



A Comparison of Small Businesses Costs and Returns in Developing Socioeconomic: A Study in Phnom Penh, Cambodia

Leaksmay Chhay¹, Md Manik Mian^{2, *}, Rathny Suy³

¹School of Economics, IIC University of Technology, Phnom Penh, Cambodia

²School of Urban Construction, and Environmental Engineering, Chongqing University, Chongqing, China

³School of Public Affairs, University of Science and Technology of China, Anhui, China

Email address:

chhayleaksmay@gmail.com (L. Chhay), manikmbstu@gmail.com (M. M. Mian), suyathny@yahoo.com (R. Suy)

To cite this article:

Leaksmay Chhay, Md Manik Mian, Rathny Suy. A Comparison of Small Businesses Costs and Returns in Developing Socioeconomic: A Study in Phnom Penh, Cambodia. *International Journal of Economics, Finance and Management Sciences*. Vol. 3, No. 4, 2015, pp. 406-410. doi: 10.11648/j.ijefm.20150304.18

Abstract: In Cambodia, a large portion of the population is associated with small business instead of paid Employees, which contributes a major share of the country's economy. Recently, small business priority has grown higher than conventional agriculture practice and service sector. This study tries to analyze the investment costs and returns of three small businesses (Recycling shop, Antique shop and Small Restaurant) in Cambodia. Standard financial tools and techniques were used to determine investment costs and returns of specific business over five-year period of time. The sensitivity analysis of investment return was conducted by using internal rate of return and net present value analysis; return of investment was used to determine annual return and payback time, five years benefits and costs ratio were analyzed to evaluate five-year performance of return of each business. The sensitivity analysis shows that, antique shop has a higher internal rate of return 30.784% than recycling shop 25.362% and small restaurant 26.496% and at 20% discount rate the net present value is bigger for antique shop. The annual return of investment shows an increasing trend for selective three businesses and exhibit profit gain after five-year period of time, however the longer payback period (2.6 years) of the antique shop consider comparatively risky business than recycling shop and small restaurant. Five years' net benefits and costs ratio are higher for small restaurant 1.1684, whereas antique shop and recycling shop are 1.1631 and 1.1604. The high increasing discount rate of antique shop is indicating higher benefit and cost ratio in the future. From the result of the financial analysis, it is suggested that, selective three businesses can perform well in terms of gain profit and profitability, so these could be effective business practice for the developing socioeconomic of Cambodia.

Keywords: Small Business, Internal Rate of Return, Return of Investment, Benefits and Costs, Socioeconomic

1. Introduction

The Kingdom of Cambodia is a Southeast Asian country with a surface area of 181,040 km², and a total population of 14.9 million in 2013 [1]. In the past, Cambodia experienced higher population growth rate (2.49%) among others ASEAN nations [2]. However, in 2013 the population growth had decreased to 1.8% [1]. The service and agriculture are the main employment as well as economic sectors in Cambodia. Therefore, the increasing population growth has a direct impact on country economic, because of more people looking for income and employment opportunities [2]. During the last 15 years, the share of GDP earning sectors in

Cambodia was changed largely. In 1990, the large portion of GDP (55.6%) earned from agricultural sectors, the service sectors contributes 31.7% and industries 11.2% [3]. The scenario had changed in 2012, services sectors contribute large GDP earning (41%) of the country, industries contribute 32% and agriculture 27% [4]. During the last decade, per capita GDP Purchasing Power Parity had shown increasing trend (int'l US\$ 2,494 in 2012) [1], the GDP growth was 7.3 percent in 2012, and reached around 7 percent in 2013 [5]. GDP growth has been driven by a sustained strong agricultural sector growth, resilient exports, rebounding construction activity, and a robust tourism sector. However, overall GDP increases in recent years, but the GDP (PPP) is

still lower. In 2014, Cambodia was the 143th country of world PPP ranking, and GDP (PPP) was 3282 int. \$, which indicating a lower socioeconomic conditions [6].

