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Trends of Development Indicators in the SAARC Countries – A Pre and Post-Liberalization Scenario

Prahlad Mishra¹

ABSTRACT

Researchers have analyzed the recent trends in the economies of the South Asian and the SAARC countries with respect to trade liberalization and opening up of the economies. Some have highlighted the impact of such policy changes on the development indicators. The change of policies has been in late nineteen eighties and early nineties which is associated with the term called liberalization of the economies. The present paper analyses the trends of various macro-economic variables/development indicators with respect to the SAARC countries. It highlights the long term trend and the differential growth rates of some of the macroeconomic/development indicators in the SAARC countries with respect to the recent policy change at the macro level. It uses time series data for the trend analysis for about forty years. It has been observed that there have been a long term growth in the said variables in all the SAARC countries. However, there has been differential growth when pre and post liberalization periods are considered.

Keywords: Trade liberalization; long term growth; differential impact; LSDV model; slope dummies

1. Introduction

There has been a change in the thought process amongst the researchers, development thinkers and the policy makers about the recent phenomena of Liberalization, Privatization and Globalization (LPG) and their impact on the pace of growth of the development indicators in the economies particularly the developing ones. The developing nations in the last two/three decades have seen the

LPG as a driver of the process of economic development. One of the important reasons could be the comparative growth amongst developing economics with respect to the extent of openness of the economies. The assumption that opening of the economies and thereby helping the market forces to operate has gained much support in the present era. This, it has been stressed, would help accelerating the pace of development

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in different economies as compared to controlled economies characterized by uses of licenses, permits, quotas and other similar regulations. The three terms have specific connotations and may vary in their extent in different countries.

Liberalization refers to state of economy having absence of regulations or control so as to encourage competition. It is also referred as deregulation. Regulated economy takes measures to remove restrictions to encourage ‘free play,’ i.e., liberalization. The measures could include lowering import duties, abolishing monopoly & licensing and remove or reduce barrier to entry into a particular industry; setting up of reasonable exchange rates, tax reforms, trade reforms, encouragement of foreign investment, providing easy access to foreign technology, etc.

Privatization is a term derived from Latin word ‘Privatus’ which means ‘not belong to state or not in public life’. The term Privatization means “the measures taken to initiate a more commercial or private approach into the activities taken by public sector”¹. This is a broader term of divestiture.

Globalization is an economic process by which flow of trade, technology, finance and technology take place across borders. It allows various economies to expand their economic activities to foreign markets thereby increasing global financial transaction.

As mentioned earlier Liberalisation or Deregulation of economic activities in developed country, in particularly, in 1970s, gained momentum in developing countries. Deregulation or liberalization pursuits resulted in efforts to eliminate price restrictions, reduce or eliminate domestic and international barriers to entry to the new firms, to remove barriers for free flow of trade and resulted in de-bureaucratization of the services². Successful deregulation addresses the issues of information asymmetry, pricing and commitment problems.

The eight countries that comprise south Asian countries vary enormously in the size of their population and economies. India with a population of more than a billion, accounts for seventy five per cent of the region’s population and seventy seven per cent of the GDP. In contrast, Bhutan and Maldives have the lowest population in the region. So it is interesting to study the growth pattern and the determinants behind the growth of these economies with respect to the recent changes in the economic policies towards liberalization.

The time and the process of liberalization have not been the same in all the SAARC countries. For example the process of liberalization started in India and Pakistan almost in the same periods. As compared to Indian economic liberalization where growth rate of employment increased, Pakistan’s growth rate dramatically fell,

1 Nand Dhamja and K.S. Sastry, Privatization: Theory and Practice, First Edition, 1998, ISBN#81-7544-133-X.

2 Nand Dhamja and K.S. Sastry, Privatization: Theory and Practice, First Edition, 1998, ISBN#81-7544-133-X, Ch.1.

though it did reach the level of negative percentage (Samad, 2009). In India, after the 1990s there have been consistent efforts with respect to the Liberalization, Privatization and Globalization (LPG) process followed by the Government. Opening up of the economy and trade liberalization started in Sri Lanka much earlier, i.e., in 1970s. In Bangladesh, there were encouraging signs of progress in the years 1980s. The economic policies aimed at encouraging private enterprise and investment, privatizing public industries, reinstating budgetary discipline, and liberalizing the import regime were accelerated. Similar reforms were introduced in the other SAARC countries in late 1980s and early 1990s. However, there have been differential impacts of such policy changes at the macro levels in different developing countries. Korotayev (2014) has opined that in the late 1990s the developing countries tended to demonstrate higher growth rates than the developed ones in terms of the rates of growth in the GDP per capita.

Authors have studied the impact of such policy change on the development indicators in various countries. A few relevant studies relating to the studies on South Asian and SAARC countries need special mention.

Ghani & Anand (2009)³ have studied the impact of globalization with respect to growth in South Asia. They have analyzed the growth with respect to diversity of South Asian countries. They have opined that

changes in capital flow mayn't have impact in growth in South Asia, because investment in South Asia is largely driven by domestic savings. They have used data from South Asian countries relating to several variables and used panel data in the estimation process to highlight the relationship. On the basis of their findings they have concluded that globalization and global competition reveals strength in South Asian countries.

Pernia, Bell & Sophastienphong (2004)⁴ have studied the relative strengths and weaknesses of different countries' financial systems and their performance in financial sector. They conducted the analysis of financial deepening and financial efficiency of each country. In assessing the health of financial systems, it was revealed that it was not possible to compare all the countries due to the differences in the composition of each country's assets. They adopted the financial indicators of IMF and confined the study to banks and non bank financial institutions. The financial performance and soundness indicators are divided under four categories such as: (1) capital adequacy, (2) asset quality of lending institutions, (3) profitability and competitiveness indicators, and (4) liquidity indicators. Each category was further divided into various indicators totaling 36 indicators taken for the study. They concluded that stable and efficient banking system is required for the growth and poverty reduction. So, they emphasized the need of strengthening the banking system

3 Ejaz Ghani & Rahul Anand (2009). The World Bank, South Asia Region, Economic Policy and Poverty Sector.

4 Joseph Del Mar Pernia, Simon C. Bell and Kiatchai Sophastienphong, World Bank, Finance and Private Sector Unit, South Asia Region.

in South Asia. An article in World Bank, South Asia Region (June, 2011) having topic “South Asia Economic Focus” gives a review of economic developments in South Asian countries. The report focused on the impact of policies and other exogenous factors on food inflation. It also reported that South Asian countries have higher fiscal deficits and debt burden as compared to the situation before Global Financial crisis but growth in monetary aggregates in line with macroeconomic stability in most of the countries. Insufficient infrastructure (roads, cold storage) results in geographical spikes in price. Inflation on food affects poor the most, as they spend more portion of their income as compared to the better offs. High inflation, i.e., sudden price rise erodes the purchasing power, pushing more people to poverty. It also compared various causes of inflation across South Asian countries.

Luden (2005)⁵ studied the development regimes in South Asia. In the article he talked about the history of development in South Asia which was dominated by British Empire and its interest. He opines that the said empire was making huge investments in infrastructure but it was for their own purpose and elitist centric, it was not for all. Further, he also argues that when globalization, regionalism, and localization are all progressing at the same time, it is deceptive to use national statistics to measure the progress of development; because national territories no longer comprise the

spatial domain of development. He also said ungovernability is now a prominent feature of development, locked in place by forces operating inside and outside national territories. As per Luden, development has entered a confusing phase of flux and uncertainty, wherein increasingly numerous, vocal, and contentious participants organize to pursue disparate, sometimes contradictory goals, including free market globalization, economic growth, gender justice, ending poverty, and empowering the poor majority of citizens who have never yet had their own effective institutional voice.

Rampal (2000)⁶ emphasized the education’s necessity in the process of development. Education would serve as a means of reducing inequalities and redress the skewed course of development. The report on Human Development in South Asia has shown that the region has dubious distinction of being poorest in the world, and had begun to lag behind all levels of human development. The steady decline in education had been worrying in compared to other developing countries. South Asian region’s poor performance in education sector is even more mystifying because the economic growth has been robust and national resources have expanded at a satisfactory rate. Also, Rampal has given the statistics of Government’s expenditure on education as percentage of its GNP. According to Rampal, “the development process in many of the south Asian countries has not had an egalitarian

5 David Luden in Special Article, Economic and Political Weekly, September 10, 2005.

6 Anita Rampal in Perspectives, Economic and Political Weekly, July 22, 2000.

record and has not valued the lives of large sections of populations, consistently subordinated to the needs of the few who decide what ‘development’ to undertake. Millions have been systematically uprooted, displaced, or deprived of their natural resources and means of subsistence, as a ‘small price for the larger cause of nation-building’.”

In the 1st general assembly of South Asia Alliance of Poverty Eradication (SAAPE), the participants from various countries deliberated on the impact of globalization in South Asia. On the basis of the deliberation that took place in the said assembly, Challam (2003)⁷ mentioned that more than half of the world’s poor live in South Asia. He also emphasized that the participants in the meeting had identified the public sector as one of the important sector that brought increased employment, reduced poverty, increased social justice and quality and improved infrastructure in all countries. He also quoted that, according the participants at SAAPE, “we are reminded of our deep cultural and civilizational commonness. We not only cherish this oneness but also see in it great opportunities for our people to lead a more peaceful and prosperous life if only the arms race and militarization in our region are brought to an end. What we need is pro-people forms of governance in which local self-government is given its due place of primacy and importance and all national governments that are anti-people, be they

military, monarchical or authoritarian are replaced by more people-friendly institutions of governance at all levels. It is only the ruling elite and their agents who search for differences and seek so many artificial ways and means to introduce and perpetuate strife among our people”.

Obino (2010)⁸ has done the review of the book *Regionalism in South Asia* written by Kishore C Dash. He has opined that after 25 years of formation of South Asian Association for Regional Cooperation (SAARC), it is not considered as a major agent of development. The objective of the formation of SAARC is to promote the social welfare in the member countries. He says “In a quarter of a century, SAARC attracted high hopes and disinterest in similar ways, offering highly contradictory images to its keen observers and barely any image of itself to the masses of the subcontinent”.

Khan and Khan (2003)⁹ have emphasized the importance of institutional change for promotion of economic development in South Asia. They classified the instruments of effective outward growth in two parts as Open regionalism and Continent based integration. To promote economic development and synthesize the economic policies with global economic policies, open regionalism’s role is very crucial. The elemental parts of open regionalism are deepening, widening, building sound trading structure and merging regional blocs

7 K S Chalam, *Economic and Political Weekly*, October 4, 2003.

8 Francesco Obino, *Economic & Political Weekly*, Vol xlv, Nos 26 and 27, June 26, 2010.

9 Saleem M. Khan, Zahira S. Khan, *Journal of Asian Economics*, 13 (2003), 767-785.

into a continent based trading. Khan and Khan pin pointed the importance of Asian integration in increasing economic potential and reducing poverty. Quick and concerted efforts of South Asia in timely manner would create an economic breakthrough. They also examined the South Asian Association for Regional Cooperation (SAARC)'s role in expressing regional aim and progress towards economic liberalization and outward development. SAARC has a feasible framework for economic integration of member countries and all South Asian countries are working towards economic development and regional integration. But the progress of economic agenda set by SAARC is very slow and comes to halt due to cross country tension. Intra regional trade is still nominal.

Herath (2010) has analyzed the economic impact of trade liberalization in Sri Lanka. He has examined impact of trade liberalization on economic growth of Sri Lanka using time series data. The primary objective of his study was to investigate the causal relationships between the trade liberalization and economic growth of Sri Lanka. Samad (2014) in his work on governance and economic policy has highlighted the performance of the economy of Pakistan and other SAARC countries with special reference to the present changes in the policies towards liberalization and opening of trade.

The above discussion highlights the issues such as social and economic relating to the impact of the recent policy changes in

the South Asian and SAARC countries. The authors have analyzed the recent trends in the economies of the South Asian and the SAARC countries with respect to trade liberalization and opening up of the economies. Some have highlighted the impact of such policy changes on the development indicators.

The present paper analyses the trends of various macro-economic variables with respect to the SAARC countries which could highlight the impact of the recent changes in the macro-economic policies in these countries. Thus, the primary objective of the present study is to highlight the trend and the differential growth rates of the said variables in the SAARC countries with respect to the recent policy change at the macro level.

The specific objectives of the study are twofold:

- i. To highlight the trends of the indicators of development in the South Asian Countries, viz., India, Pakistan, Bangladesh, Maldives, Nepal and Sri Lanka using time series data using graphical and linear trend analysis.
- ii. To highlight the differential growth with respect to the pre and post-liberalization period using time series data and a qualitative variable such as dummy variable differentiating two periods, viz., pre and post liberalization periods.

2. Methodology

The present study is a time series analysis of development indicators, especially the macro economic variables in the SAARC countries. It highlights the differential growth in some of these variables with respect to the pre-and-post-liberalization periods using statistical/ econometric tools like OLS estimators using LSDV model.

The data used in the study has been taken from the World Bank website.

The time series data for some of the macroeconomic variables/development indicators have been graphically analyzed for comparison across the SAARC countries. To corroborate this, the linear regressions have been used. Moreover, to highlight the impact of policy changes during early nineties, dummy variable approaches have been used.

The findings have been presented in the two sections. The first section of the findings gives a graphical analysis of the following variables relating to the SAARC countries.

- a. GDP (current LCU)
- b. Household final consumption expenditure (% of GDP)
- c. Gross national expenditure (% of GDP)
- d. Exports of goods and services (% of GDP)
- e. Public spending on education (% of GDP)
- f. Poverty headcount ratio at \$1.25 a day (PPP) (% of population)
- g. Literacy rate, adult total (% of people ages 15 and above)

In the second section, the linear trend analysis and trend using dummy variable have been attempted to highlight the trend of some of the variables and the differential growth in the pre and post liberalization periods.

3. Findings

Section 1: Graphical Analysis of Macro Economic Variables/Development Indicators

As mentioned earlier, an attempt has been made in this section to present a graphical analysis of the trend of the macroeconomic variables/development indicators enumerated above. For the first four variables the time period is from 1970 till 2012. However, due to data limitations, the trend analysis of the last three variables has different time periods. Extrapolation of the values of the variables has been done in a few cases when the data for the relevant year were missing.

a) GDP (Current Local Currency Units: LCU)

According to the World Bank, GDP in Local Currency Unit is defined as “GDP at purchaser’s prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current local currency.”

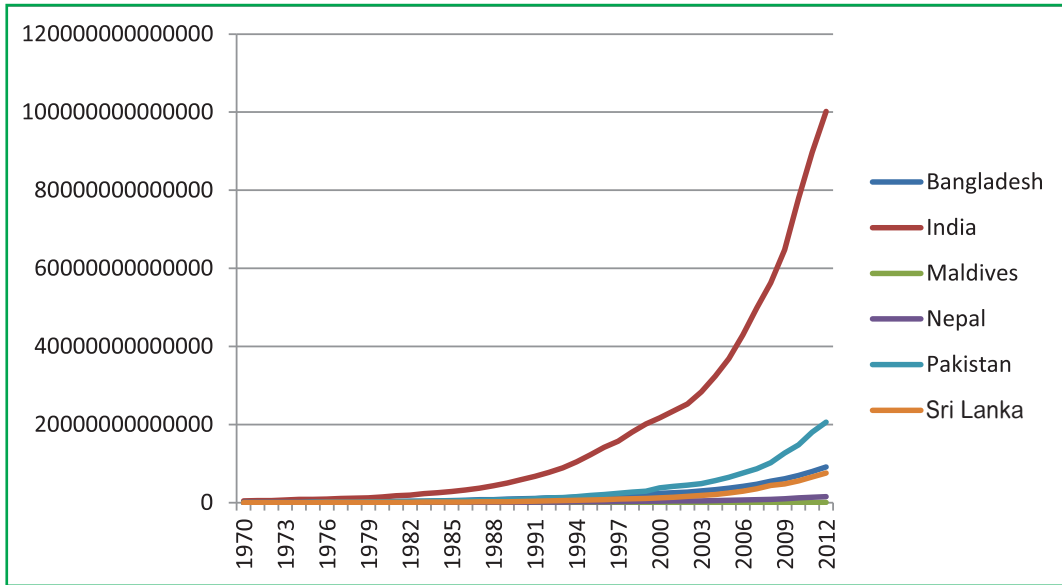
Table 1: GDP in LCU

GDP (Current LCU)						
Year	Bangladesh	India	Maldives	Nepal	Pakistan	Sri Lanka
1970	43165066387	476378864952	145600000	8768000000	47748997120	13664000000
1971	42008847287	5099886808001	163100000	8938000384	50487001088	14050000000
1972	37729475195	562141704214	180600000	10369000448	54058000384	15247000000
1973	62922812949	684198514014	198100000	9969000448	66872999936	18404000000
1974	99674260488	807699206395	215600000	12807999488	86853001216	23771000000
1975	172623537450	867068147563	233100000	16570999808	112266002432	26577000000
1976	150239133011	934217785030	250600000	17393999872	132051001344	30203000000
1977	149303279707	1058477734271	268100000	17280000000	149747990528	36407000000
1978	200820319228	1146472786383	285600000	19732000768	176418996224	42665000000
1979	236906610457	1257290809998	303100000	22215000064	195108995072	52387000000
1980	280777000000	1496419001268	320600000	23350999040	234527997952	66527000000
1981	322136000000	1758054578828	338100000	27306999808	278195994624	85005000000
1982	361740000000	1966436558499	343700000	30987999232	324159012864	99238000000
1983	408308000000	2290213509420	407700000	33760000000	364387008512	121601000000
1984	489787000000	2566108583717	772000000	39389999104	419801989120	153746000000
1985	561944000000	2895239407465	902800000	46586000000	472156995584	162375000000
1986	632691000000	3239491036504	1014600000	55724000000	514532016128	179474000000
1987	727711000000	3682107007999	1302500000	63864000000	572478980096	196723000000
1988	799929000000	4368927003581	1480400000	76906000000	675388981248	221982000000
1989	890598000000	5019281903167	1713400000	89269000000	769745027072	251891000000
1990	1003288229255	5862123944409	2054100000	103416000000	855943020544	321784000000
1991	1105180801816	6738745016507	2505800000	123801000000	1016724000000	372345000000
1992	1195424186812	7745449742310	3010900000	152714400000	1205204000000	425283000000
1993	1253694810966	8913546463553	3532700000	175682000000	1333041000000	499565000000
1994	1354123271688	10455904867951	4124700000	199272000000	1561104000000	579084000000
1995	1525178097932	12267248991283	4696100000	219175000000	1865922000000	667772000000
1996	1663240101771	14192767698024	5301000000	248913000000	2120173000000	768128000000
1997	1807012729847	15723935919024	5981791810	280513000000	2428312000000	890273000000
1998	2001765638327	18033776666893	6356934630	300845000000	2677656000000	1017986000000
1999	2196971000000	20121977430375	6935351940	342036000000	2938379000000	1105964000000
2000	2370855000000	21686524357660	7348448180	379488000000	3826111000000	1257635701505
2001	2535464000000	23483298818448	9821900000	441519000000	4209873000000	1407397537748
2002	2732010000000	25306625711466	10601483296	459443000000	4452654000000	1636037000000
2003	3005801000000	28379003909057	12158306071	492231000000	4875648000000	1822468000000
2004	3329731000000	32422090000000	13767750300	536749000000	5640580000000	2090841000000
2005	3707070000000	36933687922759	12703667037	589412000000	6499782000000	2452782000000
2006	4157279000000	42947059266885	16683210318	654084000000	7623205000000	2938680000000
2007	4724769000000	49870895676754	19737325550	727827000000	8673007000000	3578688000000
2008	5458224000000	56300630973937	24212909199	815658000000	10242800000000	4410683000000
2009	6147952000000	64778274603335	25403387403	988272000000	12723988000000	4835292000000
2010	6943243000000	77953138213138	27316542511	1192774000000	14803650000000	5604104000000

2011	7967042000000	89749467519932	31447425031	1368420000000	18032871000000	6544009000000
2012	9147840000000	100206200000000	34147626662	1557025000000	20653868000000	7582376000000

Source: The World Bank.

