both foreign and domestic investment. Survey of investment efficiency was carried out in Cần Thơ City whose structure of industry has been changed positively in the direction of industrialization and development of services and agriculture. This estimate lasted from 1990 to 2006. The scope of survey includes such fields as agriculture, fishing and sea farming, manufacturing, construction, commerce, service, transport, communications, among others.

b. Objective: The survey aims at analyzing the mobilization of investment and investment efficiency in Cần Thơ City. Specific targets are as follows:

- Analyzing the task of attracting investment and labor in Cần Thơ,
- Estimating the efficiency of employment of investment and labor in various industries in Cần Thơ,
- Suggesting measures and solutions need for improving the mobilization and employment of investment in Cần Thơ.

c. Tested hypotheses

The following three hypotheses have been tested:

- (1) The labor force is of poor quality and fails to meet the demand posed by development projects in Cần Thơ.
- (2) Sources of investment are distributed among too many projects and the investment efficiency is low.
- (3) The manufacturing sector fails to play the leading role in the economic development.

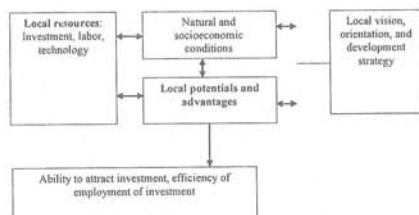
d. Analyzing methods

- Approach: Many economists use growth model to determine the investment efficiency and origin of economic growth, and analyze relations between investment, growth and investment efficiency according to the Harrod-Domar model, evaluate factors of economic growth using the Solow model or total factor productivity (Nguyễn Thị Cảnh, 2004), or estimate quality of growth through the investment efficiency by analyzing the ICOR and social labor productivity (Trương Thị Minh Sâm, 2001).

The approach employed in the survey comprises the following stages:

- Conducting semi-structure interviews in various industries and fields,
- Asking for opinions from experts,
- Analyzing, checking, comparing and contrasting data gathered.

Figure 1: Frame for estimate of investment efficiency



- Method of gathering data: Data used in the study come from 119 samples gathered from seven industries and fields of all three sectors (agriculture, manufacturing and service). Numerical data are gathered from official reports, statistical yearbooks published by Cần Thơ authorities in 1990-2006, information supplied by local leaders and officials, and various relevant studies.

- Method of analyzing:

+ Analyzing objectives (1): Employing descriptive statistics methods (comparing, checking, and contrasting) to analyze mobilization of investment and labor in Cần Thơ.

+ Analyzing objective (2):

The Solow growth model is employed to analyzing shares of capital and labor in the

economic growth:

$$\ln GDP = \ln a + \alpha \ln K + \beta \ln L + \gamma T + \gamma_1 D_1 + \gamma_2 D_2 + \gamma_3 D_3 + \gamma_4 D_4 + \gamma_5 D_5 + \gamma_6 D_6$$

where K is capital, la is labor, D_i: dummy variable indicating industry or sector (D₁: agriculture; D₂: fishery; D₃: manufacturing; D₄: construction; D₅: service; D₆: transport and communication); T: dummy variable indicating division of old provinces.

Basic hypotheses of the model: $(\alpha + \beta) > 1$ (profitability or increasing marginal productivity: Cần Thơ still suffers shortage of capital and skilled labor for development), technology is exogenous (Cần Thơ hasn't invested in development and application of high technologies), labor and capital can replace each other (manual labor is widespread).

- ICOR is used for evaluating the investment efficiency.

+ Analyzing objective (3): Methods of descriptive statistics are used as bases for suggested measures and solutions to improvements in the mobilization of investment and its employment in Cần Thơ.

3. Evaluation of investment efficiency in Cần Thơ

a. Capital for development

Capital for investment in Cần Thơ rose by 34.2% a year in 2000 – 2006 and increased from VND1,664.8 billion in 2000 to 9,730 in 2006.

In the years 2000-06, the gross investment in Cần Thơ amounted to VND30,251.6 billion, and 97.27% of which (or 29,426.3 billion) came from domestic sources while the foreign investment accounted for only some 3%. Investment from other provinces in Cần Thơ was also very limited.

Cần Thơ failed to attract foreign investment

because of its poor infrastructure and business climate. From 2001 to 2006, licenses were granted to 26 projects capitalized at US\$101.73 million. Up to early 2006, there were 36 valid FDI projects in Cần Thơ with a total registered capital of US\$140.04 million and a realized capital of US\$75.2 million. ODA fund and aid from NGOs in recent years was very small, about US\$19.4 million and 10.88 million respectively.

b. Size and quality of labor force:

The labor force in Cần Thơ rose by 1.6% a year in 2000-07, lower than the average of the Mekong Delta of 2.18%.