A lower socioeconomic condition and population load contributing as a significant factor of unemployment. From 2004 to 2007, according to board calculation total unemployment rate fell from 5.85% to 3.06%, whereas the female unemployment rate was higher than the male unemployment rate. However, the ILO unemployment rate for Cambodia was different from board rate. Surprisingly, in 2004 the unemployment rate was higher 11.17% in the capital Phnom Penh than other rural 5.10%, and urban area 6.12%, but in 2007 it changed to 5.37% in capital and 5.73% in other urban and 2.47% in other rural areas [7]. However, in 2014 Cambodian unemployment rate fell down to 0.3% [8], but low skill workers and lower monthly wages make these changes unsuccessful. Majority portions of Cambodian are self-employed or work in a family business which are agriculture and small business. Total paid employment was smaller than own account worker 38.7% and unpaid family business 36.2% in 2007 [7]. The average monthly wages in Cambodia was 121 US\$ in 2012 [9]. However, the average wages were very low in poor workers' level. A survey shows that, textile and shoe industry workers earned US\$ 61 per month or US\$ 0.29 per hour for a full-time worker and 46.4% of drivers, construction workers, agricultural workers, restaurant workers, tourism-related, beautician services, teachers, public administration, food manufacturing & sales, and machine, maintenance & repair services workers gained fewer wage. About more than 50% of Service and sales, skilled agricultural, forestry and fishery, Craft and related trades workers gained fewer wages than the benchmark of each occupation [10]. According to the ILO report, in 2004 about 56.5% workers Wage and salaries were below US\$2 per day and about 32% workers below US\$ 1.25 per day [11].

Considering the population size, country GDP, employment condition, working wages and uneven distribution of working sectors, the small business is one of the most effective ways to improve Cambodian economy, which could reduce unemployment and improve the socioeconomic condition. Small business is effective for both male and female and also possible to carry out with lower technical knowledge. Existing socioeconomic structure, the potentiality of tourism and cheaper raw materials could be favorable for small business. Especially, the demand of tourism business is increasing day by day; Cambodia becomes a new destination for international tourists from around the world, especially from East Asia, which is contributing to growing up country economy. In 2014, tourism receipts 2,736 Million US\$ which was 3.29 times higher than 2005 tourism receipts [12]. The small antique shop could be a profitable business, because tourists are always demanding some traditional things while they travel a country. Considering the average person's investment capability, a small restaurant could be another

possible small business practice for Cambodia. The small recycling shops of various solid waste materials, perhaps a feasible small business practice considering available cheap raw materials and environmental significance. This study tries to analysis the five-year investment costs and returns of antique shop, small restaurant and recycling shop in Cambodia, by using standard financial analysis techniques, net present value, internal rate of return, return of investment, payback period and net benefits and costs ratio.

2. Methodology

2.1. Respondent Selection

A quantitative questionnaire survey was conducted upon three small business practices (Recycling shop, Antique shop and small restaurant) in Phnom Penh, Cambodia. The selective respondents had at least five years experience of their own business and had a clear idea of monthly cash inflow and outflow and available supporting cash documents. Five-year cash data were considered for analysis, from the start of each business. The respondents were selected from the old market (phsarchas), central market, Orussey market, BoeungKeng market, The Russian market, of Phnom Penh, Cambodia. Among a total of 42 respondents, 6 respondents of each category of business were chosen on the basis of approximately similar investment, location, shop structure and strategy of the business.

2.2. Questionnaire Types

A close-ended questionnaire was made to find the monthly cash flow of the specific business, the cost factors (Table 1) were achieved by respondent's opinion and cash documents. The entire cash unit Cambodian Riel (KHR) was converted to USD \$ by, 1 USD \$ = 4114.95 KHR[13].