Figure 1: GDP in LCU



From Figure 1, it is evident that GDP in local currency has increased in India during early nineties whereas for other countries GDP in local currency increased during late nineties. The rate of growth of this variable is much higher in India after the liberalization. However, since this data is in current prices the inflationary effect has not been eliminated.

b) Household Final Consumption Expenditure (% of GDP)

As per the World Bank, “Household final consumption expenditure (formerly private consumption) is the market value of all goods and services, including durable products (such as cars, washing machines, and home

computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. Here, household consumption expenditure includes the expenditures of nonprofit institutions serving households, even when reported separately by the country. This item also includes any statistical discrepancy in the use of resources relative to the supply of resources.”

The data taken here is from 1970 to 2012 for the mentioned five countries.

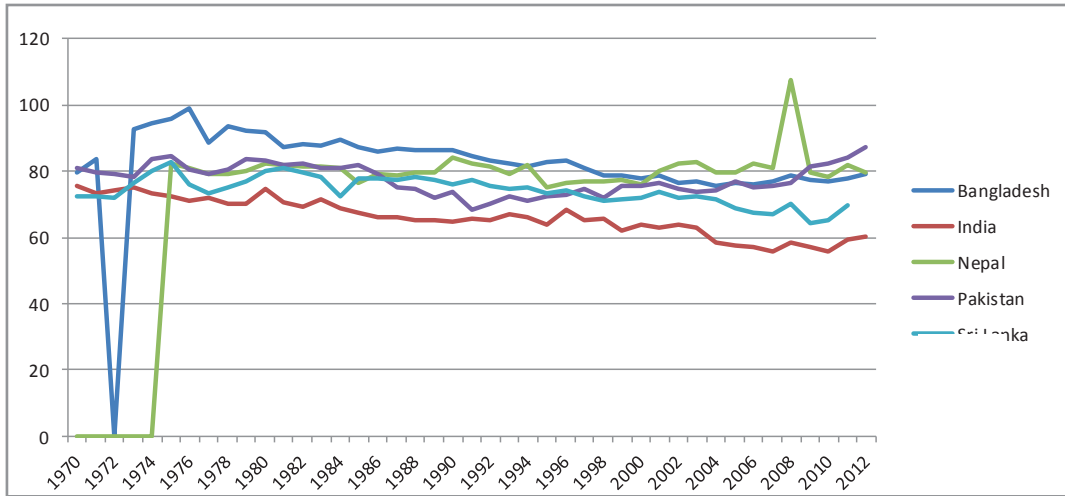
Table 2 : Household Final Consumption Expenditure

Household Final Consumption Expenditure, etc. (% of GDP)					
Year	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1970	79.47247398	75.37441	90.32588	80.95926	72.32143
1971	83.87000057	73.40746	88.73992	79.57755	72.37722
1972	88.26752716	74.06245	87.15396	79.04923	71.83052
1973	92.66505376	75.13493	85.56799	78.29607	76.52141
1974	94.62989993	73.50595	83.98203	83.89318	80.21539
1975	95.89378138	72.53802	82.38489	84.66691	82.56011
1976	98.91080645	71.02815	80.83247	80.54736	76.12158
1977	88.72823647	72.04512	79.21296	79.30506	73.33205
1978	93.50082301	70.3421	79.16582	80.54482	75.24903
1979	92.20097975	70.03469	79.86046	83.81635	77.06301
1980	91.8082316	74.86362	82.20205	83.09578	80.26666
1981	87.09737502	70.62929	82.07053	81.75692	80.87877
1982	88.36263615	69.38394	81.55415	82.21645	79.83434
1983	87.94684405	71.38065	81.33294	80.84119	78.07913
1984	89.56035991	68.99659	80.88347	81.19834	72.34985
1985	87.20975756	67.39188	76.53158	81.97171	77.90793
1986	85.82989168	66.19400	79.28684	79.23001	77.6547
1987	86.63823963	66.21363	78.82746	75.10000	77.24008
1988	86.44042159	65.35928	79.67706	74.55938	78.14012
1989	86.4829025	65.05454	79.68630	72.16748	77.2874
1990	86.15452709	64.60661	84.34524	73.76076	75.91676
1991	84.5323046	65.86512	82.48620	68.21635	77.40509
1992	83.00439506	65.02128	81.27374	70.02458	75.35359
1993	82.18637965	67.13419	79.27152	72.21226	74.8221
1994	81.57706122	66.13564	82.01795	71.10225	75.10707
1995	82.73054794	64.02895	75.09775	72.42377	73.23712
1996	83.21190777	68.22491	76.37012	72.88217	74.13035
1997	80.93755378	65.11306	77.13154	74.87559	72.31928
1998	78.58703917	65.6036	76.91403	72.06684	71.07229
1999	78.68274092	62.05419	77.46085	75.68792	71.46517
2000	77.65173324	64.07538	75.87776	75.37732	72.05485
2001	78.52542966	62.80964	80.2303	76.27529	73.96922
2002	76.62208411	64.02422	82.11182	74.78371	71.76042
2003	77.06953987	63.06963	82.77374	73.85609	72.24462
2004	75.79747433	58.36618	79.60667	74.18948	71.46072
2005	76.39909686	57.5912	79.54521	76.94872	69.01408
2006	76.08012356	56.96102	82.33392	75.03532	67.66228
2007	76.93629043	55.69324	80.98422	75.41185	67.15215
2008	78.92184344	58.61217	107.5637	76.49999	69.95053
2009	77.49019511	57.17628	79.78724	81.24698	64.44742

2010	76.8282487	55.95486	78.48008	82.33634	65.159
2011	77.77409734	59.38368	81.75472	84.06868	69.81031
2012	79.21647077	60.24912	79.75986	87.30444	

Source: The World Bank.

Figure 2 : Household Final Consumption Expenditure, (% of GDP)



From the above chart shown in Figure 2, it is evident that the percentage of GDP that accounts household final consumption expenditure has been decreasing over the years. And all the countries have followed almost the same trend except in Nepal from the year 2006 to 2009. The probable reason could be abolition of Monarchy in Nepal. In 2008, the Maoists, as the largest party of the country, took power right after the elections and named Pushpa Kamal Dahal (Prachanda) as the Prime Minister of the country and the consumption expenditure rose up in that period.

c) Gross National Expenditure (% of GDP)

The World Bank defines “Gross national expenditure is the sum of household final consumption expenditure (formerly private consumption), general government final consumption expenditure (formerly general government consumption), and gross capital formation (formerly gross domestic investment).” Data for this economic indicator is summarized in Table 3 from the year 1970 to 2012.

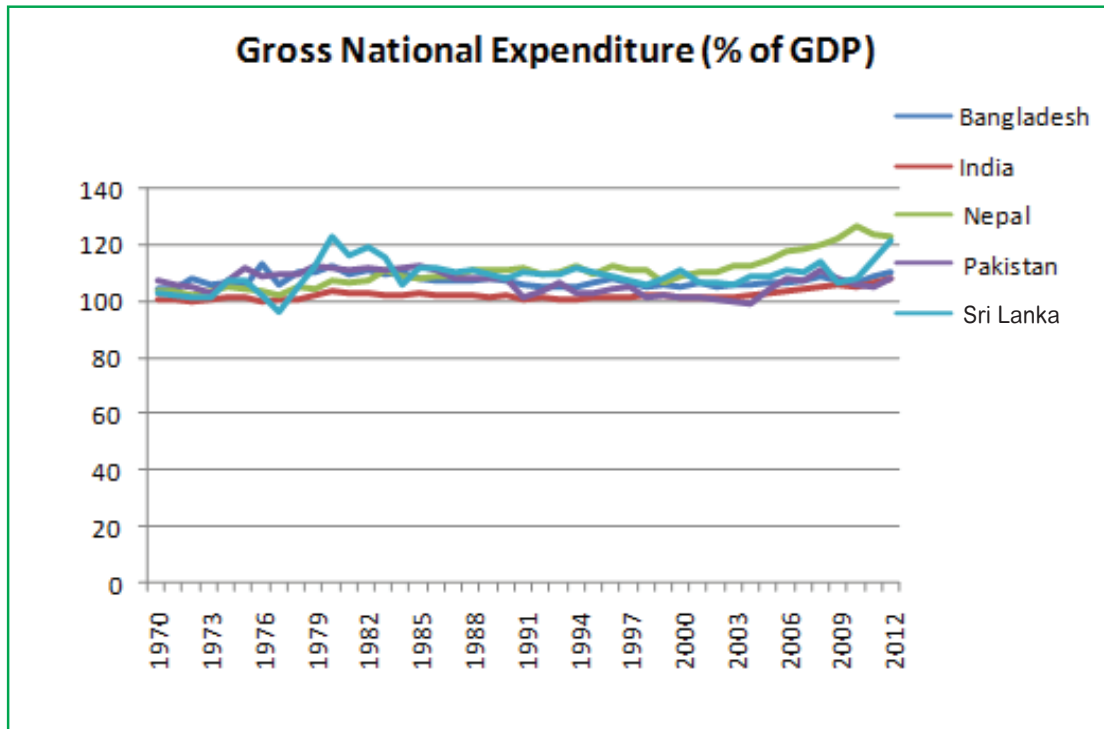
Table 3: Gross National Expenditure (% of GDP)

Gross National Expenditure (% of GDP)					
Year	Maldives	India	Nepal	Pakistan	Sri Lanka
1970	104.1943728	100.0944626	103.3987226	106.9011662	103.1469555
1971	104.4360929	100.3294191	103.7256655	105.6476224	102
1972	108.0578282	99.68691168	102.2567267	105.2081712	101.5740801
1973	105.3158369	100.5057012	103.761661	102.7768005	101.2116931
1974	106.6474757	101.1687519	105.0983767	107.096748	107.4670817
1975	105.2054692	100.9826217	104.4656328	111.5387994	107.4688641
1976	112.89011	99.43803254	103.4034718	108.652411	102.3342052
1977	105.3406877	99.88379538	102.5289348	109.7361804	96.34136292
1978	109.9231917	100.2686501	104.9006684	109.2384445	104.7744053
1979	109.6886228	101.3950631	104.18186	112.0646621	112.0430641
1980	112.3886635	103.0519527	107.1902708	111.612632	122.5803057
1981	109.2293317	102.5897945	106.7162271	110.6951501	116.0767014
1982	110.7311881	102.1221127	107.2156958	111.8188964	118.9010258
1983	109.3341301	101.9806014	111.0841236	111.0590559	115.1026719
1984	109.676247	101.4177109	108.7966496	111.5557487	105.9396667
1985	107.6826161	102.3497193	108.4703567	112.3908293	111.9531948
1986	106.8687558	101.7953438	108.6404422	110.7658504	111.6111526
1987	106.9430035	101.3519433	109.093339	107.7687996	110.5041098
1988	107.0716276	101.3955372	110.9346995	108.0837644	110.7603319
1989	107.5157366	101.1162951	111.2157188	107.8638429	109.496568
1990	107.408539	101.37544	111.1341359	107.8328811	107.8823061
1991	105.5646099	99.99925802	111.6935526	101.5607972	110.1137386
1992	104.7606532	100.7343667	109.7759609	103.169256	109.2630084
1993	105.0870435	99.98339606	110.323653	106.134395	109.5455046
1994	104.8627774	100.2967701	112.4441969	102.7620197	111.8050231
1995	106.4802268	101.1591841	109.5442004	102.7128144	110.4397908
1996	107.6088834	101.1391717	112.8226184	104.5239233	108.9272882
1997	106.02475	101.2166165	111.3798647	104.6883597	107.0613171
1998	104.9488311	101.6338785	111.0654988	101.0421428	106.0073518
1999	105.4650699	101.8887309	106.8700371	101.6129642	107.7840689
2000	105.2473053	100.8944264	109.1425816	101.2469581	110.6050424
2001	106.1185645	100.8641461	110.7293701	101.0524546	106.2362265
2002	104.771066	100.9651623	110.7566771	100.0903955	106.5084714
2003	105.8214765	100.6854716	112.8481546	99.40656093	106.0292417
2004	105.3485702	101.7547913	112.7818962	98.9663297	108.8211394
2005	106.4644585	102.7448924	114.8954042	103.8742992	108.930227
2006	106.2710008	103.1588426	117.86876	107.9887659	111.0041243
2007	106.9257354	104.0144037	118.8679453	107.1486164	110.3765123
2008	108.4118754	105.0669947	120.4845658	111.0321396	113.6860663
2009	107.1247791	105.3777135	122.2407394	107.5525456	106.4924104
2010	106.6100668	104.3614537	126.8198334	105.8619327	108.3079115

2011	108.7095813	106.4491413	123.9191111	105.074156	114.5517068
2012	110.3263612	107.7082855	122.8077905	108.1580845	120.7955020

Source: The World Bank.

Figure 3: Trends of Gross National Expenditure (% of GDP)



The trend given in Figure 3 reveals that all the countries follow similar trend in Gross national expenditure as percentage of GDP over the years from 1970 to 2012.

d) Exports of Goods and Services (% of GDP)

According to the World Bank, “Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance,

transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.” Table 4 shows the data from the year 1970 to 2012 for exports of goods and services as percentage of GDP of five South Asian countries.

Table 4 : Exports of goods and services (% of GDP)

Exports of goods and services (% of GDP)					
Year	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1970	8.313113	3.717629	4.904197	7.768792	25.45375
1971	6.291487	3.604002	5.403893	7.142331	24.6121
1972	5.674731	3.958077	5.661105	11.77432	22.3257
1973	6.539409	4.136226	6.610492	13.52683	24.34797
1974	3.701075	4.748055	5.449719	13.68056	26.43137
1975	2.895079	5.549737	8.901093	10.85362	27.48993
1976	4.746082	6.571273	10.77383	10.72161	29.04678
1977	7.040752	6.27316	11.78819	9.284638	33.81493
1978	5.557663	6.205991	10.57166	9.240688	34.77089
1979	6.109219	6.63331	11.78483	10.69262	33.71065
1980	5.494284	6.033738	11.54126	12.48728	32.2185
1981	5.270134	5.833721	12.90145	12.31717	30.45938
1982	5.208713	5.88018	11.59158	9.945595	27.35646
1983	5.742234	5.73702	10.23104	11.91851	26.32873
1984	3.279997	6.175109	10.65245	11.07039	28.804
1985	5.550197	5.163994	11.52921	10.42335	26.01201
1986	5.351111	5.106666	11.6623	11.90075	23.7182
1987	5.1651	5.507988	11.81328	13.23483	25.19228
1988	5.627374	5.931205	11.44717	13.58642	26.07644
1989	5.747262	6.895209	11.0676	13.88311	27.2602
1990	6.122069	6.931788	10.52731	15.53831	30.1808
1991	6.66262	8.347845	11.49075	16.99694	28.74109
1992	7.586679	8.690522	15.95973	17.3593	31.77037
1993	9.017266	9.664728	18.43296	16.30648	33.80101
1994	9.001544	9.717667	18.99394	16.28252	33.81288
1995	10.86463	10.65708	24.97316	16.70997	35.59763
1996	11.08433	10.20618	22.81758	16.9031	34.97334
1997	11.99344	10.50647	26.32784	16.08195	36.53812
1998	13.32868	10.82857	22.82205	16.48479	36.24382
1999	13.19367	11.31584	22.84847	15.3535	35.4837
2000	13.98002	12.82483	23.284	13.44132	39.01571
2001	15.3818	12.38144	22.5539	14.65954	37.3312
2002	14.27597	14.04992	17.73713	15.22362	34.91333
2003	14.21382	14.70894	15.69986	16.71897	34.6535
2004	15.46485	17.55134	16.6827	15.6669	35.3309
2005	16.58132	19.28015	14.58369	15.6895	32.33687
2006	18.97366	21.06948	13.44661	15.22981	30.12853
2007	19.77669	20.43089	12.85571	14.19346	29.115
2008	20.3396	23.60125	12.77582	12.84805	24.84148
2009	19.42762	20.04962	12.41935	12.85914	21.32837
2010	18.40617	21.93873	9.582536	13.57411	22.37683

2011	22.90086	23.88479	8.907024	14.15537	23.05261
2012	24.99486	23.82828	9.785906	12.46914	23.72839

Source: The World Bank.