In 2006, the primary sector employed 51.12% of the labor force and this proportion tended to fall. The industrial sector employed 16.9% and the service sector 31.98%; and figures of the two sectors show signs of increase. This means that the labor structure is changing positively. Rate of changes in the labor structure, however, is slower than the average rate found in the Mekong Delta.

In recent years, the vocational training in Cần Thơ has made good progress: number of trainees rose from 11,000 in 2000 to 31,400 in 2006 and 32,920 in 2007. Laborers with some training (long or short term) represented 27.97% of the labor force in 2006 and this figure rose to 31.43% in 2007. Technically trained laborers (acquiring certificates after long-term training courses) accounted for 11.4% of the working population. This figure is high as compared with the Mekong Delta but it is still lower than the national average of 12.5%. Well-trained and skilled labor, especially in the manufacturing sector, and education and health care services, is still lacking. Many well-trained laborers, unfortunately, couldn't find jobs appropriate to their expertise and changes in

Table 1: Investment in development in Cần Thơ in 2000-2006 (VND billion)

Source	2000	2001	2002	2003	2004	2005	2006
1. Domestic capital	1,504.8	1,717.2	2,582.3	2,947.9	3,929.1	7,120.0	9,625.0
- Local budget	995.4	1,139.1	1,665.9	1,981.1	2,972.9	5,383.0	7,315.0
- Grant-in-aid	509.4	578.2	916.5	966.8	956.2	1,137.0	2,310.0
2. Foreign capital	160.0	77.2	20.1	73.2	159.8	230.0	105.0
Total	1,664.8	1,794.4	2,602.4	3,021.1	4,088.9	7,350.0	9,730.0

Source: Cần Thơ Statistical Yearbooks 2004, 2005, and 2006; Reports on implementation of Cần Thơ People Council's Resolutions on socioeconomic development, national defense and public security in 2004, 2005, and 2006

the structure of industry. Labor structure in rural areas is changing favorably when more and more laborers left the agricultural sector for the manufacturing and service ones, but the change is still slow.

c. Roles of capital and labor in the economic growth

The Cần Thơ economy has gained promising growth rates in recent years: 13.5% on average in the years 2001-05 (based on the 1994 price) and 16.2% in 2006. The fastest developing industries are construction and fishery. However, all sectors still face great obstacles to their development (Nguyễn Thị Diệu Thắm, 2007).

Regression analyses show that both labor and capital have relations to the economic growth in Cần Thơ, and the former is more important than the latter, because the starting point of Cần Thơ is rather low and its economy is still based on manual and cheap labor. Around 87.9% of changes in the economic growth can be explained by the roles of capital and labor ($R^2 = 87.9\%$); and 12.1% of changes in its gross product come from exogenous factors as suggested by assumptions of the model.

- Re-division of the province: Variable T (re-division of the province) with its regression coefficient γ of 0.937 (> 0) is statistically significant at 1%. This means that the growth rate of Cần Thơ City is higher than that of Cần Thơ Province (Cần Thơ City is established by separating the provincial town and some wards from the Province of Cần Thơ).

Regression equation:

$$\ln GDP = -4,403^{**} + 0,037 \ln K^{***} + 1,645 \ln L^{***} + 0,937 T^{***} - 3,100 D_1^{***} + 4,211 D_2^{***} - 0,140 D_3^{ns} + 0,854 D_4^{***} - 0,755 D_5^{***} + 0,207 D_6^{ns}$$

***: statistically significant variable with an error of 1%; **: statistically significant variable with an error of 5%; *: statistically significant variable with an error of 10%; ns: non significant.

Operating as a city under direct control of the central government brings about more favorable conditions for the economic growth.

- Agriculture: $\lambda_1 = -3.100 < 0$. It is statistically significant at 1%, which shows that the agricultural sector has developed slowly. Investment in this sector is not big enough to promote production of high-quality farm products.

- Fishery: $\lambda_2 = 4.211 > 0$. It is statistically significant at 1% and proves that this business has developed well and affected favorably the local economic growth.

- Manufacturing: $\lambda_3 = -0.140$. It has no statistical significance. This means that the manufacturing sector in Cần Thơ has developed very slowly and couldn't act as a dynamic of economic development.