Table 1. Cost factors of Recycling shop, Antique shop and Small Restaurant.

| | Recycling shop | Antique shop | Small Restaurant |
|---------------|------------------------|---------------------|------------------|
| Fixed cost | Shop security | Shop security | Shop security |
| | Shop Decoration | Shop Decoration | Shop Decoration |
| | Machineries | Fixed raw materials | Machineries |
| Variable cost | Monthly rent | Monthly rent | Monthly rent |
| | Raw materials | Raw materials | Raw materials |
| | Labor cost | Labor cost | Labor cost |
| | Transportation | Transportation | Transportation |
| | Machineries renovation | Electricity | Electricity |
| | Electricity | Renovation | Renovation |
| | Others | Other | Other |

2.3. Financial Analysis

Entire cash flow was calculated annually and the meanvalue was considered for analysis. The sensitivity analysis of investment and return were conducted by using net present value (NPV) and internal rate of return (IRR). Simple return of investment (ROI) was calculated to obtain net cash flow, cumulative cash flow and a yearly return of investment, B/C was measured by NPVB and NPVC ratio for

5 year period of time.

$$NPV = -PV + \frac{FV_1}{(1+i)^1} + \dots + \frac{FV_t}{(1+i)^t}$$

$$IRR \% = i, NPV = -PV + \frac{FV_1}{(1+i)^1} + \dots + \frac{FV_t}{(1+i)^t} = 0$$

$$ROI = \frac{Gains - Investment\ costs}{Investment\ costs} = \%$$

$$B/C = \left[\frac{B_0}{(1+i)^0} + \dots + \frac{B_t}{(1+i)^t} \right] / \left[\frac{C_0}{(1+i)^0} + \dots + \frac{C_t}{(1+i)^t} \right]$$

Where, NPV is net present value, PV is an investment, FV is the future value, (i) is the discount rate, (t) is year. NPV measured at 0 % to 50 % discount rate and IRR percentage can be achieved when the sum of NVP is 0. ROI is the annual return of investment and B/C is the ratio of present value benefit and cost. All data were calculated by using MS excel 2010.

3. Result and Discussion

3.1. Sensitivity Analysis

The relationship between NVP and the discount rate of Recycling shop, Antique shop and Small Restaurant during the five-year period of time are illustrated in Figure 1. Three

different curves show the changes of NPV with the changes of discount rate. As for 20% of discount rate, NPV is higher for antique shop 8610.97\$, whereas recycling shop and small restaurant are 2685.74\$ and 3725.69\$. IRR of three businesses can be found while the curves cross the NPV zero line. It can be seen from Figure 1, the antique shop shows higher discount rate at zero NPV than small restaurant and recycling shop. The five years present values and IRR of three businesses are presented in Table2.

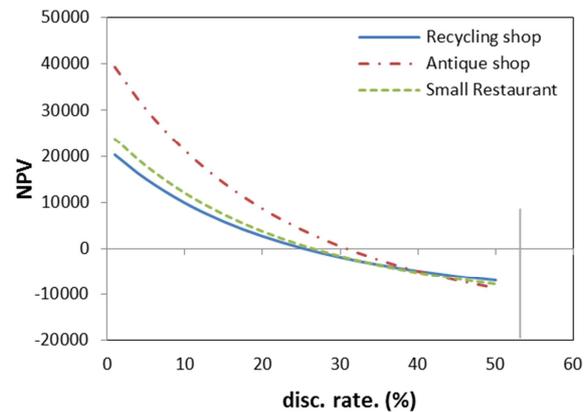


Figure 1. The relationship between NVP and discount rate of Recycling shop, Antique shop and Small Restaurant.

Table 2. Five years IRR of Recycling shop, Antique shop and Small Restaurant.