Figure 4: Exports of Goods and Services (% of GDP)

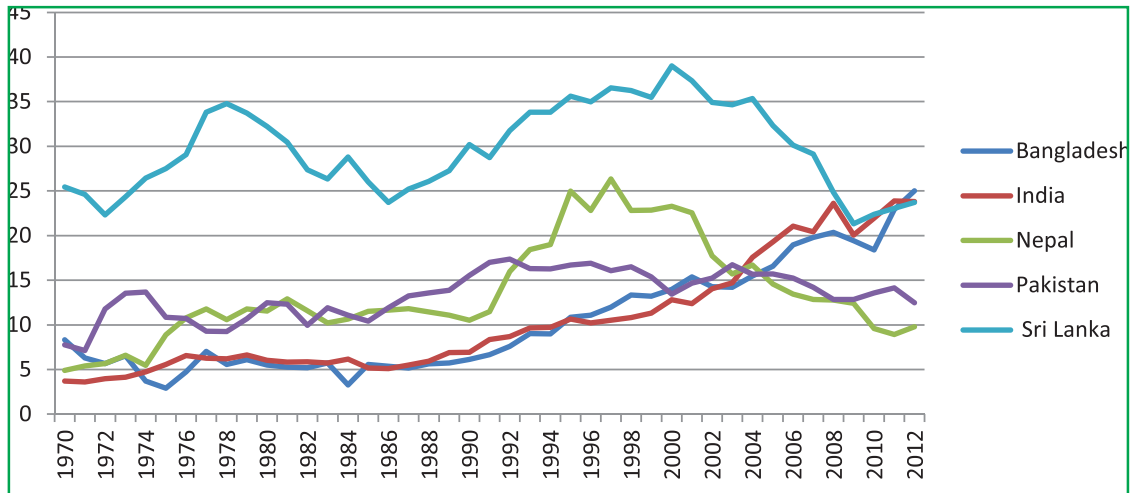


Figure 4 shows trends of exports of goods and services that contribute to GDP. It is clear from the figure that after liberalization, i.e., after 1990, exports of all the countries had increased except Sri Lanka and Nepal. India exhibits a consistent positive growth in export as compared to the other members of the group.

is the total public expenditure (current and capital) on education expressed as a percentage of the Gross Domestic Product (GDP) in a given year. Public expenditure on education includes government spending on educational institutions (both public and private), education administration, and transfers/subsidies for private entities (students/households and other private entities).” Data shown in Table 5 has been extrapolated in linear trend for some of the missing years.

e) Public Spending on Education (% of GDP)

According to the World Bank, “Public expenditure on education as % of GDP

Table 5: Public Spending on Education, Total (% of GDP)

Year	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1997	2.22962	2.82791	2.72963	3.0223	3.19751
1998	2.323745	3.51098	2.81147	2.816895	3.05142
1999	2.41787	4.33929	2.89331	2.61149	2.960918
2000	2.38442	4.27335	2.97515	1.83782	2.870416
2001	2.45975	4.035263	3.70838	1.874263	2.779915

2002	2.3178	3.797177	3.15283	1.910707	2.689413
2003	2.38055	3.55909	3.11435	1.94715	2.598911
2004	2.24829	3.29894	3.17194	1.94841	2.508409
2005	2.351825	3.1338	3.36464	2.25436	2.417907
2006	2.45536	3.09073	3.60536	2.62638	2.327405
2007	2.553843	3.13074	3.51737	2.84025	2.236904
2008	2.393233	3.17075	3.80517	2.92569	2.146402
2009	2.232623	3.21076	4.66376	2.69068	2.0559
2010	2.072013	3.31959	4.71699	2.37237	1.96588
2011	1.911403	3.42842	4.77022	2.05406	1.9956
2012	1.750793	3.53725	4.82345	1.73575	2.02532

Source: The World Bank and Own Estimation.

Figure 5: Trends of Public Spending on Education, Total (% of GDP)

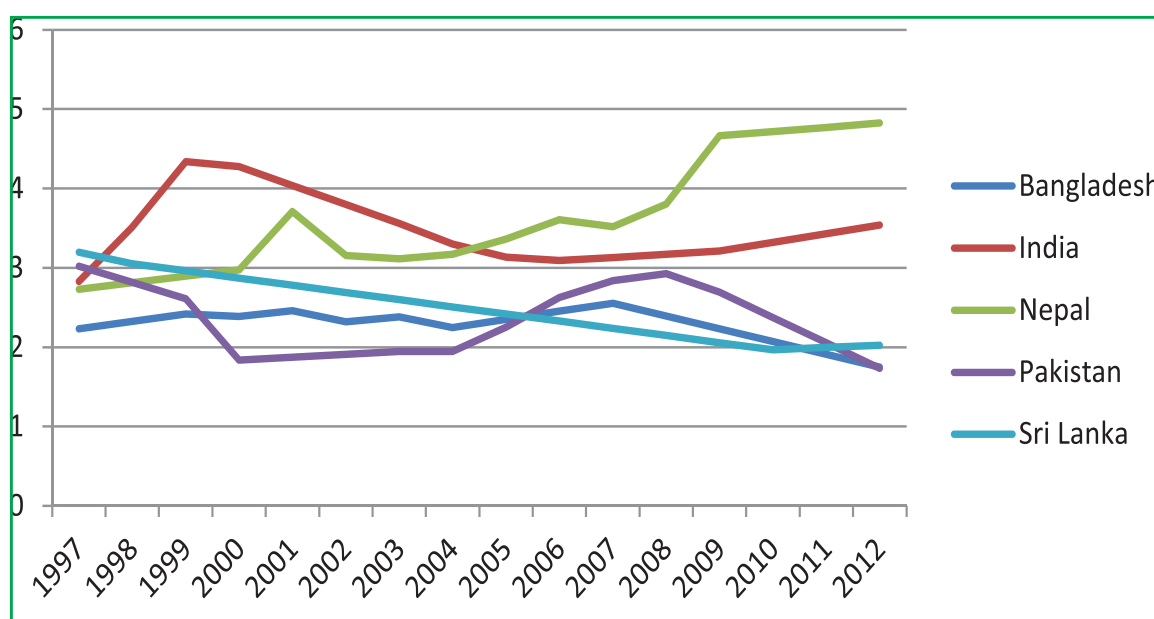


Figure 5 shows the trends of public spending on education, total (% of GDP) and it is seen that the countries don't show similar pattern. Nepal's public spending has been increasing over the years. All other countries don't follow any specific (increasing/decreasing) pattern.

f) Poverty Headcount Ratio at \$1.25 a Day (PPP) (% of Population)

According the World Bank "Population below \$1.25 a day is the percentage of the population living on less than \$1.25 a day at 2005 international price. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be

compared with poverty rates reported in earlier editions.” Table 6 contains data from the year 1985 to 2012 and data is extrapolated in linear trend for poverty headcount ratio at \$1.25 a day (PPP) (% of population) of the five countries for the missing years.

Table 6: Poverty Headcount Ratio at \$1.25 a Day (PPP) (% of Population)

Year	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1985	57.92	54.742	78.15	67.335	19.96
1986	55.27	54.358	77.22455	66.8975	19.135
1987	59.07667	53.974	76.29909	66.46	18.31
1988	62.88333	53.59	75.37364	66.0225	17.485
1989	66.69	52.89167	74.44818	65.585	16.66
1990	67.86667	52.19333	73.52273	65.1475	15.835
1991	69.04333	51.495	72.59727	64.71	15.01
1992	70.22	50.79667	71.67182	61.94833	15.272
1993	67.8925	50.09833	70.74636	59.18667	15.534
1994	65.565	49.4	69.82091	56.425	15.796
1995	63.2375	48.69455	68.89545	53.66333	16.058
1996	60.91	47.98909	67.97	50.90167	16.32
1997	60.33	47.28364	65.85	48.14	15.925
1998	59.75	46.57818	63.73	38.595	15.53
1999	59.17	45.87273	61.61	29.05	15.135
2000	58.59	45.16727	59.49	31.32333	14.74
2001	56.966	44.46182	57.37	33.59667	14.345
2002	55.342	43.75636	55.25	35.87	13.95
2003	53.718	43.05091	53.13	31.44333	12.568
2004	52.094	42.34545	49.08571	27.01667	11.186
2005	50.47	41.64	45.04143	22.818	9.804
2006	49.026	39.848	40.99714	22.276	8.422
2007	47.582	38.056	36.95286	21.734	7.04
2008	46.138	36.264	32.90857	21.192	6.063333
2009	44.694	34.472	28.86429	20.65	5.086667
2010	43.25	32.68	24.82	20.108	4.11
2011	41.806	30.888	20.77571	19.566	3.133333
2012	40.362	29.096	16.73143	19.024	2.156667

Source: The World Bank.

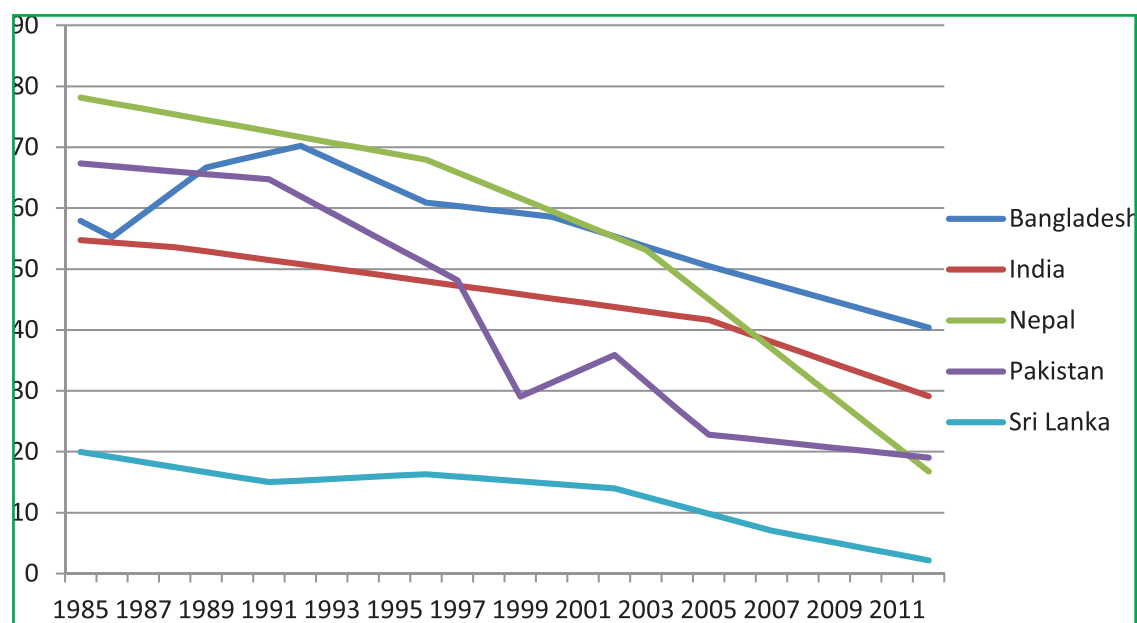
Figure 6 : Trends of Poverty Headcount Ratio at \$1.25 a Day (PPP) (% of Population)

Figure 6 shows the trends of poverty headcount ratio at \$1.25 a day (PPP) (% of population). It could be said that all countries' poverty headcount ratios have been decreasing over the years from 1985 to 2012. Nepal's steep slope in the figure shows that the rate of reduction of poverty is faster as compared to other countries. Moreover, the level of poverty is relatively lower in Sri Lanka and higher in Bangladesh as compared to the other SAARC countries.

g) Literacy Rate, Adult Total as % of People Ages 15 and Above

The World Bank defines literacy rate (% of people ages 15 and above), adult as "total adult (15+) literacy rate (%). Total is the percentage of the population age 15

and above who can, with understanding, read and write a short, simple statement on their everyday life. Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations. This indicator is calculated by dividing the number of literates aged 15 years and over by the corresponding age group population and multiplying the result by 100."

Table 7 represents the data of literacy rate, adult total (% of people ages 15 and above) from the year 1981 to 2012 and the data has been extrapolated in linear trend based on the available data of the five countries.

Table 7 : Literacy Rate, Adult Total (% of People Ages 15 and Above)

Literacy Rate, Adult Total (% of People Ages 15 and Above)					
Year	Bangladesh	India	Nepal	Pakistan	Sri Lanka
1981	29.2272327	40.76359	20.57367	25.72519	86.77792
1982	29.836439	41.50944	21.81386	26.72367	86.97316
1983	30.4456453	42.25529	23.05406	27.72215	87.16841
1984	31.0548516	43.00114	24.29425	28.72063	87.36365
1985	31.6640579	43.74698	25.53444	29.7191	87.55889
1986	32.2732642	44.49283	26.77463	30.71758	87.75413
1987	32.8824704	45.23868	28.01482	31.71606	87.94937
1988	33.4916767	45.98453	29.25501	32.71454	88.14461
1989	34.100883	46.73038	30.4952	33.71301	88.33986
1990	34.7100893	47.47623	31.73539	34.71149	88.5351
1991	35.3192956	48.22207	32.97559	35.70997	88.73034
1992	36.5359161	49.50132	34.53892	36.70844	88.92558
1993	37.7525365	50.78057	36.10226	37.70692	89.12082
1994	38.969157	52.05982	37.6656	38.7054	89.31606
1995	40.1857774	53.33907	39.22894	39.70388	89.5113
1996	41.4023979	54.61832	40.79228	40.70235	89.70655
1997	42.6190183	55.89756	42.35562	41.70083	89.90179
1998	43.8356388	57.17681	43.91896	42.69931	90.09703
1999	45.0522592	58.45606	45.48229	43.72421	90.29227
2000	46.2688797	59.73531	47.04563	44.74912	90.48751
2001	47.4855001	61.01456	48.60897	45.77402	90.68275
2002	48.5182056	61.36254	49.90959	46.79893	90.70797
2003	49.5509112	61.71052	51.2102	47.82383	90.73318
2004	50.5836167	62.05851	52.51082	48.84874	90.7584
2005	51.6163223	62.40649	53.81144	49.87364	90.78361
2006	52.6490278	62.75447	55.11205	54.15121	90.80883
2007	53.6817334	63.10246	56.41267	54.83879	90.68339
2008	54.7144389	63.45044	57.71329	55.52637	90.55795
2009	55.7471445	63.79843	59.0139	54.89264	90.86965
2010	56.77985	64.14641	60.31452	54.25891	91.18136
2011	57.8125555	64.49439	61.61514	53.62517	91.49306
2012	58.8452611	64.84238	62.91575	52.99144	91.80477

Source: The World Bank and Own Estimation.

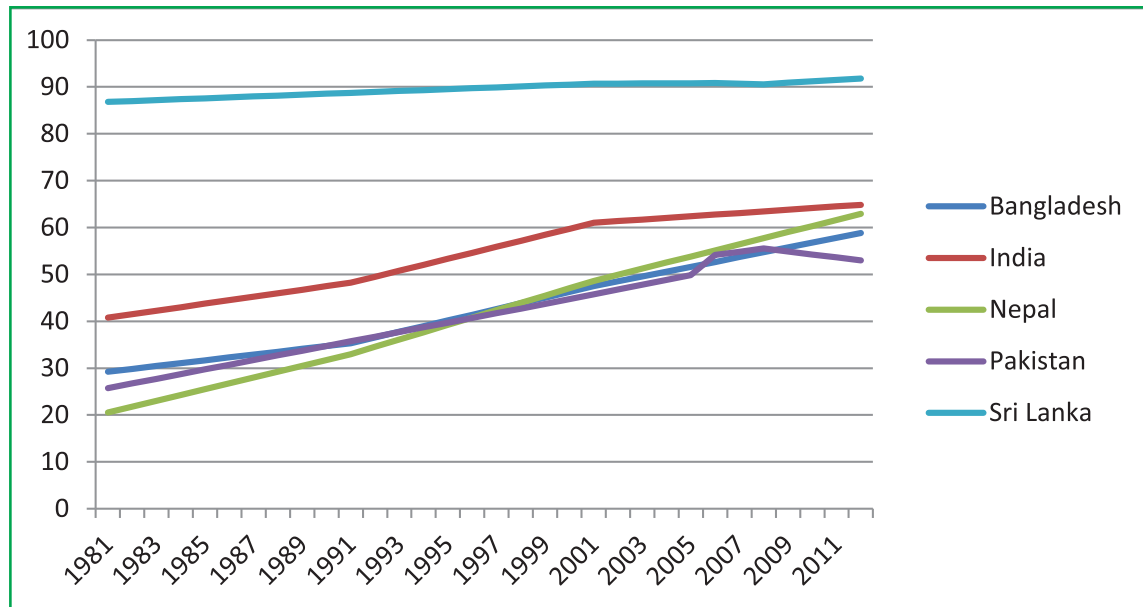
Figure 7: Trends of Literacy Rate, Adult Total (% of People Ages 15 and Above)

Figure 7 shows the trends of literacy rate, adult total (% of people ages 15 and above) and it could be seen that all the countries have been following a growth trend over the years. It may be pointed out that the literacy level of Sri Lanka is considerably high amongst the countries considered in the analysis followed by India. Moreover, one of the interesting features in the growth of literacy in the time period considered for Nepal is that slope is very high and has surpassed Bangladesh and Pakistan.

Section 2: Linear Trend Analysis of Macroeconomic Variables/Development Indicators

In this section, the data presented in the graphical analysis relating to some of the

macroeconomic variables/ development indicators have been used as a function of time. Moreover, the differential rate of growth for the overall period, and change in policy in nineties have been captured with the use of the time dummy at 1991.

Trend Analysis:

For the linear trend analysis, the following equation has been used for estimation:

$$Y = a + bt, \text{ where}$$

Y = The Macro Economic Variable/ Development Indicator, and 't' = time.

The results of the estimated equations for all the countries have been summarized in the following tables with respect to some of the variables as dependent variable and time as independent variable.

Table 8: Y= GDP (Current LCU)

Country	a	b
Bangladesh	-1.333E12 (.000)	1.449E11(.000)
India	-1.607E13(.000)	1.531E12(.000)
Maldives	-6.280E9(.000)	5.872E8(.000)
Nepal	-2.426E11(.000)	2.394E10(.000)
Pakistan	-3.115E12(.000)	2.836E11(.000)
Sri Lanka	-1.212E12(.000)	1.084E11(.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 8 summarizes the trend of the current GDP in local currency of six South Asian countries. It may be seen that the slope coefficients are positive and statistically significant at a very high level. Thus, it is evident that all countries are showing a positive growth rate of GDP in the time period from 1970 to 2012.

Table 9: Y= Household Final Consumption Expenditure, etc. (% of GDP)

Country	a	b
Bangladesh	93.200 (.000)	-.422 (.000)
India	75.486 (.000)	-.432 (.000)
Maldives	23.354 (.000)	1.059 (.000)
Nepal	82.537 (.000)	-.049 (.472)
Pakistan	80.470 (.000)	-.141 (.009)
Sri Lanka	79.164 (.000)	-.235 (.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 9 summarizes the results of the trend analysis of the six south Asian countries with respect to household final consumption expenditure (% of GDP). It is observed that there is negative growth in the variable over the time period of the last forty two years (1970 to 2012) in all countries except Maldives. The coefficients are also statistically significant at high levels except that for Nepal. This may suggest that there has been a gradual increase in the savings since there has been a rise in the GDP and a fall in the household final consumption expenditure as per cent of GDP.

Table 10: Y = Gross National Expenditure (% of GDP)

Country	a	b
Bangladesh	107.838 (.000)	-.038 (.159)
India	99.945 (.000)	.079 (.000)
Maldives	88.311 (.000)	-.329 (.060)
Nepal	101.454 (.000)	.415 (.000)
Pakistan	109.492 (.000)	-.145(.003)
Sri Lanka	106.806 (.000)	.095 (.123)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 10 shows the trend of gross national expenditure (% of GDP) in the countries. India, Nepal and Sri Lanka are showing positive trend and other countries such as Bangladesh, Maldives and Pakistan have

negative trends. Positive trend shows that national expenditure of the countries is growing. However, as evident in the analysis the rates of growth, either positive or negative, are not that high in the countries.

Table 11: Y= Exports of Goods and Services (% of GDP)

Country	a	b
Bangladesh	1.304 (.115)	.402 (.000)
India	572 (.474)	.448 (.000)
Maldives	152.467 (.000)	-2.217 (.000)
Nepal	8.317 (.000)	.247 (.000)
Pakistan	10.385 (.000)	.141 (.000)
Sri Lanka	28.012 (.000)	.089 (.151)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 11 summarizes the trend of exports goods and services as a percentage of GDP. Except Maldives other five South Asian countries are having positive coefficients. Positive coefficients show that the countries are increasingly exporting, and export plays

an important role in GDP contribution. This shows the international participation in trade for all the countries has been on the rise in the total time period considered in the study.