- Construction: $\lambda_4 = 0.854$. It is statistically significant at 1%, which reflects its positive role in the economic growth.

- Service: $\lambda_5 = -0.755$. It is statistically significant at 1%, which shows that this sector is underdeveloped and couldn't be a key industry for Cần Thơ.

- Transport and telecommunications: $\lambda_6 = 0.207$. It has no statistical significance and reflects the fact that this service fails to support the economic growth.

d. Investment efficiency: Cần Thơ is badly in

Table 2: Size and quality of the Cần Thơ labor force, 2000 - 2007

Labor	2000	2004	2005	2006	2007	Average increase per year (%)
1. Total labor force (person)	660,001	699,835	710,337	723,883	737,687	1.60
2. Employed laborers	451,383	490,740	496,115	526,762	573,540	3.48
3. Laborers with some training	60,713	86,125	115,830	147,320	180,240	16.82
4. Trained laborers as % of labor force	13.45	17.55	23.35	27.97	31.43	4.63*
5. Graduates from vocational schools per year	11,100	24,757	29,705	31,400	32,920	16.80

Source: Cần Thơ Statistical Yearbook 2006; Report on vocational training in Cần Thơ in 2004-07 and program for 2008-2010 by Cần Thơ People's Committee (April 2008); *: Average annual growth rate in 2004-07

need of capital because local authorities are accelerating development of the manufacturing and service sectors and urbanization is taking place at high speed. Particularly, infrastructure projects of large scale and training of human resource are carried out continuously after Cần Thơ is recognized as a city directly responsible to the central government. To estimate the investment efficiency and its effects on the economic growth, we can analyze the ICOR, the ratio of increases in investment to increases in the GDP.

The Cần Thơ ICOR in 2004-06 was higher than that of the whole Mekong Delta. These are the first years after Cần Thơ became independent from the Province of Cần Thơ, therefore big investments were made with a view to developing it into a big city.

In the years 2000-06, the agriculture developed slowly. The investment in this sector fell remarkably and only started to increase in 2005. The ICOR reflects its poor development. The agriculture here faces too many difficulties: small investment; lack of application of technical advances; and failure to tap local advantages and potentials. Its structure of products is unreasonable and slow to change. Non-farming businesses couldn't develop. Infrastructure in rural area is poor. Production is still of a small scale.

The ICOR of the manufacturing sector showed an upward tendency from 2005 on. Most industrial concerns in Cần Thơ are small and employ obsolete machines. There is almost no famous brand name here. The manufacturing sector fails to support the agricultural development. To attract more investment to this sector, local government should beef up the infrastructure, especially in industrial estates, and offer more incentives to

potential investors.

The service sector has just developed recently and couldn't meet all needs of both the public and industrial concerns. Trading business fails to link producers with consumers and the distribution network is limited. Export from Cần Thơ starts to develop but it faces many difficulties caused by obsolete technologies, poor competitiveness of products, limited market and lack of famous brand names.

The investment efficiency produces effects on personal income and living standard. In recent years, high growth rates have helped improve and stabilize the living standard in Cần Thơ. Basic needs, such as food, clothes, accommodation, education and health care, have been better satisfied. The personal income in this city has also become higher over years.

Per capita GDP (in market price) rose from US\$389 (VND5.47 million) in 2000 to 802 (VND12.58 million) in 2005, and 998 (15.67 million) in 2006. The average growth rate in this period was 19.17% compared with a growth rate of 6.86% of the Mekong Delta and the national average of 6.61%.

4. Suggested solutions

a. More investment and effective employment of capital:

To attract more investment, the business climate and competitiveness should be improved and new policies on encouragements to investment project should be adopted. Land clearance must be carried timely to ensure area for new projects. Administrative procedures must be simplified and publicized. Infrastructure should be upgraded continuously. Plans to develop the human resource should be in place. More attention should be paid to incentives for foreign investors.