| | | year 0 | year 1 | year 2 | year 3 | year 4 | year 5 | NPV | IRR % |
|------------------|-----------|----------|----------|---------|---------|---------|----------|---------|--------|
| Recycling shop | Cash Flow | 14829.3 | 2639.95 | 2907.13 | 2936.71 | 3640.34 | 24488.04 | 0.00199 | 25.362 |
| | dis.fact. | | 1.254 | 1.572 | 1.970 | 2.470 | 3.096 | | |
| | *PV | -14829.3 | 2105.87 | 1849.83 | 1490.61 | 1473.94 | 7909.08 | | |
| Antique shop | Cash Flow | 23169.5 | 4100.85 | 5740.29 | 8049.91 | 9083.16 | 38165.68 | 0.01052 | 30.784 |
| | dis.fact. | | 1.308 | 1.711 | 2.237 | 2.926 | 3.826 | | |
| | *PV | -23169.5 | 3135.589 | 3356.02 | 3598.55 | 3104.69 | 9974.70 | | |
| Small Restaurant | Cash Flow | 18394.5 | 3773.759 | 4846.32 | 5623.57 | 5565.41 | 24066 | 0.00986 | 26.496 |
| | dis.fact. | | 1.265 | 1.600 | 2.024 | 2.560 | 3.239 | | |
| | *PV | -18394.5 | 2983.303 | 3028.72 | 2778.32 | 2173.65 | 7430.54 | | |

*PV at year 0 is investment, 1, 2, 3, 4 years is profit and year 5 is revenue.

It can be seen from Table 2, initial investment of three businesses are different, higher initial investment is required for the antique shop and lower for the recycling shop. The antique shop shows a bigger internal rate of return 30.784 % at five-year period of time, while recycling shop and small restaurant are 25.362 % and 26.496%. The IRR percentage suggests that, antique shop has a comparatively higher growth of investment return than small restaurant and recycling shop. Perhaps the increasing number of annual tourists and high demand of antique products is affecting higher IRR percentage. In 2013, a total number of 4210165 international tourists arrived in Cambodia which was 2.962 times than tourists arrived in 2005 [12]. On the basis of investment returns, the ranking of three businesses can be made as: Antique shop > Small restaurant > recycling shop. The internal rate of return of recycling shop, antique shop and small restaurant are higher than the average annual lending rate in Cambodia from 1995 to 2012,[4] which indicating selective three businesses are profitable business

in Cambodia.

3.2. Return of Investment

The simple return of investment of recycling shop, antique shop and small restaurant compare the magnitudes of investment gain with the magnitude and timing of investment cost (Table 3). All three businesses show an increasing trend of ROI percentage. At the beginning year, antique shop and small restaurant show negative ROI where recycling shop shows positive because of its lower investment and quick recovery. The negative return of investment extent to the second year for the antique shop because of its higher investment cost, which affects the longer negative return. However, at the fifth year ROI is higher for the antique shop 36.257% whereas recycling shop and small restaurant are 17.452 % and 21.879 %. The result suggests that, primarily the investment is higher for the antique shop but it can make higher returns than recycling shop and small restaurant after a five-year period of time.

Table 3. Financial consequences of individual investment of Recycling shop, Antique shop and Small Restaurant.

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|------------------|---------------|-----------|-----------|-----------|-----------|-----------|
| Recycling shop | Cash inflow | 15668.41 | 16879.34 | 18277.59 | 21872.91 | 24488.04 |
| | Cash outflow | -14829.30 | -13972.20 | -15340.90 | -18232.60 | -20370.50 |
| | Net cash flow | 839.08 | 2907.13 | 2936.71 | 3640.34 | 4117.57 |
| | Cumulative CF | 839.08 | 3746.21 | 6682.92 | 10323.26 | 14440.83 |
| | ROI % | 5.658 | 13.007 | 15.139 | 16.550 | 17.452 |
| Antique shop | Cash inflow | 12477.49 | 16400.82 | 22999.74 | 25951.89 | 38165.68 |
| | Cash outflow | -23169.50 | -10660.50 | -14949.80 | -16868.70 | -19481.60 |
| | Net cash flow | -10692.10 | 5740.29 | 8049.91 | 9083.16 | 18684.08 |
| | Cumulative CF | -10692.10 | -4951.76 | 3098.15 | 12181.31 | 30865.38 |
| | ROI % | -46.147 | -14.637 | 6.351 | 18.555 | 36.257 |
| Small Restaurant | Cash inflow | 15736.57 | 20209.16 | 23450.27 | 23207.76 | 24066 |
| | Cash outflow | -18394.50 | -15362.80 | -17826.70 | -17642.30 | -18294.80 |
| | Net cash flow | -2657.94 | 4846.32 | 5623.57 | 5565.41 | 5771.23 |
| | Cumulative CF | -2657.94 | 2188.38 | 7811.95 | 13377.36 | 19148.59 |
| | ROI % | -14.450 | 6.483 | 15.144 | 19.324 | 21.879 |