Table 12: Y = Literacy Rate, Adult Total (% of People Ages 15 and Above)

Country	a	b
Bangladesh	26.020 (.000)	1.009 (.000)
India	39.887 (.000)	.871 (.000)
Nepal	18.412 (.000)	1.405 (.000)
Pakistan	24.733 (.000)	1.008 (.000)
Sri Lanka	86.977 (.000)	.152 (.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 12 summarizes that the trend of literacy rate. There is a positive growth of literacy rate in all countries with respect to time. Positive coefficient shows that all the countries have an increasing literacy rate over 42 years from 1970 to 2012.

Differential Trend Analysis using Dummy Variable

In the trend analysis the total time period was considered as one and the pooled data was used to estimate the equations. It has been observed that the rates of growth of the variables/development indicators have shown a positive trend. However, it may be seen the total time period covered could be divided into two sub periods, i.e., the pre and post liberalization/globalization/economic reform periods. This has been attempted using a time dummy, i.e., the year before 1991 has been taken as dummy 0 and after 1991 is taken as dummy 1. Time as dummy variable is used to know the differential growth of these variables before and after liberalization.

The following equation has been used to estimate the equation with respect to some

of the above mentioned variables:

$$Y = a + b_1 D_i + b_2 t + b_3 D_i t + u, \text{ where}$$

Y = The Macro Variable/Development Indicator, 't' = time and D = The Dummy Variable taking values as mentioned above.

It may be mentioned here that the coefficient b_1 in the above equation is the intercept dummy and b_3 is the slope dummy. If the intercept dummy is significant, there is statistical difference in level. If the slope dummy is statistically different it may mean that the rate of change for the two groups is different with respect to the independent variable. The sign will determine the direction of change, i.e., higher or lower. For example if b_3 is positive and significant, this would mean after liberalization, the rate of growth is different and positive. This would in turn suggest that there has been an impact of the changes in the policy on the growth of the variable/indicator.

The results of the estimated equations have been presented in the following tables with respect to selected variables/indicators:

Table 13: Y= GDP (Current LCU)

Country	a	b ₁	b ₂	b ₃
Bangladesh	-1.442E11 (.537)	-6.359E12 (.000)	4.633E10 (.016)	2.569E11 (.000)
India	-5.450E11 (.851)	-8.201E13 (.000)	2.376E11 (.307)	3.330E12 (.000)
Maldives	-2.712E8 (.776)	-3.061E10 (.000)	8.047E7 (.292)	1.262E9 (.000)
Nepal	-1.004E10 (.807)	-1.144E12 (.000)	4.093E9 (.216)	4.789E10 (.000)
Pakistan	-1.109E11 (.865)	-1.678E13 (.000)	3.845E10 (.459)	6.661E11 (.000)
Sri Lanka	-5.029E10 (.834)	-6.515E12 (.000)	1.381E10 (.470)	2.582E11 (.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 13 shows the current GDP in local currency with dummy variable. For all the countries b₃ is positive and significant, which could be interpreted as after liberalization, the rate of growth is different and positive. That means the GDP has been increased after liberalization as compared to pre-liberalization period.

Table 14: Y= Household Final Consumption Expenditure (% of GDP)

Country	a	b ₁	b ₂	b ₃
Bangladesh	90.810 (.000)	-.031 (.994)	-.153 (.209)	-.211 (.220)
India	76.016 (.000)	4.100 (.066)	-.514 (.000)	-.051 (.568)
Maldives	37.204 (.000)	-81.923 (.000)	-.046 (.837)	3.180 (.000)
Nepal	86.251 (.000)	-15.742 (.015)	-.379 (.038)	.704 (.008)
Pakistan	83.121 (.000)	-25.487 (.000)	-.299 (.002)	.842 (.000)
Sri Lanka	75.257 (.000)	11.381 (.001)	.142 (.114)	-.618 (.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 14 shows the household final consumption expenditure (% of GDP) with dummy variable. As mentioned above if the slope dummy is positive and statistically different it may mean that the rate of change has been more in the post liberalization period. It is seen that in case of Maldives, Nepal and Pakistan, the slope dummy is positive and significant which suggest that the variable

has a relatively high rate of growth after the liberalization which might have affected adversely the rates of domestic savings in the countries. However, the percentage of final household consumption expenditure in India, Sri Lanka and Bangladesh have negative and statistically significant slope dummies suggesting increment in the rates of savings in the period after liberalization.

Table 15: Y = Gross National Expenditure (% of GDP)

Country	a	b ₁	b ₂	b ₃
Bangladesh	106.826 (.000)	-4.375 (.064)	.100 (.135)	.014 (.878)
India	100.169 (.000)	-6.577 (.000)	.090 (.008)	.176 (.000)
Maldives	81.378 (.000)	59.518 (.000)	.122 (.768)	-2.032 (.001)
Nepal	101.622 (.000)	-9.958 (.003)	.451 (.000)	.252 (.055)
Pakistan	107.164 (.000)	-10.019 (.006)	.173 (.086)	.032 (.818)
Sri Lanka	102.766 (.000)	4.620 (.409)	.524 (.002)	-.469 (.043)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 15 shows the household gross national expenditure (% of GDP) with dummy variable. The slope dummy for gross national expenditure (% of GDP) is positive and significant for India and Nepal but negative and significant for Sri Lanka and Maldives

which means that there is a positive and negative change after liberalization period respectively. Although the statistical analysis is suggesting differential growth rates in the national expenditure, the secular trend does not corroborate this.

Table 16: Y= Literacy Rate, Adult Total (% of People Ages 15 and Above)

Country	a	b ₁	b ₂	b ₃
Bangladesh	26.868 (.000)	-1.069 (.615)	.913 (.000)	.120 (.152)
India	38.481 (.000)	15.226 (.000)	1.013 (.000)	-.665 (.000)
Nepal	18.403 (.000)	2.894 (.015)	1.402 (.000)	-.101 (.027)
Pakistan	24.713 (.000)	7.354 (.027)	1.000 (.000)	-.257 (.044)
Sri Lanka	86.583 (.000)	1.977 (.000)	.195 (.000)	-.107 (.000)

Note: Figures in the parentheses are the significance levels.

Source: Own Estimation.

Table 16 shows the household literacy rate trend with dummy variable. It may be observed that so far the rate of growth of literacy is concerned, all the countries except Bangladesh are showing the same pattern, i.e., the rate of growth of the variable in India, Nepal, Pakistan and Sri Lanka in the liberalization period is less than that experienced in the pre-liberalization. This may be quite natural since the rate of increment in the earlier years was results of consistent effort to increase literacy rate. Once the rate is reaching a high level the later, even if there is increment in the rate there the rate would be less at higher levels.

4. Conclusion

From the graphical analysis presented in the study in the relevant section, it is seen that the recent policy changes with respect to the liberalization and globalization in the SAARC countries appears to have a positive impact although the trends are not same for all the countries. Fluctuations in the graphs

in the selected countries may exhibit the impact of monetary and fiscal policies of the respective government during the long period considered. In this context, it may be pointed out that such fluctuations may also relate to the stability in the government at the central level. For example, the graphs for Pakistan in cases of export, public expenditure and poverty head count ratio have large fluctuations. However, in general, the recent process of liberalization has helped the SAARC countries to grow in economic as well as social sector. In the economic side, exports which can be considered as the index of international participation in trade have been increasing along with the gross national expenditure. Similarly, in social aspect, the poverty has been decreasing along with increasing literacy rate.

The trend analysis shows that there has been a positive growth of all the indicators of development considered in this study. The period considered here is for about

forty years. Thus for the period considered there has been a long term growth of these variables. Such a growth can be examined with respect to the two different sub-periods characterized by the changes in the policy at the macro level. The recent phenomenon considered in this study is the process of liberalization which has taken place in many countries both developed and developing. So far as the SAARC countries are concerned the process of liberalization has been in the late nineteen eighties or early nineties. The present study takes nineteen-nineties as the beginning of the said process. The findings suggest that after liberalization there has been a positive growth in indicators like the GDP and export in all the SAARC countries. Such a situation may be indicative of the positive impact of the process of liberalization and opening up of the economies. Further, the findings suggest that in case of Maldives, Nepal and Pakistan, the slope dummy after the liberalization period for household final consumption expenditure is positive and significant. This might have affected the domestic savings in these countries adversely. But another argument and implications can also be that there has been increasing consumerism in these countries in the recent years which might have led to increment in the consumer aggregate demand leading to increased production. Contrary to this finding, in India, Sri Lanka and Bangladesh, there have been negative and statistically significant slope dummies suggesting increment in the rates of savings in the period after liberalization. So far as the public expenditure is concerned except

Sri Lanka there has been a positive growth of this variable in India, Bangladesh, Nepal and Pakistan. More public expenditure may be indicative of a high level of intervention of the public authorities in the economy with various development programs and development expenditure. This might also accelerate the pace of economic development in these countries.

The study analyses the behavior of the macroeconomic variables/development indicators with respect to time only. The determinants of these variables could also be used using the LSDV model for such analysis. In cases of a few variables extrapolated values of the missing variables have been used. However, this has been limited to two variables in the trend analysis only.

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Missionaries and Markets

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ABSTRACT

The purpose of the article is to explain the role of missionaries-defined as preaching Gospel and offering services such as health, education and shelter-in the African continent for developing markets for products and services. Based on the relevant literature review, the results indicate that the use of picture postcards as a medium of communications to develop markets for services such as religion, education and tourism can be very effective, and that such medium, if used strategically, can yield a high return on investment for a sustained period of time. The implication for marketing managers is that they should not underestimate the power of picture postcards when promoting religion-based products and services in developing countries and emerging markets.

Keywords: Education; missionaries; marketing; religion; tourism

1. Who are Missionaries?

A Christian missionary is a person who dedicates his or her life to preaching the Gospel while helping needy with services such as education, health, and shelter, among others. Traditionally, missionaries reach people beyond their country and culture and draw people closer to Jesus. In some cultures, this can happen in a few years, whereas in others, it may take several generations to see any change (CT, 2014). Thus, in some cases, missionaries have to live overseas for a long period of time, and communicate the progress of their work and its impact on local communities to people of their home country. To communicate the missionary work, missionaries began to print picture postcards of their work and local culture and

send them to their home countries.

2. How did Missionaries Create the Markets: Picture Postcards as a Marketing Technique?

Christian missionaries were a prominent user of the picture postcard in Africa, as they utilized the techniques of marketing or persuasion to a greater or lesser degree. Most picture postcards illustrated missionaries in action, preaching to indigenous people, whereas others represented the *exotic* and illustrated non-western and non-Christian people whose lifestyle appeared to be strange and mysterious (Long, 2003). Some postcards-negatively portraying African stereotype-were also produced for the market of European visitors such as missionaries

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and tourists (Vokes, 2010). Photographs of Africa were published profusely to promote a variety of imperial, commercial, missionary and scientific enterprises (Killingray and Roberts, 1989). In USA alone, billions of picture postcards were distributed between 1905 and 1915. The mass distribution of the images through picture postcards ignited a desire to visit Africa, and thus created markets for religion, education and tourism, among others.

3. Religion

The presence of Christianity affected the social and political dynamics in Africa. The Africans perceived the Christian missionaries as convincing them to abandon their values and convert to Christians, and thus the emergence of a cultural genocide perpetrated by the missionaries (Mukova and Mangena, 2012). However, one exception to the missionary's intolerance of local customs was their furtherance of vernacular languages, as reading the Bible was at the core of Protestant ideas of becoming Christian. Therefore, translating the Bible into African languages was a high priority, because by translating the Bible in multiple languages, missionaries were able to exert a tremendous influence that went well beyond conversion (Lindenfeld, 2005).

Although many Africans rejected Christianity and stuck either to traditional African religions or Islam, a significant number did convert to Christianity. In fact, Christianity had been very successful in converting Africans to Christians, as it provided them with access to Western education, wage employment, influence, and power in the colonial world (Shufelt, 2003). There were over 300 million Christians in Africa in 2001, about 37 per cent of the entire population of

Africa (Kaba, 2005). In some countries such as Africa and the Philippines, the religious market is so huge that individual Pastors have opened their own churches and run it like a business organisation. The creation of the religious market could be attributed to the presence and influence of Christian missionaries (Mbiti, 1980).

4. Education

Christian missionaries also used their influences to establish formal education in Africa during the colonial periods (Ssekamwa, 2001). Africans scarcely felt a need to change their religion, especially when it came to changing their morals such as the renouncing of polygamy. Confronted with the reticence of adults, missionaries addressed the adults by establishing the concept of boarding schools (Smalley, 2007). For example, in South Africa which has over 5000 mission-run schools, the adults who were able to attend school received education aimed at converting them to Christianity, though they also received a basic education in reading and writing that adhered to the basic elements of Western education (Kaba, 2005).

As missionaries were trying to capture the attention of African adults for education, cameras and photography became a dominant part of education and mass visual culture. As a result, mass-produced images of missions were printed on postcards (Long, 2003). Although these picture postcards may seem designed primarily to publicize the mission's work, it also illustrates the customs, methods, and technology used by the missionaries, and provides depictions of indigenous life, and sheds light on the culture of the missionary enterprise in the early 20th century (Smalley, 2007). Indeed,

the picture postcards created curiosity in Western people to visit Africa, not only to contribute to education in Africa, but also to culturally educate themselves through tourism.

5. Tourism

The picture postcards introduced adventurous tourism in Africa, as they were considered mass-produced artifacts of popular culture for mainly European customers (Vokes, 2010). These artifacts contributed to the desire to travel in Africa, and thus created a market for the segment. In fact, during the picture postcard boom, it was just as popular to achieve the postcards in scrapbook and display them in homes as it was to send them (DeBres and Sowers, 2009). These postcards gave insights as to where the adventurous senders visited, what they saw and what messages they wrote.

As such, Africa has a comparative advantage in tourism over Western countries, as it has ideal weather conditions with unique tourist attractions such as pristine beaches, diverse wildlife, scenic landforms and unique indigenous cultural heritage. Tourism also offers a potential to galvanize local agricultural development through backward integration that allows local farmers to supply the food needs of tourism establishments. For example in Kenya, Botswana, Namibia and South Africa, the local Safari lodges allow the local farmers to provide food and other supplies for the tourists, and thus contribute to local economy by improving agricultural technology and quality of production (Rogerson, 2012). Although political instability and unsafe media portrayal may be detrimental to the tourism market (Huggan, 2012), Africa still receives a significant number of Western tourist,

creating a sustainable market not only for tourism, but also for agricultural products.

6. Conclusion

The missionaries used the picture postcards and exhibited extraordinary proficient marketing techniques in its use and distribution to Western customers, tourists and missionaries. Picture postcards have made a clear contribution to the presence of Christianity in Africa which in turn created various markets such as religion, education and tourism, among others. The expansion of the Christian religion in Africa gave rise to the proliferation of Churches and the relations between African and Western countries. The Christian missionaries also created a market for schools where, for example, East African educational policies brought significant progress within the limits of their resources. Finally, the picture postcard created the market for tourism by creating a desire to explore the world.

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Role of Special Economic Zones in Cambodia's Economic Development

Phon Narin¹

ABSTRACT

A Special Economic Zone (SEZ) is an important source for expanding industrial development in a country. Evidences show that establishment of SEZ enhances employment and exports, increases foreign direct investment (FDI), retains domestic investment, transfers latest technology and skills, and streamlines administrative and regulatory interfaces in the country. Cambodia's SEZs are still in their early stages of development. The results of the study show that all the companies in the selected SEZs were owned by foreign investors. There were significant changes in the number of employees and the amount of exports of the SEZs between 2010 and 2012. Further, the SEZs were also found to have contributed to the improvement of the living standard of the villagers living in the surrounding areas of the SEZs through creation of direct and indirect employment opportunities. To augment the efforts made by SEZs in Cambodia's economic development, the Royal Government of Cambodia along with other developmental and regulatory bodies are required to develop attractive and effective policies and play constructive roles.

Keywords: Special Economic Zone; economic development; employment; exports

1. Introduction

Generally, Special Economic Zones (SEZs) are considered as growth engines that boost manufacturing, augment exports and generate employment. Components of a SEZ include infrastructure facilities like roads, port, transport system, generation and distribution of power, telecom, hospitals, hotels, educational institutions, leisure and entertainment units, residential, industrial/commercial complexes, water supply, sanitation and sewerage system and any

other facility required for development of the Zone. SEZs also enjoy a number of fiscal benefits including benefits of income tax, Value Added Tax (VAT), relaxed tariff, etc. which are different from the other economic areas in the country and hence, are considered promising business destinations. Thus, by offering privileged terms, SEZs attract investment and foreign exchange, spur employment and boost the development of improved technologies and infrastructure. Moreover, SEZ not only attracts foreign companies looking for cheaper and efficient

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location to set up their offshore business, but it also allows the local industries to improve their exports through a proper channel and with the help of the new foreign partners to the outside world at a very competitive price (Mishra and Corbett, 2008).

The contribution of SEZ to economic growth has been debated quite extensively in the literature. The traditional argument is that SEZ improves economic growth by increasing the capital stock, whereas, recent literature points to the role of SEZ as a channel of international technology transfer. The economic performance and impact of zone programs in developing countries have been evaluated in numerous studies. As pointed out by Markusen (1995), SEZ not only contributes to import-export of more efficient foreign technologies, but also generates technological spillovers for local firms. The most economic benefits from zone development are both static and dynamic. The static benefits are quite straightforward and include direct employment creation and income generation, export growth and export diversification, foreign exchange earnings, foreign direct investment and government revenues. The impact of these benefits is obviously amplified in poorer countries where jobs and foreign exchange earnings and government resources are scarce. The dynamic benefits are much harder to measure, but are far more important to the term contributions from zone development. These include indirect employment creation, skills upgrading, female employment, technology transfer, “demonstration effect” arising from application of “best practices,”

and regional development.