To employ the capital more effectively, local authorities should make a list of prioritized projects based on local advantages and potentials. Allocation of public investment must be based on needs of each industry or field in order to avoid waste of money in this industry and shortage of

Table 3: Cần Thơ ICOR in 2001-06

Sector	ICOR					
	2001	2002	2003	2004	2005	2006
Cần Thơ	0.275	0.536	0.275	0.457	1.859	1.251
Including:						
- Manufacturing	-0.454	0.480	-0.063	-0.383	0.170	0.939
- Service	0.204	-0.680	1.860	-1.252	0.078	0.691
- Agriculture	-4.309	-0.091	-7.360	-0.038	0.072	0.577

Source: Cần Thơ Statistical Yearbook 2006; Report on the implementation of Decision 173/2001/QĐ-TTg (2001-2005) in the Mekong Delta

Table 4: Per capita GDP in Cần Thơ in 2000- 2006 (VND million, market price)

Cần Thơ in comparison with regional and national average	Year							Growth rate (%)
	2000	2001	2002	2003	2004	2005	2006	
1. Cần Thơ	5.47	5.84	7.15	8.44	10.41	12.58	15.67	19.17
2. Mekong Delta	4.38	4.68	5.39	6.06	7.08	7.83	8.79**	12.31
3. Compared with Delta average	+1.09	+1.16	+1.76	+2.38	+3.33	+4.75	+6.88	+6.86
4. Vietnam	5.69	6.12	6.72	7.58	8.72	10.10	11.57	12.56
5. Compared with the national average	-0.22	-0.28	+0.43	+0.86	+1.69	+2.48	+4.10	+6.61

Source: MPI, Report on Implementation of Decision 173/2001/QĐ-TTg (2001-2005) and direction of socioeconomic development for the Mekong Delta in 2006- 2010; *Statistical Yearbook 2006*; **: estimated result.

capital in others. All projects should be evaluated carefully before granting approval and supervised strictly during construction.

b. Development of human resource:

Results of the study show that there is a shortage of trained laborers and imbalance between trained and unskilled laborers. Most trained laborers are working in state-owned and privatized companies. To develop the human resource, local government should increase the public investment in the vocational training service, especially in technical schools. New policies must be adopted to change the structure of occupations of trained laborers with a view to employing them at their best.

c. Application of high technologies:

At present, investment in high technologies in Cần Thơ is very limited. To enhance the investment efficiency and make the best use of the advantage of an economic center of the Mekong Delta, Cần Thơ should increase investment in R&D activity and application of high technologies in the manufacturing sector, especially in processing and preserving farm products. In addition, financial service, trading, and distribution network should be beefed up to support production of high-quality farm products.

5. Conclusion

In the past few decade, Cần Thơ gained high growth rates in which the capital and labor played positive roles. Due to a low starting point, however, Cần Thơ economy is facing great difficulties with the result that its investment efficiency is low. The quality of the labor force, moreover, is not high enough to meet the market demand while the investment is divided among too

many projects. The agriculture develops slowly and lacks investment in modernization. The manufacturing sector is not well developed enough to become a dynamic of the economic growth. The service sector is small and can't satisfy diverse demands from other sectors.

To improve the investment efficiency, Cần Thơ government should take active measures to deal with existing obstacles, attract more investment, employ the capital more effectively; develop the technical education service, and give priority to application of high technologies ■

Reference:

- Cần Thơ Bureau of Statistics (2007), *Niên giám thống kê 2006* (Statistical Yearbook 2006)
- Mai Văn Nam (2008), *Giáo trình kinh tế lượng* (Textbook on Econometrics), Văn Hóa Thông Tin Publishers
- Nguyễn Thị Diệu Thẩm (2007), "Phân Tích Các Yếu Tố Tác Động Đến Tăng Trưởng Kinh Tế Thành phố Cần Thơ", (Analysis of factors affecting Cần Thơ economic growth) University of Cần Thơ
- Nguyễn Thị Cảnh (2004), *Các Mô Hình Tăng Trưởng và Dự Báo Kinh Tế-Lý Thuyết và Thực Nghiệm* (Growth models and economic forecast: Theory and practice), Đại học Quốc gia TP.Hồ Chí Minh Publishers
- Russell Davidson, James G. Mackinnon (2004), *Econometric Theory and Methods*, Oxford University Press.
- General Bureau of Statistics (2007), *Niên Giám Thống Kê 2006* (Statistical Yearbook 2007), Thống Kê Publishers
- Trương Thị Minh Sâm (2001), "Các Giải Pháp Nâng Chất Lượng Tăng Trưởng Ở Vùng Kinh Tế Trọng Điểm Phía Nam Thời Kỳ 2001-2010" (Measures to enhance the quality of growth in the Southern Key Economic Zone in 2001-2010)
- Cần Thơ People's Committee (2008), "Tổng kết công tác dạy nghề giai đoạn 2004-2007 và Triển Khai Nhiệm Vụ Từ Nay Đến Năm 2010" (Report on vocational training in Cần Thơ in 2004-07 and program for 2008-2010)