The magnitudes of NCF with timing are presented in Figure 2a. It can be seen that, the antique shop shows high increasing of NCF, whereas recycling shop and small restaurant shows steady NCF trend after second year. However, three selective businesses bring profit with timing, but antique shop is more profitable in terms of higher return at the end of the fifth year. The cumulative cash flow (Figure 2b) shows an increasing trend over 5 years, the antique shop

cumulative CF is heading skyward, which is more vertical curve than small restaurant and recycling shop. However, the payback period is lower for recycling shop, which is less than a year and small restaurant and antique shop payback are 1.6 and 2.6 years. The lower payback period of recycling shop is suitable for early recovery of cash and available for use again, shorter payback period also considered as less risky business than a longer payback period.

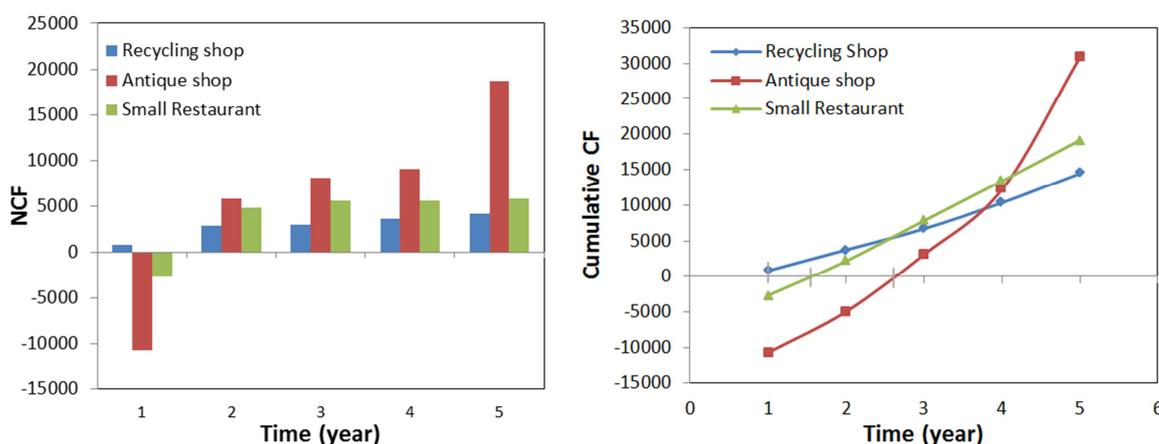


Figure 2. The magnitude of (a) NCF and (c) Cumulative CF of Recycling shop, Antique shop and Small Restaurant with the magnitude of timing.

3.3. Benefit-Cost Ratio

The benefits and cost ratio of recycling shop, antique shop and small restaurant over five-year are presented in Table 4. The result shows that, B/C ratio is higher for small restaurant 1.1684, while antique shop and recycling shop are 1.1631 and 1.1604. The moderate investment, shorter payback

period and significant return are resulting higher five-year B/C ratio for small restaurant. However, the NCF (Figure 2a) and Cumulative CF (Figure 2b) after five-year is higher for antique shop but large investment cost makes lower B/C ratio than small restaurant. Perhaps the higher discount rate of antique shop will affect higher B/C ratio in the future.

Table 4. Five years benefits and cost ratio of Recycling shop, Antique shop and Small Restaurant.