Research on the role of SEZs in an economy provides mixed results. In a very influential paper, Borensztein et al. (1998) suggest that the effectiveness of SEZs depends on the stock of human capital in the host country. Only in countries where human capital is above a certain threshold, SEZs positively contribute to growth. Boarnet and Bogart (1996) present their econometric evidence regarding the effectiveness of the New Jersey enterprise zone program. They reported no positive impacts on employment and property values. Their conclusions were that the enterprise zone program in New Jersey was ineffective in achieving the goal of improving the economy in zones and their surrounding areas. However, the authors hinted that enterprise zone incentives in New Jersey might have increased investment without increasing employment or property value, but the data used in this study would not allow such investment effects to be identified. The studies conducted by Taiwan Ministry of Economic Affairs (1996), and Korea Ministry of Industry and Trade (1998), reveal that the shares of Export Processing Zone (EPZ) in the total exports of Taiwan and Korea were quite substantial. It is noted that SEZs were established after the model of EPZs, especially in Taiwan and Korea which had already achieved a significant success. The research carried out by Ge (1998) points that in India macroeconomic indicators like industrial State Domestic Product, service State Domestic Product, agriculture State Domestic Product, and export State Domestic Product had strong explanatory

power for the pattern of SEZs across states. Bondonia and Engberg (2000) look at data from enterprise zone programs in California, Kentucky, Pennsylvania, New York, and Virginia's enterprise zones, and found no significant changes in employment growth, per capita income, or poverty rates. Armas (2002) mentions that SEZs were a much more significant source of employment generation in smaller countries with population of less than five million (examples include Mauritius, the Seychelles, and Jamaica) than in larger countries. Tatsuyuki (2003) reveals that economic growth in China had been impressive since the reform and open door policy were adopted, which was possible due to the establishment of SEZs. The SEZ was the key instrument in the open door policy, though its relative importance declined as the stage of economic development advanced. The overall economic performance of the SEZs at the first stage during the mid-1980s was disappointing. Various social and economic problems caused drastic changes in the SEZs. The reform and open door policy had been modified to cope with the problems such as expanding inequity and regional disparity. Further, the experiences of the SEZs were extended to the wider areas opened with preferential incentives. The management and operation of the SEZs helped considerably contributing to enhance growth in the open regions. The research carried out by Douglas (2004) points out that the concept of SEZs was largely pioneered by China, wherein the SEZs contribute to 20 per cent of the total foreign direct investment (FDI). The SEZ model was also successfully

implemented in Poland and Philippines. In the former, the SEZs contributed to almost 35 per cent of the FDI inflows. Shenzhen in China had been at the helm of rapid economic development.

The SEZs are important for the third world countries which have been in the races for rapid economic growth. There are many positives which emerge out of establishing an SEZ. For undertaking any kind of massive development program, the government requires huge amount of funds. Therefore, it looks out for the potential partners to support the development of the government's programs. For the setting up of SEZ, the government may tie up with private partners to invest in that area, thus a win-win situation for both. The private player on the other hand gets the right to market and use the SEZ's with relaxed tax laws, thereby increasing its revenue generating capacity and also carrying out the economic growth of the company in a more efficient way with the better tax policies. Actually SEZs with relaxed import tariffs to encourage the import were dependent on export driven industries to flourish, which support investors to develop their competitive prices of manufactures (Kigira and Sayek, 2004). In a study conducted by Aggrawal (2005), it is revealed that Sri Lanka, in the beginning, followed the way of offering incentives to investors like other countries. These included 100 per cent of foreign ownership, a tax holiday up to ten years with complete tax exemption for remuneration of foreign personnel employed, royalties and dividends of shareholders during that period,

and duty exemptions for the importation of equipment, construction materials and production inputs. In addition, EPZ units were provided with industrial services such as land, power, water and telecommunication services at subsidized rates. However, in the late 1990s, the government curtailed the incentives. Tax holidays were gradually reduced to three to five years. Furthermore, conditions for tax exemptions on dividends, exemptions in turn-over tax and expatriates incomes were made more stringent. All labour laws were made applicable. The ban on trade unions in these zones was removed. According to Aggarwal (2006a and 2006b) in India, the SEZ scheme was started in 2000 and the SEZ Act was passed in 2005. The objectives for setting up SEZs in India were: (a) generation of additional economic activity, (b) promotion of exports of goods and services, (c) promotion of investment from domestic and foreign sources, (d) creation of employment opportunities, and (e) development of infrastructure facilities. While policy objectives did not explicitly include balanced regional development, proponents of the policy had claimed that SEZ Act facilitated a more balanced pattern of development. Further, a micro level analysis of the zones contribution to industrialization efforts in India reveals that EPZs had a catalytic effect in promoting new production sectors, exporting new products and in building up the country's image in certain products in international markets. Indian policy makers started toying with the idea of SEZs as far back as in 1965 when the Kandla Export Processing Zone (EPZ) was

set up in Gujarat. Additionally, Indian SEZs did not pay income tax for the first five years and paid 50 per cent of their tax liability for the next two years. A tax holiday for a ten-year period was furthermore awarded to SEZ developers under the new policy (Aggarwal, 2006a). Again it was revealed that though India was the first Asian country to take the free zone initiative and set up the first zone in Kandla, the share of SEZs in exports was a mere five per cent in 2004-2005. Furthermore, they accounted for only one per cent of factory sector employment and 0.32 per cent of factory investment in the same year (Aggarwal, 2006b). The comprehensive study carried out by Bondonia and Greenbaum (2007) used plant level data from enterprise zone programs in eleven states of the United States, in an effort to sort out growth outcomes into gross flows accounting for new, existing, and vanishing business in the zone areas. The study focused on enterprise zone effects upon employment, sales, capital expenditures, and payroll per employee outcomes, and found only modest (statistically insignificant) impacts from enterprise zone incentives. In a study taken up by the World Bank (2008), it was pointed out that SEZs create immense employment opportunities. The setting up of SEZ enhanced employment generation to the labour force both direct and indirect.

Experience of SEZs in different countries provides an interesting pictures. In a research, Halim (2007) points out that Indonesia had experienced 194 per cent increase in foreign investments in 1993 as part of the negotiations for the General Agreement on

Tariffs and Trade (GATT) and the Asia-Pacific Economic Cooperation (APEC), the country eliminated all restrictions on foreign investments. Indonesia's bonded zones were in government hands, but over 100 export-oriented industrial estates were almost wholly privately developed and run. While most zones host traditional light manufacturing and assembly-style export processing activities, Indonesia net exports of firms located in bonded zones reached 62 per cent in 1990. Indonesia, which provided bonded zone status to Batam and Bintan islands are located 20 minutes away from Singapore. In a similar study, it was revealed that Vietnam had relied mostly on private zone developers from the very start of its program in 1991 with the establishment of the private Tan Thuan EPZ in Ho Chi Minh City. In 1998, Vietnamese government had started to develop Moc Bai Border Economic Zone (MBBEZ) as state-owned project which was located at border gate between Vietnam and Cambodia, 170 kms from Phnom Penh, Cambodia, 73 kms from Ho Chin Minh city, 70 kms from Tan Nhat Airport, and 75 kms from Saigon port. There were around 5,000 customers visiting duty free shops per day. The country had four kinds of Zone such as: (i) Industrial Zone (IZ), (ii) Export Processing Zone (EPZ), (iii) High Tech Park (HTP), and (iv) Economic Zone (EZ). Up to October, 2007, there were around 140 IZs and EPZs, 2 HTPs and 8 EZs in Vietnam. In the most cases, Vietnamese government provided land to zone developers, and zone developers received many supports from the government. Zone developers can sell land

to investors at cheaper prices (CSD, 2007).

Bangladesh had formulated the Export Processing Zones Act of 1980, Foreign Private Investment Promotion and Protection Act of 1980, and was also not lagging behind in offering incentives to lure investors in SEZs. Bangladesh besides offering tax holiday for ten years and a reduction to 50 per cent of total tax attributable, exempted the zones from three major labour laws since 1989. These included the Factories Act, the Industrial Dispute Act and the Employment of Labour (Standing Orders) Act. These were replaced by two instructions on labour relations, and all EPZs considered this step as a major incentive, and the Private Export Processing Zone Act of 1996 to facilitate the growth of EPZs (Halim, 2007). According to Khan (2007), Pakistan paved the way to economic zones through policy reforms implemented in 1994, which aimed at better integration with open markets and large scale privatization. During this period, an EPZ was set up in Karachi. The concessions and facilities offered included duty-free imports and exports of goods, and tax exemptions. Overseas Pakistanis were not required to disclose the origin of their funds for investment, and were allowed to bring in second-hand machinery without any surveyor certificate. The growth of FDI in Pakistan was not significant until 1990 due to the regulatory policy framework. However, under the more liberal policy regime, it had played a more significant role in the development of Pakistan's economy. Over the post-liberalization era, there was a steady build up in the actual FDI inflows,

which increased from US\$ 216.2 million in 1990 to US\$ 1,524 million in 2005, thus growing at the annual compound rate of 21.47 per cent. During the fiscal year 2005-2006, Pakistan received US\$ 3,521 million as FDI. The study made by ILO (2007) points out that the Shannon Free Zone in Ireland was the world's first EPZ, established in 1958, inspiring the development of EPZs in emerging markets worldwide. Although less important as a catalyst for economic growth, the zone was critical to the growth of exports, attraction of FDI, and outward orientation of the Irish economy. Shannon zone offered investors security access to European markets, attractive tax benefits, and subsidized rent and facilities. Specialized training and manpower development facilities were integrated into zone design from inception. As a result, export manufacturing activities accelerated. As a large share of the zone's activities was in service sectors, the zone's contribution to overall merchandise exports was relatively small. According to ADB (2007), China's SEZs provided the infrastructure necessary for low-cost, rapid manufacturing through liberal economic policies, low tax rates, and highly developed infrastructure. Short-term manufacturing was encouraged to expand its capacity and scope through the presence of industrialization and urbanization, highly developed infrastructure, foreign direct investment, research and development, and universities and skill training centres. By promoting the development of long-term industries, China's SEZs had also been able to help its population to grow in its income

level, skill and education in tandem with the companies that make up the SEZ. The research of FIAS (2008) points out that Thailand established 34 industrial estates located in 14 provinces among which 22 estates had been running by private sectors. The industrial Estate Authority of Thailand Act had enabled investors to receive lucrative incentives like easy access to licenses or permits, for instance, for land allocation, factory construction, etc., as well as tax benefits and reduction in customs and other duties. As of September 2003, there were about 96 SEZs. Thailand was often pointed to as models in utilizing its zones to both promote and diversify their export bases. Each of these had succeeded in moving from low value-added manufacturing to attract investment and encourage exports in a wide range of industries, including electronics assembly, component manufacturing, automotive assembly and chemical processing. Thailand's FDI had been a major contributor to Thailand's economic growth since the mid-1980s. In the late 1980s, about 50 per cent of FDI inflow went to the manufacturing sector, especially in the area of labor intensive and export-oriented industries. The Arab Republic of Egypt, the Syrian Arab Republic, Israel, and Jordan established government-run zones in the 1960s and 1970s, at about the same times that zones were first set up in the Philippines, the Dominican Republic, the Republic of Korea, and Taiwan. The majority of zones in the Middle East and North Africa region were free trade zones, aimed at facilitating trade with their host countries. Though

many of these zones started manufacturing, trading and associated activities remained predominant. With a handful of exceptions, the economic contribution of zones in the Middle East had been negligible compared to zone programs in the Far East and Latin America, largely due to their traditional focus on trading activities rather than manufacturing. The notable exceptions to this were zones in Egypt and Jordan, which had developed a manufacturing focus on enterprises in the qualified industrial zones (FIAS, 2008). According to the World Bank (2008) following the break-up of the Soviet Union, many countries of the former Soviet bloc turned to free zones as a means of attracting foreign investment and integrating their economies with the global economy through export-led expansion. The research carried out by FIAS (2008) reveals that several African countries were pioneers in using free zones as economic development tools. Liberia and Senegal, for example, established EPZs in the early 1970s. In 1981, Mauritius started a single factory-based EPZ program whose prominence and success led to a wave of zone development throughout the continent in the late 1980s in East, Southern, and West Africa. Most countries in the region implemented both pure EPZ approaches along with single factory models. With the notable exceptions of Ghana (where most zones were private), most zones were developed and operated by government, typically by an EPZ authority. A number of countries such as Madagascar, Mali, Mauritius, and the Seychelles operate single factory EPZ programs, which were

quite successful in terms of job creation and exports.

Thus, it is widely perceived that SEZ is an important source for expanding industrial development of both poor and developing countries. Most of the countries in the world have changed their strategies and economic attitudes towards SEZs, because it is believed that SEZ could contribute to the development efforts of a country for economic growth and human resource development through investment incentives. The traditional benefits of SEZs are that they boost employment, increase and diversify exports, and attract FDI/retain domestic investment. There are also dynamic benefits such as the transfer of technology and skills, stimulation of local economy through linkages, streamlining of administrative and regulatory interfaces, and piloting of new economic policies. The new strategy also involves large-scale mega zones that are integrated using IT systems and networks. These are usually predicated on public-private partnerships and aimed to serve a range of markets, not just export.

The empirical evidence that SEZ generates positive spillovers for local firms is mixed. While some studies find positive spillover effects, some find no effects and some even conclude that there are negative effects. SEZs in some countries have also been criticized for negative socio-economic impacts, particularly in relation to the role of women, labor, and working condition (ILO, 1989).

Cambodia is a small country located in Southeastern Asia, bordering the Gulf of Thailand, and the lands of Thailand, Vietnam, and Laos. Over the past decade, Cambodia has adapted a wide range of free market policies, with a business-friendly and proactive government seeking to encourage investment and manufacturing in the country. It has aimed to accelerate economic growth and created an enabling environment conducive to increasing investment in the Kingdom. Strong macroeconomic stability and significant improvement in standards of living have been realized in the Kingdom. GDP annual growth rate in Cambodia averaged 7.72 per cent from 1994 until 2012. In the context of Cambodia, the Royal Government recognizes that SEZs have had a significant economic impact in terms of rapid employment generation, higher pay levels and growth rates, enhanced local economic development and skills as well as technology transfer. Therefore, the present study has made an attempt to know the role of SEZs for the economic development of Cambodia.

2. Objectives of the Study

The main objective of the present study is to assess the roles of the Special Economic Zones in Cambodia's Economic Development. The study also aims to explore various advantages contributed by SEZs in Cambodia.

3. Hypotheses of the Study

To understand the role of SEZs in Cambodia's economic development, the study intends to test the following null hypotheses:

- i. There is no significant change in the number of employees in the Special Economic Zones between 2010 and 2012.
- ii. There is no significant change in the amount of exports of the Special Economic Zones between 2010 and 2012.

4. Methodology and Tools of Analysis

The total number of approved SEZs in Cambodia in 2012 was 22. Out of these, six SEZs had already started operation by the time of the survey. From among the six SEZs, the study has specifically surveyed only four SEZs, namely, Phnom Penh SEZ, Manhattan (Svay Reing) SEZ, Tai Seng Bavet SEZ, and Sihanouk Ville SEZ, as these were fully in operation during the time of study. From the four selected SEZs, 30 firms'/factories' managers, 80 employees, and 62 villagers from the surrounding villages of the selected SEZs have been surveyed through direct personal interview method. For the selection of 30 firms'/factories' managers, census method has been used as this number of firms/factories was in operation during the time of survey. From among the 30 firms/factories, 11 managers were from Phnom Penh SEZ, 9 managers from Manhattan SEZ, 6 managers from Tai Seng Bavet SEZ, and 4 managers from Sihanouk Ville SEZ. In addition, the study has selected 30 employees from Phnom Penh SEZ, 30 employees from Manhattan SEZ, 10 employees from Tai Seng Bavet SEZ and 10 employees from Sihanouk Ville SEZ by using lottery method. With regard

to villagers of the surrounding villages, 22 villagers from Phnom Penh SEZ, 17 villagers from Manhattan SEZ, 12 villagers from Tai Seng Bavet SEZ, and 11 villagers from Sihanouk Ville SEZ were surveyed for the study purpose. For the selection of these villagers, census method has been used. All these villagers were doing small businesses, i.e., selling of fruits, vegetables, soft drinks, etc., inside the SEZs.

In addition, the present study has mostly used the secondary data relating to SEZs over the period 2008 to 2012 for the country as a whole. The secondary data have been collected from various sources such as Council for the Development of Cambodia (CDC), Ministry of Commerce, Ministry of Economy and Finance and Ministry of Planning of Government of Cambodia, Greater Mekong Sub-region (GMS), International Monetary Fund, etc.

The study has used both descriptive and quantitative approaches to meet the objectives and test the hypotheses. The study has used “t” test in order to test the hypotheses. The formula to calculate the ‘t’ value is as follows:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s} \times \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

Where:

\bar{x}_1 = Mean of the variable (x_1) after the establishment of SEZ.

\bar{x}_2 = Mean of the variable (x_2) before the establishment of SEZ.

s = Combined Standard Deviation.

$$s = \sqrt{\frac{\sum (x_1 - \bar{x}_1)^2 + \sum (x_2 - \bar{x}_2)^2}{n_1 + n_2 - 2}}$$

n_1 = Number of observations of variable x_1

n_2 = Number of observations of variable x_2

5. Results of the Study

5.1 Responses of the Companies

5.1.1 Reasons to Invest in Cambodia's Special Economic Zones

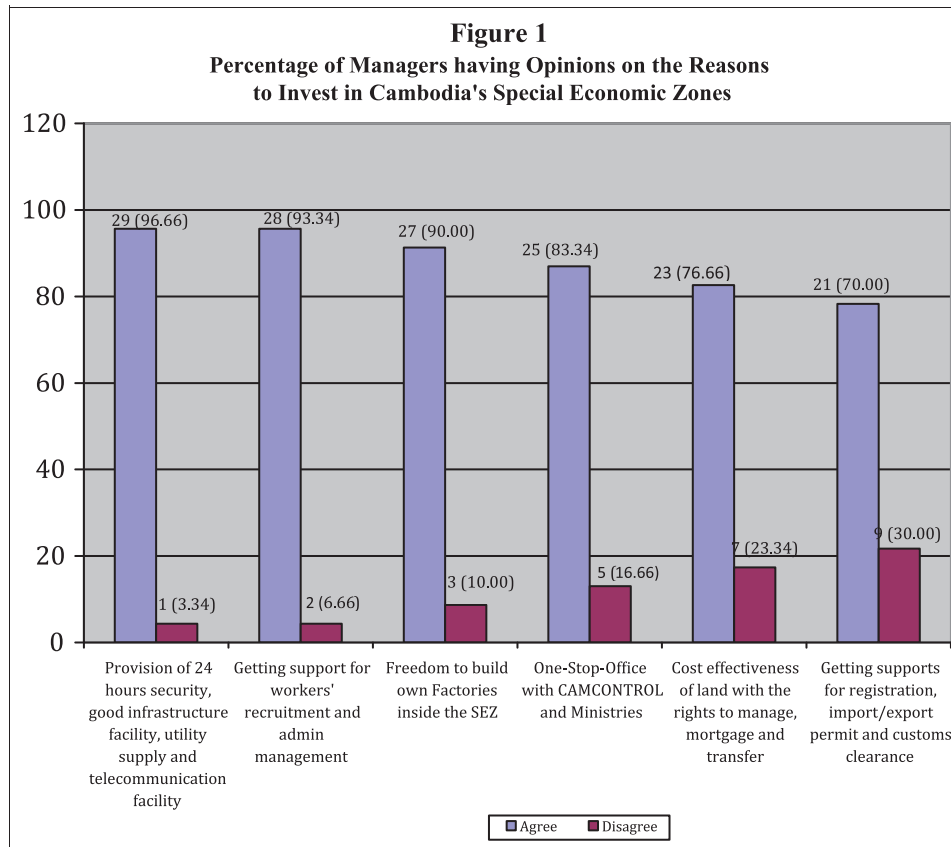
More than 96 per cent of selected company managers agreed with the opinion that provision of 24 hours security, good infrastructure facility, utility supply, and telecommunication were the reasons for their investment in Cambodia's SEZs. The percentages of managers having the opinions of getting supports for registration, import/export permit and customs clearance; and One-Stop-Office with CAMCONTROL and Ministries inside the SEZ were 93.34 and 90.00 respectively. Moreover, cost effectiveness of land with the rights to manage, mortgage and transfer; freedom to build own factories inside the SEZ; and getting support for workers' recruitment and administration management were also the reasons of investment in Cambodia's SEZs as opined by respective 83.34, 76.66 and 70.00 per cent of surveyed managers (Table 1 and Figure 1).

Table 1: Opinions of the Managers on the Reasons to Invest in Cambodia's SEZs

Sl. No.	Reasons of Investment	Agree	Disagree	Total
1	Provision of 24 hours security, good infrastructure facility, utility supply and telecommunication facility	29 (96.66)	1 (3.34)	30 (100)
2	Getting support for workers' recruitment and administration management	28 (93.34)	2 (6.66)	30 (100)
3	Freedom to build own Factories inside the SEZ	27 (90.00)	3 (10.00)	30 (100)
4	One-Stop-Office with CAMCONTROL and Ministries	25 (83.34)	5 (16.66)	30 (100)
5	Cost effectiveness of land with the rights to manage, mortgage and transfer	23 (76.66)	7 (23.34)	30 (100)
6	Getting supports for registration, import/export permit and customs clearance	21 (70.00)	9 (30.00)	30 (100)

Note: Figures in the parentheses indicate percentage to the corresponding total.

Source: Own Survey.



5.1.2 Employees Working in the SEZs

Altogether 20,924 employees were working in the four SEZs in 2012 as compared to 12,847 in 2010. In 2012, the highest number of employees, i.e., 7,282 (34.80 per cent), was in Phnom Penh SEZ followed by 6,504 (31.08 per cent) in Manhattan SEZ, 3,786 (18.09 per cent) in Taiseng Bavet SEZ and 3,352 (16.02 per cent) in Sihanoukville SEZ. The average annual percentage increase in

the number of employees during 2010-2012 was 27.62 per cent in all the SEZs. The 't' value (4.614) and its significance level (0.000) indicated that there was significant increase in the number of employees in the SEZs between the years 2010 and 2012, and the level of significance was at one per cent. Hence, the null hypothesis "There is no significant change in the number of employees in the special economic zones between 2010 and 2012" is rejected (Table 2).

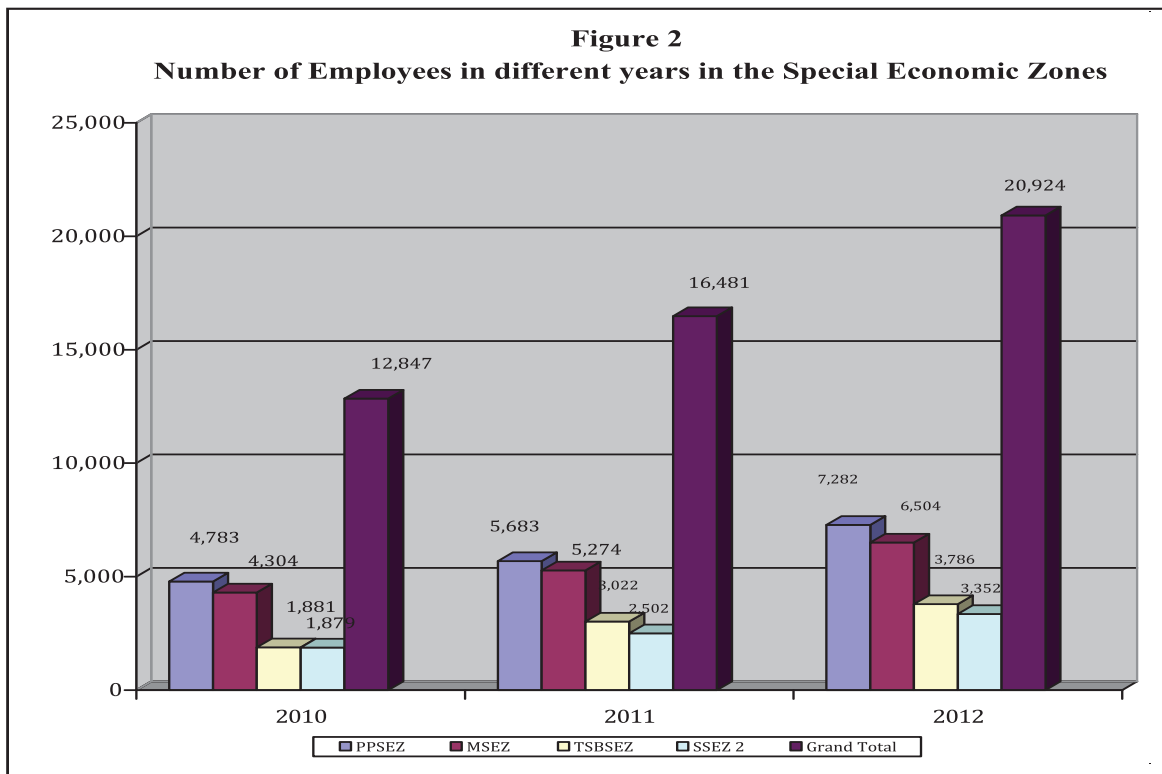
Table 2: Number of Employees Working in the Companies in the SEZs, 2010-2012

Name of the SEZ	Name of the Company	2010	2011	2012	%Change in 2011 over 2010	%Change in 2012 over 2011	Average % Change
Phnom Penh SEZ	1.Clean Circle Co Ltd.	197	210	263	6.60	25.24	15.92
	2.Yi Xiang Co Ltd.	167	196	250	17.37	27.55	22.46
	3.SinChinHong CO Ltd.	216	214	245	-0.93	14.49	6.78
	4.Ajinomoto Co Ltd.	147	153	195	4.08	27.45	15.77
	5.Cambox Private Ltd.	120	128	135	6.67	5.47	6.07
	6.Evergreen Industrial Co Ltd.	2,560	3,125	4,125	22.07	32.00	27.04
	7.Cambodian Success Co Ltd.	155	165	206	6.45	24.85	15.65
	8.Tiger Wing Co Ltd.	411	490	612	19.22	24.90	22.06
	9.New Hope Group	345	395	493	14.49	24.81	19.65
	10.Dishells Co Ltd	90	112	140	24.44	25.00	24.72

	11.Ji Xiang Co Ltd.	375	495	618	32.00	24.85	28.42
Total		4,783	5,683	7,282	18.82	28.14	23.48
Manhat- tan SEZ	1.Sheico Ltd.	1,314	1,695	1,743	29.00	2.83	15.91
	2.Forest Packing Co Ltd.	46	51	72	10.87	41.18	26.02
	3.Galaxy Textile, Garment	1,131	1,345	1,815	18.92	34.94	26.93
	4.Ampack Packing Co Ltd.	44	58	65	31.82	12.07	21.94
	5.Bestway Industry Co Ltd.	827	871	1,135	5.32	30.31	17.82
	6.Leegrow Plastic PKG Co Ltd.	56	63	95	12.50	50.79	31.65
	7.S.Y.G steel Co Ltd.	86	96	135	11.63	40.63	26.13
	8.Kingmaker	235	465	699	97.87	50.32	74.10
	9. Estern Indust. Enterprise Inc.	565	630	745	11.50	18.25	14.88
Total		4,304	5,274	6,504	22.54	23.32	22.93
Taiseng Bavet SEZ	1.Doko INC Co Ltd.	735	996	1,145	35.51	14.96	25.24
	2.Atlantic Bicycle Co Ltd.	574	875	1,095	52.44	25.14	38.79
	3.La More Cambodia Ltd.	213	629	856	195.31	36.09	115.70
	4.A and J Co Ltd, Bicycle	245	365	456	48.98	24.93	36.96
	5.Tai Seng Logistic, Dry Port.	27	32	58	18.52	81.25	49.88
	6.YORKS Co. Ltd, Gloves.	87	125	176	43.68	40.80	42.24

Total		1,881	3,022	3,786	60.66	25.28	42.97
Siha-noukville SEZ 2	1.Hodo Group Co Ltd.	706	1,000	1,250	41.64	25.00	33.32
	2.Nanguo Garment Co Ltd.	741	835	1,245	12.69	49.10	30.89
	3.SRC Garment Co Ltd.	256	378	489	47.66	29.37	38.51
	4.Nissin Lotus Garment Co Ltd	176	289	368	64.20	27.34	45.77
Total		1,879	2,502	3,352	33.16	33.97	33.56
Grand Total		12,847	16,481	20,924	28.29	26.96	27.62
t-value=4.614		df=29		Significance Level (2-tailed)=0.000			

Source: CDC and Own Estimate.



5.1.3 Foreign Employees working in the SEZs

The total number of foreign employees working in the four surveyed SEZs was 1,952 in 2012 among which 34.43 per cent was in Phnom Penh SEZ, 30.48 per cent in Manhattan SEZ, 18.44 per cent in Tai Seng Bavet SEZ, and 16.65 per cent in Sihanouk

Ville SEZ. In Phnom Penh SEZ, the average annual growth rate of foreign employees during 2008-2012 was 90.55 per cent followed by 79.61 per cent in Manhattan SEZ. Similarly, 52.05 and 66.73 per cent were the growth rates of foreign employees in Tai Seng Bavet and Sihanouk Ville 2 SEZs respectively during the same period (Table 3 and Figure 3).

Table 3: Number of Foreign Employees Working in Different Companies in the SEZs, 2008-2012

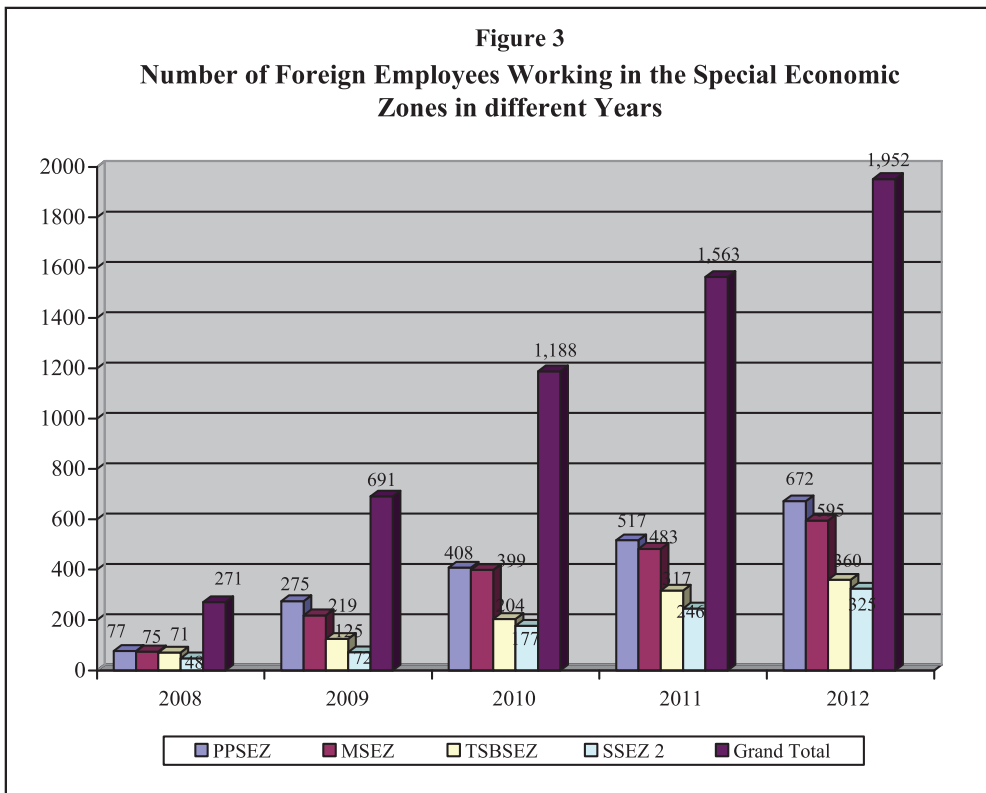
Name of the SEZ	Name of the Company	Number of Employees					Average Change
		2008	2009	2010	2011	2012	
1. Phnom Penh SEZ	1.Clean Circle Co Ltd.	-	11	25	18	22	
	2.Yi Xiang Co Ltd.	-	10	15	20	23	
	3.SinChinHong CO Ltd.	-	6	12	17	19	
	4.Ajinomoto Co Ltd.	-	7	8	10	16	
	5.Cambox Private Ltd.	-	2	6	8	11	
	6.Evergreen Industrial Co Ltd.	65	216	256	312	395	
	7.Cambodian Success Co Ltd.	3	3	10	13	15	
	8.Tiger Wing Co Ltd.	9	6	20	40	61	
	9.New Hope Group	-	7	26	32	45	
	10.Dishells Co Ltd	-	-	5	9	12	
	11.Ji Xiang Co Ltd.	-	7	25	38	53	
Sub-total: 11		77	275	408	517	672	90.55

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2. Manhat-tan SEZ	1.Sheico Ltd.	21	27	120	158	165	
	2.Forest Packing Co Ltd.	-	-	5	5	6	
	3.Galaxy Textile, Garment	25	126	115	130	181	
	4.Ampack Packing Co Ltd.	-	-	4	3	5	
	5.Bestway Industry Co Ltd.	26	57	78	76	98	
	6.LeeGrow Plastic PKG Co Ltd.	3	9	5	5	7	
	7.S.Y.G steel Co Ltd.	-	-	8	8	10	
	8.Kingmaker	-	-	19	43	59	
	9. Estern Indust. Enterprise Inc.	-	-	45	55	64	
Sub-total:	9	75	219	399	483	595	79.61
3. Taiseng Bavet SEZ	1.Doko INC Co Ltd.	53	86	126	146	146	
	2.Atlantic Bicycle Co Ltd.	18	23	29	81	95	
	3.La More Cambodia Ltd.	-	16	20	55	75	
	4.A and J Co Ltd, Bicycle	-	-	17	20	25	
	5.Tai Seng Logistic, Dry Port.	-	-	3	5	7	
	6.YORKS Co. Ltd, Gloves.	-	-	9	10	12	
Sub-total:	6	71	125	204	317	360	52.05

4. Siha-noukville SEZ 2	1.Hodo Group Co Ltd.	48	57	85	98	125	
	2.Nanguo Garment Co Ltd.	-	15	65	83	118	
	3.SRC Garment Co Ltd.	-	-	18	37	46	
	4.Nissin Lotus Garment Co Ltd	-	-	9	28	36	
Sub-total:	4	48	72	177	246	325	66.73
Grand Total : 30 Companies		271	691	1,188	1,563	1,952	70.84

Source: CDC and Own Survey.



5.1.4 Products Produced by the Firms in the Special Economic Zones

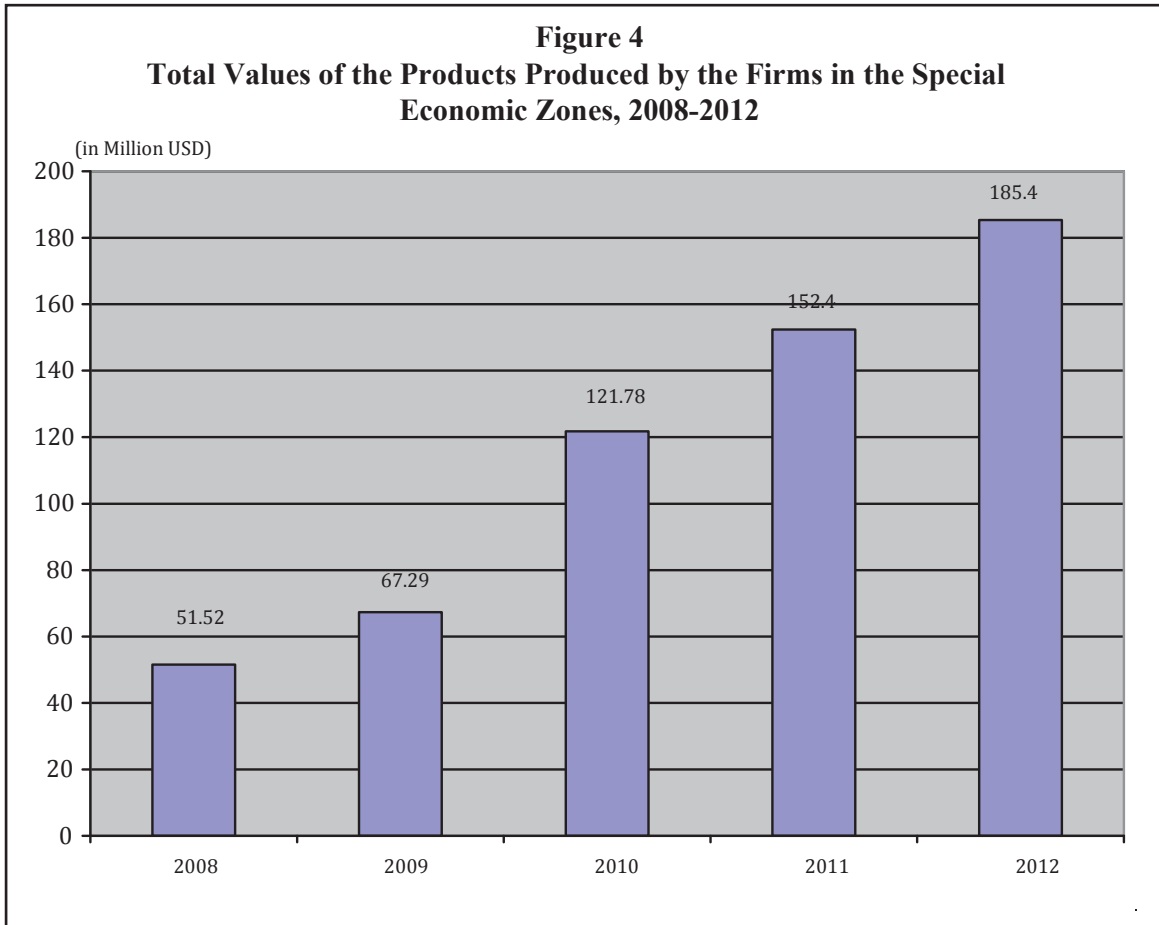
In 2008, only seven firms in the SEZs started producing the products with the total value of 51.52 million USD. The numbers of active firms in the SEZs in 2008, 2009, 2010, 2011 and 2012 were 7, 10, 30, 30 and 30 respectively. The monetary values of

the products produced by these firms in the corresponding years were respective 51.52 million USD, 67.29 million USD, 121.78 million USD, 152.4 million USD and 185.4 million USD. The growth rate of the values of the products in the SEZs during 2008-2012 was estimated at 39.60 per cent (Table 4 and Figure 4).