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | NPVC and NPVB | Ratio B/C |
|----------------|--------------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|
| Recycling shop | Cost flow | 14829.33 | 13972.22 | 15340.88 | 18232.57 | 20370.47 | | |
| | Benefit flow | 15668.41 | 16879.34 | 18277.59 | 21872.91 | 24488.04 | | |
| | Disc. Fact. | 1.254 | 1.572 | 1.970 | 2.470 | 3.096 | | |
| | PVC | 919603.17 | 691159.94 | 605338 | 573891.93 | 511466.82 | 3301459.85 | |
| Antique shop | PVB | 971636.52 | 834966 | 721218.15 | 688475.96 | 614851.85 | 3831148.48 | 1.1604 |
| | Cost flow | 23169.54 | 10660.54 | 14949.83 | 16868.73 | 19481.61 | | |
| | Benefit flow | 12477.49 | 16400.82 | 22999.74 | 25951.89 | 38165.68 | | |
| | Disc. Fact. | 1.308 | 1.711 | 2.237 | 2.926 | 3.826 | | |

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | NPVC and NPVB | Ratio B/C |
|------------------|--------------|------------|-----------|-----------|-----------|-----------|---------------|-----------|
| Small Restaurant | PVC | 1377232.69 | 484523.03 | 519537.65 | 448237.71 | 395818.57 | 3225349.65 | |
| | PVB | 741680.94 | 745420.05 | 799288.69 | 689596.48 | 775433.27 | 3751419.42 | 1.1631 |
| | Cost flow | 18394.51 | 15362.84 | 17826.70 | 17642.35 | 18294.78 | | |
| | Benefit flow | 15736.57 | 20209.16 | 23450.27 | 23207.76 | 24066 | | |
| | Disc. Fact. | 1.265 | 1.600 | 2.024 | 2.560 | 3.239 | | |
| | PVC | 1130461.83 | 746384.03 | 684676.05 | 535665.58 | 439124.50 | 3536311.99 | |
| | PVB | 967114.38 | 981836.41 | 900662.17 | 704645.3 | 577649.62 | 4131907.87 | 1.1684 |

It can reveal from financial analysis, selective three businesses can successfully bring profit after five-year and shows profitability. The antique business shows higher profitability than recycling shop and small restaurant, the increasing number of tourists resulting increased demand of antique shops. However, antique shop businesses are higher risky in terms of longer payback period and require higher initial cost and investment. The recycling shops require small capital to initiate and the payback period is less than a year, so it could be an effective business for the people who have lower capital. Small restaurant has higher benefit and cost ratio over a five-year period of time. It requires moderate investment cost and comparatively lower risky than antique shop.

4. Conclusion

The investment costs and returns of recycling shop, antique shop and small restaurant in Phnom Penh, Cambodia were successfully investigated. The financial analysis of investigating data proves that, selective three businesses are profitable businesses. Considering the present Cambodian economic status recycling shop, antique shop and small restaurant could be an effective small business practice for improving individual as well as country socio-economy.

References

- [1] The World Bank, Rebuilding Policy Buffers, Reinigorating Growth,76-78.

- [2] H. Sen, National Population Policy, Harvard School of Public Health. August 2003, (2003).
- [3] H. Hill, J. Menon, Cambodia: Rapid Growth with Institutional Constraints, January 2013, ADB Economics Working Paper Series, 331 (2013).
- [4] OECD, Economic Outlook for Southeast Asia, China and India 2015, OECD Publishing.
- [5] World Bank, GDP Growth (annual %) Data Bank, Cambodia,.
- [6] International Monetary Fund, World Economic Outlook, Legacies, Clouds, Uncertainties, October 2014.
- [7] World Bank, poverty profile and trend in Cambodia, Cambodia Socio - Economic Survey (CSES), 2007, 48618-KH (2009).
- [8] Trading Economics, Cambodian Unemployment Rate, 1994-2015.
- [9] ILO, Global Wage Report 2014 / 15, Wages and income inequality, International Labour Organization 2015.
- [10] CIDS, Minimum Wage Compliance Report Cambodia, August 2011, (2011).
- [11] S. Kapsos, R. Horne, Working poverty in the world: Introducing new estimates using household survey data, ILO: Key Indicators of the Labour Market, 7th edn (Geneva, ILO), Ch. 1A, (2011).
- [12] Ministry of Tourism, Tourism Statistics Report, May 2015, Statistics and Tourism Information Department.
- [13] Money Converter, (26 July 2015).