Table 4: Values of different Types of Products Produced by the Firms in the SEZs, 2008-2012 (in million USD)

Sl. No.	Type of Products	2008		2009		2010		2011		2012		Average Annual Growth Rate of the Value of the Products
		No. of Firms	Value of Products	No. of Firms	Value of Products	No. of Firms	Value of Products	No. of Firms	Value of Products	No. of Firms	Value of Products	
1	Garments	4	39.64	5	49.19	10	88.7	10	110.4	10	134.2	37.61%
2	Bicycle	2	8.73	3	13.6	4	17.6	4	21.4	4	27.1	33.36%
3	Footwear	1	3.15	1	4.2	5	7.2	5	10.5	5	12.2	42.55%
4	Screws, nuts, bolts	-	-	-	-	2	1.7	2	1.9	2	2.3	16.41%
5	Carton boxes	-	-	-	-	3	4.1	3	4.4	3	5	10.48%
6	Food process	-	-	-	-	1	0.13	1	0.15	1	0.2	24.36%
7	Wire mesh	-	-	-	-	2	1.1	2	1.5	2	1.8	28.18%
8	Plastics package	-	-	1	0.3	3	1.25	3	2.15	3	2.6	142.53%
Total		7	51.52	10	67.29	30	121.78	30	152.4	30	185.4	39.60

Source: Own Survey.



5.1.5 Goods Exported by the Companies

The study reveals that the products such as clothes, bicycles, foot wears, screws nuts bolts, carton boxes, wire mesh, and plastic packages were produced in the SEZs during 2008 to 2012, and all these products were exported to other countries. During 2008

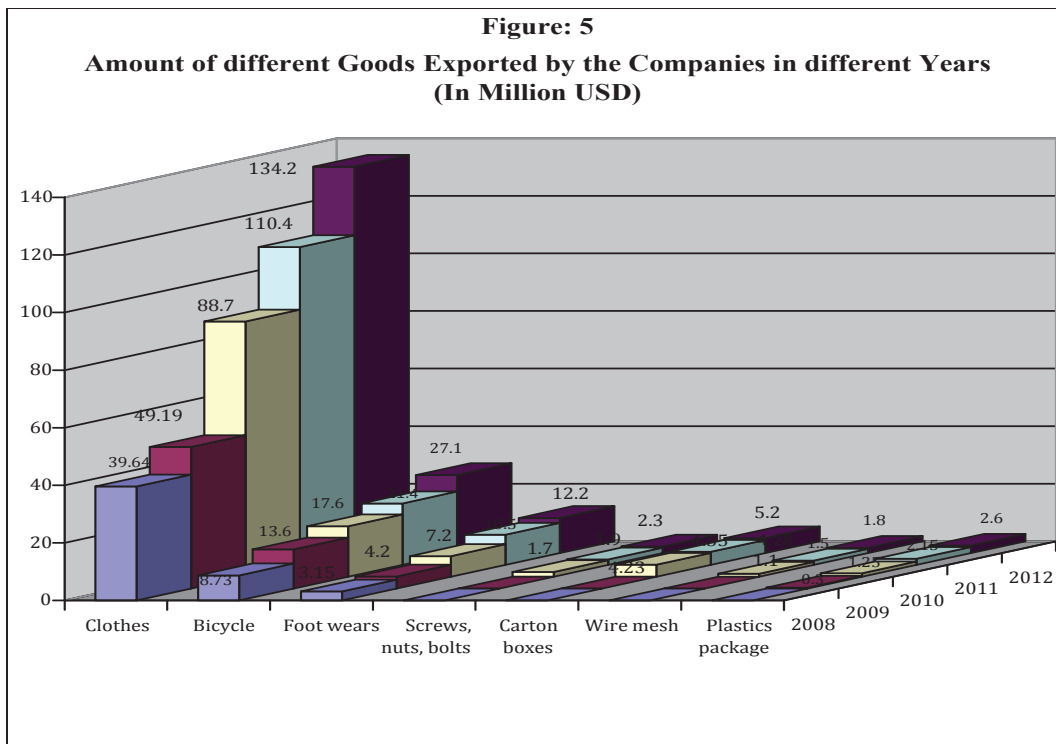
to 2012, the total amount of the products exported to other countries by the firms was USD 578.39 million. The percentage shares of clothes, bicycles, foot wears, screws nuts bolts, carton boxes, wire mesh and plastic packages to the total amount of exports in the years 2008 to 2012 were 72.98, 15.29, 6.44, 1.02, 2.42, 0.76 and 1.09 per cent respectively (Table 5 and Figure 5)

Table 5: Amount of different Goods Exported by the Companies in different Years

Sl. No.	Types of Goods	Value (Million USD)					Total
		2008	2009	2010	2011	2012	
1	Clothes	39.64(76.94)	49.19(73.10)	88.7(72.83)	110.4(72.44)	134.2(72.38)	422.13(72.98)
2	Bicycles	8.73(16.94)	13.6(20.21)	17.6(14.44)	21.4(14.04)	27.1(14.62)	88.43(15.29)
3	Foot Wears	3.15(6.12)	4.2(6.24)	7.2(5.90)	10.5(6.89)	12.2(6.58)	37.25(6.44)
4	Screws, Nuts, Bolts	-	-	1.7(1.40)	1.9(1.25)	2.3(1.24)	5.9(1.02)
5	Carton boxes	-	-	4.23(3.46)	4.55(2.99)	5.2(2.80)	13.98(2.42)
6	Wire mesh	-	-	1.1(0.90)	1.5(0.98)	1.8(0.97)	4.4(0.76)
7	Plastic packages	-	0.3(0.45)	1.25(1.07)	2.15(1.41)	2.6(1.41)	6.3(1.09)
Total		51.52 (100.00)	67.29 (100.00)	121.78 (100.00)	152.4 (100.00)	185.4 (100.00)	578.39 (100.00)

Note: Figures in the parentheses indicate percentage to the corresponding column total.

Source: CDC and Own Survey.



During 2010 to 2012, in the four selected SEZs 30 active companies produced goods for exports. Among the 30 companies, 11 companies were in Phnom Penh SEZ, nine companies in Manhattan SEZ, six companies in Tai Seng Bavet SEZ and four companies in Sihanouk Ville SEZ 2. Altogether goods of amount USD 185.4 million were exported by the four SEZs in 2012 as compared to USD 121.78 million in 2010. In 2012, the highest amount of exports, i.e., USD 67.3 million (36.30 per cent), was from Phnom Penh SEZ followed by USD 62.7 million (33.82 per cent) from Manhattan SEZ, USD 30.6 million (16.50 per cent) from Tai Seng Bavet SEZ and USD 24.8 million (13.38 per cent) from Sihanouk Ville SEZ 2. The average annual percentage increase in the

amount of exports during 2010-2012 was 23.40 per cent in all the SEZs. During the period, the highest average annual increase in exports was 38.91 per cent in case of Sihanouk Ville SEZ 2 followed by 34.14 per cent in Tai Seng Bavet SEZ, 19.41 per cent in Phnom Penh SEZ and 18.96 per cent in Manhattan SEZ. The ‘t’ value (4.359) and its significance level (0.000) indicated that there was significant increase in the amount of exports in the SEZs between the years 2010 and 2012, and the level of significance was at one per cent. Hence, the null hypothesis “There is no significant change in the amount of exports of the Special Economic Zones between 2010 and 2012” is rejected (Table 6).

Table 6: Amount of Exports of the Companies in Different SEZs, 2010 – 2012 (In Million USD)

Name of the SEZ	Name of the Company	2010	2011	2012	%Change in 2011 over 2010	%Change in 2012 over 2011	Average % Change
Phnom Penh SEZ	1.Clean Circle Co Ltd.	1.5	1.6	1.8	6.67	12.50	9.58
	2.Yi Xiang Co Ltd.	1.4	1.5	1.7	7.14	13.33	10.24
	3.SinChinHong CO Ltd.	1.8	1.8	1.9	0.00	5.56	2.78
	4.Ajinomoto Co Ltd.	1.2	1.3	1.5	8.33	15.38	11.86
	5.Cambox Private Ltd.	0.8	1	1.2	25.00	20.00	22.50
	6.Evergreen Industrial Co Ltd.	28.5	34.3	41.2	20.35	20.12	20.23
	7.Cambodian Success Co Ltd.	0.9	0.9	1.1	0.00	22.22	11.11
	8.Tiger Wing Co Ltd.	5.3	6.4	7.5	20.75	17.19	18.97
	9.New Hope Group	2.7	3.5	4.0	29.63	14.29	21.96
	10.Dishells Co Ltd	0.6	0.8	0.9	33.33	12.50	22.92

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	11.Ji Xiang Co Ltd.	2.5	3.3	4.5	32.00	36.36	34.18
Total		47.2	56.4	67.3	19.49	19.33	19.41
Manhattan SEZ	1.Sheico Ltd.	14.2	15.2	19.5	7.04	28.29	17.67
	2.Forest Packing Co Ltd.	0.15	0.2	0.3	33.33	50.00	41.67
	3.Galaxy Textile, Garment	13.5	16	20.4	18.52	27.50	23.01
	4.Ampack Packing Co Ltd.	0.13	0.15	0.2	15.38	33.33	24.36
	5.Bestway Industry Co Ltd.	10.5	11.2	12.5	6.67	11.61	9.14
	6.Leegrow Plastic PKG Co Ltd.	0.3	0.4	0.5	33.33	25.00	29.17
	7.S.Y.G steel Co Ltd.	0.5	0.7	0.9	40.00	28.57	34.29
	8.Kingmaker	2.4	3.3	3.9	37.50	18.18	27.84
	9.Estern Indust. Enterprise Inc.	2.7	3.5	4.5	29.63	28.57	29.10
Total		44.38	50.65	62.7	14.13	23.79	18.96
Taiseng Bavet SEZ	1.Doko INC Co Ltd.	7.5	9.8	10.6	30.67	8.16	19.41
	2.Atlantic Bicycle Co Ltd.	4.2	6.2	7.8	47.62	25.81	36.71
	3.La More Cambodia Ltd.	2.8	4.4	6.5	57.14	47.73	52.44
	4.A and J Co Ltd, Bicycle	1.8	2.5	3.6	38.89	44.00	41.44
	5.Tai Seng Logistic, Dry Port.	0.2	0.25	0.3	25.00	20.00	22.50
	6.YORKS Co. Ltd, Gloves.	0.6	1.5	1.8	150.00	20.00	85.00
Total		17.1	24.65	30.6	44.15	24.14	34.14
Sihanoukville SEZ 2	1.Hodo Group Co Ltd.	5.5	8.7	9.8	58.18	12.64	35.41
	2.Nanguo Garment Co Ltd.	4.6	6.8	8.9	47.83	30.88	39.35
	3.SRC Garment Co Ltd.	2.3	3.7	4.2	60.87	13.51	37.19
	4.Nissin Lotus Garment Co Ltd	0.7	1.5	1.9	114.29	26.67	70.48
Total		13.1	20.7	24.8	58.02	19.81	38.91

Grand Total	121.78	152.4	185.4	25.14	21.65	23.40
t-value=4.359	df=29		Significance Level (2-tailed)=0.000			

Source: CDC and Own Estimate.

5.2 Responses from Employees

5.2.1 Reasons to Select SEZ to Work

In the survey, 91.25 per cent of the 80 selected employees opined that unemployment was the reason to select SEZ to work while, 90 per cent mentioned easy to apply for the

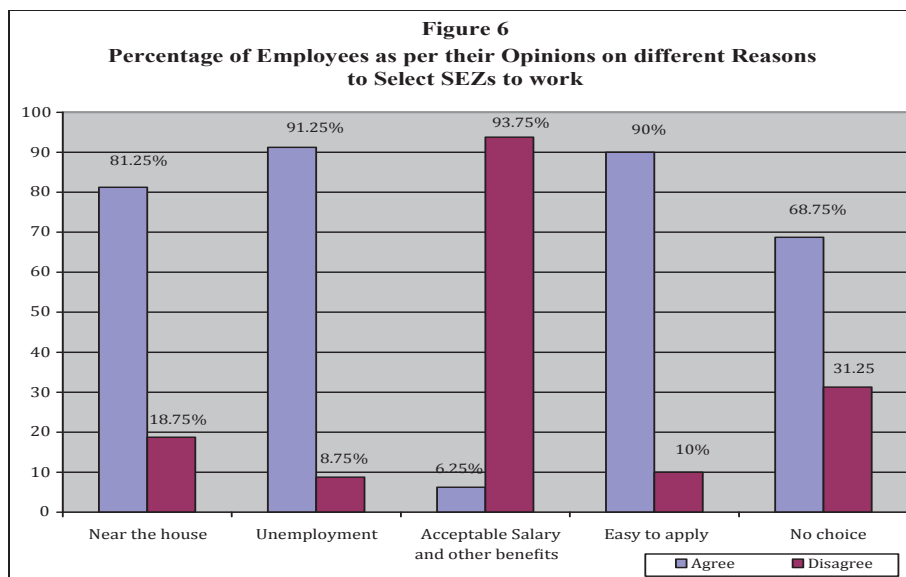
job as the reason. Besides, near the house, no choice and acceptable salary and other benefits were the reasons to select SEZs to work as viewed by 81.25 per cent, 68.75 per cent and 6.25 per cent of surveyed employees respectively (Table 7 and Figure 6).

Table 7: Opinions of Employees on the Reasons to select SEZs to Work

Sl. No.	Reasons	Agree	Disagree	Total
1	Near the house	65 (81.25)	15 (18.75)	80 (100)
2	Unemployment	73 (91.25)	07 (8.75)	80 (100)
3	Acceptable Salary and other benefits	05 (6.25)	75 (93.75)	80 (100)
4	Easy to apply	72 (90.00)	08 (10.00)	80 (100)
5	No choice	55 (68.75)	25 (31.25)	80 (100)

Note: Figures in the parentheses indicate percentage to the corresponding row total.

Source: Own Survey



5.2.2 Working Conditions

Around 89 per cent of surveyed employees in the SEZs mentioned that they were getting direct support from Ministry of Labour. Besides longer duration and stability in jobs;

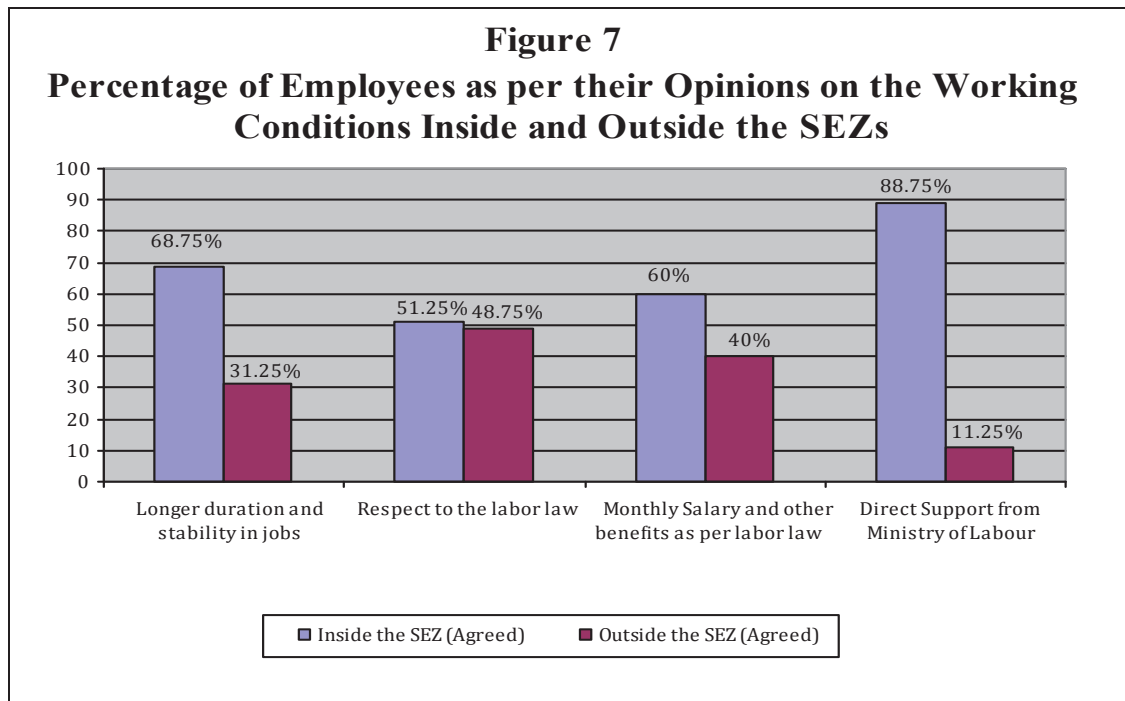
respect to the labor law; and monthly salary and other benefits as per labour laws were the benefits found in the SEZs as viewed by 68.75; 51.25; and 40.00 per cent employees respectively (Table 8 and Figure 7).

Table 8: Opinions of Employees on the Working Conditions Inside and Outside the SEZs

Sl. No.	Opinions on Working Conditions	Inside the SEZ	Disagree	Total
1	Longer duration and stability in jobs	55 (68.75)	25 (31.25)	80 (100)
2	Respect to the labor law	41 (51.25)	39 (48.75)	80 (100)
3	Monthly salary and other benefits are as per labor law	32 (40.00)	48 (60.00)	80 (100)
4	Direct support from the Ministry of Labour	71 (88.75)	09 (11.25)	80 (100)

Note: Figures in the parentheses indicate percentage to the corresponding raw total.

Source: Own Survey.



5.2.3 Improvement of Job Skills

It is revealed from the study that about 64 per cent of surveyed employees disagreed with the opinion on the improvement of their job skills of working in the SEZs. The percentage of disagreed employees in Phnom Penh SEZ was 76.66 followed by 60.00 per cent each in Manhattan SEZ and Tai Seing Bavet

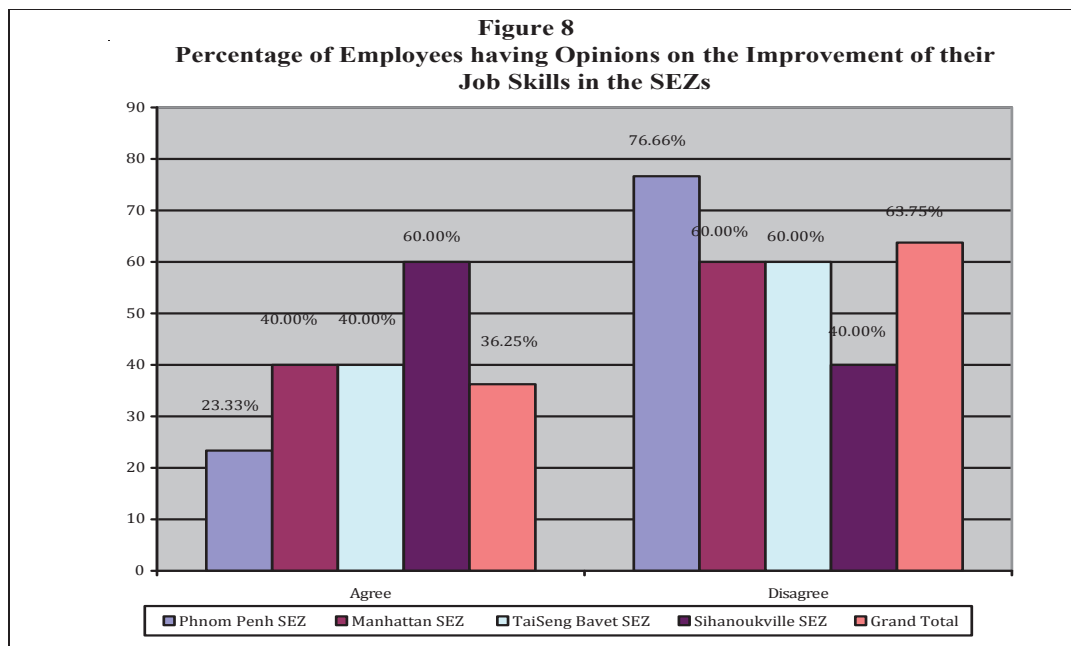
SEZ, and 40.00 per cent in Sihanouk Ville 2 SEZ. On the other hand, the percentages of employees agreed with the opinion were 60.00 per cent in Sihanouk Ville SEZ 2 followed by 40.00 per cent, 23.33 per cent, and 40.00 per cent in Manhattan, Phnom Penh, and Tai Seng Bavet SEZs respectively (Table 9 and Figure 8).

Table 9: Opinions of Employees on the Improvement of their Job Skills in the SEZs

Sl. No.	Name of the SEZ	Staff and Employees opinions		Total
		Agree	Disagree	
1	Phnom Penh SEZ	7 (23.33)	23 (76.66)	30 (100)
2	Manhattan SEZ	12 (40.00)	18 (60.00)	30 (100)
3	Tai Seng Bavet SEZ	4 (40.00)	6 (60.00)	10 (100)
4	Sihanoukville SEZ2	6 (60.00)	4 (40.00)	10 (100)
Total		29 (36.25)	51 (63.75)	80 (100)

Note: Figures in the parentheses indicate percentage to the corresponding row total.

Source: Own Survey.



5.2.4 Work Stability

With regard to the work stability inside the SEZ, more than 83 per cent of employees strongly agreed that the companies followed the laws, 78.75 per cent strongly agreed on the opinion ‘company has long term contract

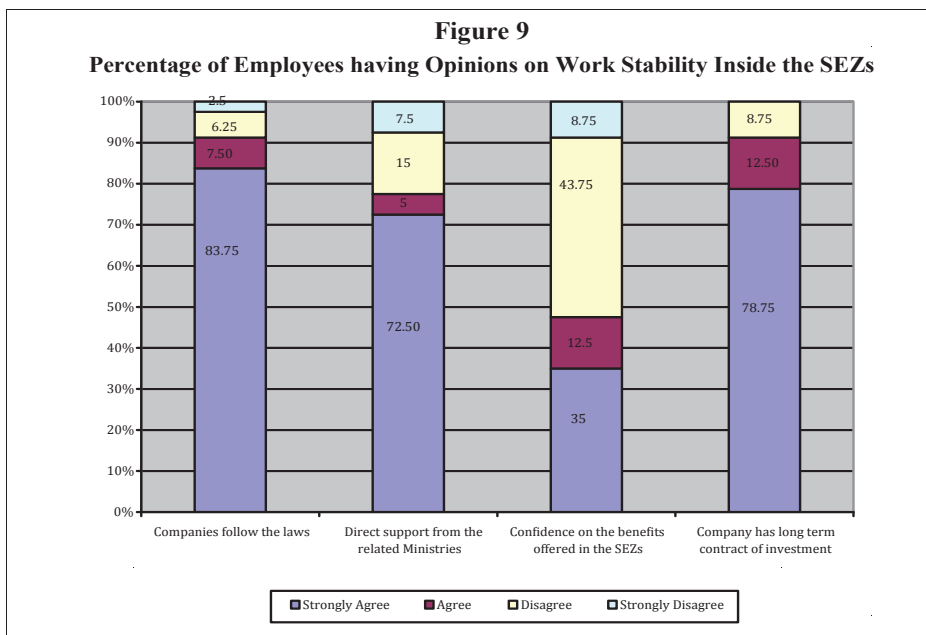
of investment’, and 72.50 per cent strongly agreed on ‘the companies receive direct support from the related Ministries’. Only 35 per cent of employees strongly agreed that they had confidence on the benefits offered in the SEZs (Table 10 and Figure 9).

Table 10: Employees’ Opinions on Work Stability inside the SEZs

Sl. No.	Opinions	Type			
		Companies follow the laws	Direct support from the related Ministries	Confidence on benefits offered in the SEZs	The company has the long term contract of investment
1	Strongly Agree	67 (83.75)	58 (72.50)	28 (35.00)	63 (78.75)
2	Agree	6 (7.50)	4 (5.00)	10 (12.5)	10 (12.50)
3	Disagree	5 (6.25)	12 (15.00)	35 (43.75)	7 (8.75)
4	Strongly Disagree	2 (2.5)	6 (7.50)	7 (8.75)	0 (0.00)
Total		80(100)	80(100)	80(100)	80(100)

Note: Figures in the parentheses indicate percentage to the corresponding column total.

Source: Own Survey.



5.2.5 Work Benefits Received by the Employees

All the surveyed employees strongly agreed that they got daily overtime work benefits in the SEZs. Similarly, 78.75 per cent of employees also strongly agreed that the companies in the SEZs supported travel

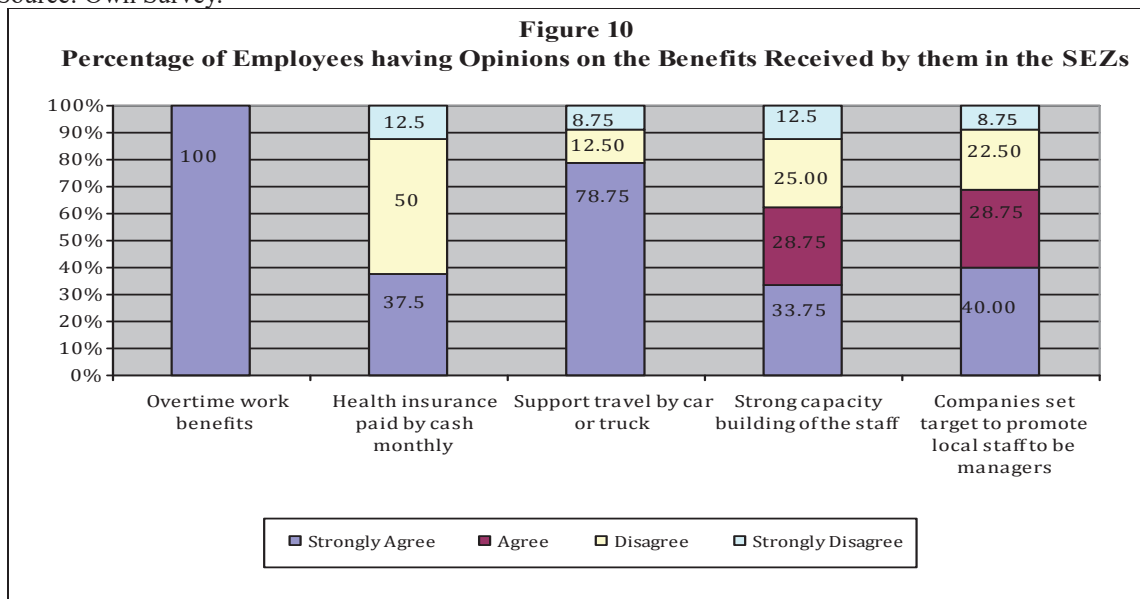
expenses. The percentages of employees having the opinions of strongly agree and agree on the views ‘strong capacity building of the staff’ and ‘companies set target to promote local staff to be managers’ were 62.50 and 68.75 respectively (Table 11 and Figure 10).

Table: 11 Employees’ Opinions on the Type of Benefits received by them in the SEZs

Sl. No.	Opinions	Type				
		Overtime work benefits	Health insurance paid by cash monthly	Support travel by car or truck	Strong capacity building of the staff	Companies set target to promote local staff to be managers
1	Strongly Agree	80 (100.00)	30 (37.50)	63 (78.75)	27 (33.75)	32 (40.00)
2	Agree	0 (0.00)	0 (0.00)	0 (0.00)	23 (28.75)	23 (28.75)
3	Disagree	0 (0.00)	40 (50.00)	10 (12.50)	20 (25.00)	18 (22.50)
4	Strongly Disagree	0 (0.00)	10 (12.50)	7 (8.75)	10 (12.5)	7 (8.75)
Total		80(100)	80(100)	80(100)	80(100)	80 (100)

Note: Figures in the parentheses indicate percentage to the corresponding column total.

Source: Own Survey.



5.3 Responses from Villagers
5.3.1 Benefits Received by the Villagers in the SEZs

The study reveals that 96.77 per cent of surveyed villagers strongly agreed and agreed on the opinion ‘villagers got jobs inside the SEZs’, and 87.10 per cent of them strongly agreed and agreed on the view ‘villagers sold grocery items to the workers working in the SEZs’. Similarly, 72.57 and 56.45 per cent of surveyed villagers strongly agreed and agreed on the benefits of

leasing the houses or rooms to the workers; and running the small restaurants inside the SEZs by the villagers (Table 12 and Figure 11).

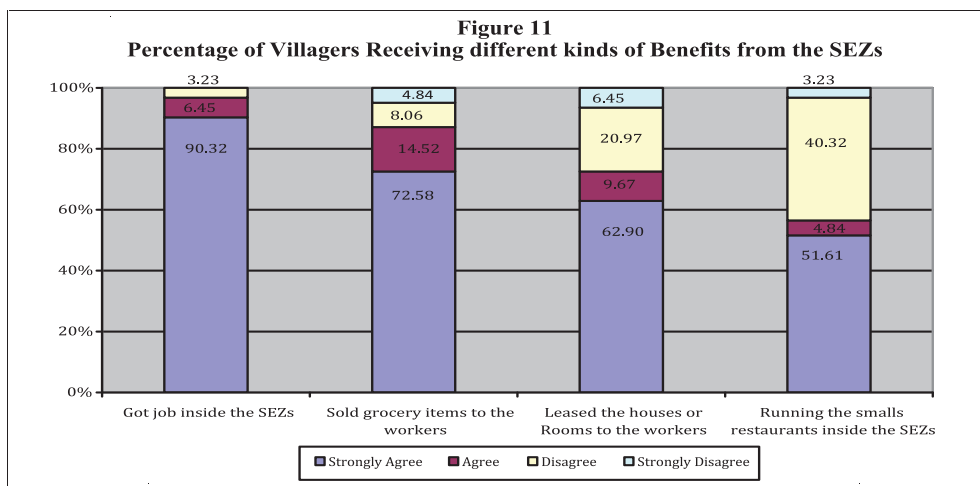
Besides the above benefits, the villagers in the localities earned money by providing transportation services and selling the local fruits and foods in the SEZs. As a result, the standard of living of many villagers living around the SEZs were found to be better compared to before as opined by the surveyed villagers.

Table 12: Kinds of Benefits received by the Villagers from the SEZs

Sl. No.	Opinions	Kinds of Benefits			
		Got job inside the SEZs	Sold grocery items to the workers	Leased the houses or rooms to the workers	Running the small restaurants inside the SEZs
1	Strongly Agree	56 (90.32)	45 (72.58)	39 (62.90)	32 (51.61)
2	Agree	4 (6.45)	9 (14.52)	6 (9.67)	3 (4.84)
3	Disagree	2 (3.23)	5 (8.06)	13 (20.97)	25 (40.32)
4	Strongly Disagree	0 (0.00)	3 (4.84)	4 (6.45)	2 (3.23)
Total		62 (100)	62 (100)	62 (100)	62 (100)

Note: Figures in the parentheses indicate percentage to the corresponding column total.

Source: Own Survey.



Thus, there were significant increases in the number of employees and augment of exports in the SEZs during the period 2010-2012, and the SEZs contributed a lot in the improvement of the standard of living of the villagers living in the surrounding villages. All companies in the SEZs were owned by foreign investors. They invested in Cambodia, more particularly in the SEZs, because of better investment conditions, investment incentives, tax exemptions, young and cost effective work force, quota free, rare application of anti-dumping and protective tariffs, low minimum capital requirement for business, and low rate of taxes when compared with some ASEAN countries. The reasons such as cost effectiveness of land with the rights to manage, mortgage and transfer, supports for registration, import/export permit, customs clearance, and support for worker's recruitment and administrative management, and particularly one-stop-office with CAMCONTROL and the direct supports of the representatives of the concerned ministries inside the SEZs, were also responsible for the foreign companies to invest in the SEZs.

The result of the study shows that there were significant changes in the number of employees and amount of exports of the Cambodia's Special Economic Zones between 2010 and 2012, and the SEZs also were found to have contributed in the improvement of the living standard of the surrounding villagers. During 2010 to 2012, in the four selected SEZs, altogether the numbers of workforce employed were

12,847; 16,481; and 20,924, which shows that the average annual percentage increase in the number of employees was 27.62 per cent. In addition, the amount of raw material inputs imported by the companies in the SEZs was estimated at USD 1,388.16 million; the total amount of the products exported to other countries was USD 578.39 million; the total amount of taxes paid by the companies in the SEZs was 607.42 million Khmer Riels; and other kinds of benefits received by the villagers from the SEZs include both direct employment as well as indirect benefits.

6. Conclusion

Many countries in the world have changed their strategies and economic attitude towards SEZs, because it is believed that SEZ could contribute to the development efforts of a country. Cambodia's SEZs are still in their early stages of development. The study reveals that all surveyed companies were owned by foreign investors, and there were significant changes in the number of employees, amount of exports, and contribution to the improvement of the living standard of the surrounding villagers. However, several constraints faced by the investors in the SEZs in the country should not be overlooked. As it is beyond the scope of the present study to look into the constraints faced by the investors in the SEZs in Cambodia, future studies in this direction could be undertaken to critically look into challenges faced by the investors in the SEZs. In addition, it would be further important to know about the gap between the

expected and realized benefits of investors, employees and villagers living around the SEZs. This would be the basis to draw future developmental plan as well as intervention programs to further benefit the investors, employees and members of the community.

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Role of the National Audit Authority of Cambodia in Public Accountability

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ABSTRACT

It is globally recognized that an independent control body must be established to evaluate and control the use of national resources used by the government. In Cambodia, the National Audit Authority (NAAC) plays a crucial role as an independent control institution for managing public funds and enhancing public confidence with regard to public accountability. The present study has examined the role of the National Audit Authority of Cambodia in public accountability. To achieve the objectives and test the hypotheses of the study, necessary primary data have been collected from the sample of 174 respondents working in the NAAC. The main findings of the study are: (1) the NAAC conducted its audit works independently in compliance with generally accepted auditing standards and government auditing standards in order to ensure the quality of audit works; (2) the performance of the NAAC was dependent on its reliance on the financial statements prepared by the executive arms of government for the audit; (3) the parliament's oversight role as well as the Commission on Economy, Finance, Banking and Audit had a significant effect on the performance of the NAAC; (4) there was no significant association between the qualification of the NAAC's auditors and the number of audit reports prepared by them; and (5) the operational problems faced by the NAAC were insufficient budget, low salary, unclear organizational structure and limited knowledge of the auditors on audit skills. The study has provided a number of suggestions such as: wide dissemination of law on audit to the stakeholders, restructuring of organizational structure of the NAAC for better functioning, empowerment to manage its staff properly, adequate provision of fund directly by the government, need of close cooperation with government and anti-corruption unit, and amendment of law on audit for smooth functions of the NAAC for strengthening its role of the NAAC in public accountability.

Keywords: The National Audit Authority of Cambodia; public accountability; performance

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1. Introduction

It is globally recognized that an independent control body must be established to evaluate and control the use of national resources used by the government. The Royal Government of Cambodia has recognized that the public financial management system in Cambodia is still weak and good governance in managing public finance is a major concern of the Royal Government. The Royal Government of Cambodia has started to embark on reform in all sectors, especially a comprehensive macroeconomic policy and structural reform program and integration of Cambodia's economy into the region and the world. Amongst all reforms, the most important reform is the Public Financial Management Reform Program, which was set out in "Royal Government of Cambodia's Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia". The aim of the Public Financial Reform Program is to install much higher standards of management and accountability in the mobilization of all government current and capital resources and effectiveness and efficiency in the use of resources in their application for the operation of the Government. The Public Financial Reform program is steadfastly built up upon four sequenced and prioritized platforms: (i) A more credible budget; (ii) Effective financial accountability; (iii) The RGC policy agenda becomes fully affordable and prioritized; and (iv) RGC managers become fully accountable for program performance (Hun, 2008).

To achieve the Financial Management Reform, the role of the financial control bodies needs to be in place to help enforcement, follow up and provide recommendations for improvement. In Cambodia, there are many bodies playing roles as financial controls such as, the Inspectorate General of Ministry of Economy and Finance, Ministry of Senate and National Assembly Relationship and Inspection, Internal Audit Departments of line ministries, Anti-corruption Unit, the Commission for Economy, Finance, Banking and Audit of the National Assembly and the National Audit Authority of Cambodia (NAAC, 2000).

Paralleling the global economic crisis, starting from the collapse of a series of corporations, followed by the spreading over the public debt crisis in a number of European countries, has given rises to various discussions regarding role and responsibility of auditors. Also, the governments of many countries have announced the review of the crisis issues so that there have been various questions raised concerning roles of public audit. In a number of different jurisdictions, Auditor-Generals have emerged as highly effective champions of public accountability, standing up for values such as transparency, probity and good governance. They have become central figures in the news, more pluralist version of public accountability, which seeks to supplement the traditional chain of ministerial accountability with alternative channels of accountability (Buchanan, 2006).

With the steady growth of public sector

activities and spending by governments in pursuit of development and increased public consciousness, the demand for public accountability of persons and bodies managing public resources has become increasingly evident so that there is a greater need for ensuring that the accountability process is in its rightful place and is effective. Therefore, the Supreme Audit Institutions (SAIs) have accordingly become increasingly concerned with the need for proper mandates, systems, controls, checks and balances in the discharge of functions in the planning, programming, implementing and delivering processes in addition to the traditional forms of audit, and the need for ensuring value for money in the management of public resources. Supreme Audit Institutions are also of the view that there is a need for increasing the public accountability awareness in all sections of society (ibid).

Public accountability pertains to the obligations of persons or entities entrusted with public resources to be answerable for the fiscal, managerial and program responsibilities that have been conferred on them, and to report to those that have conferred these responsibilities. The elements of public accountability are: (1) the recognition of the responsibility, (2) the provision of information on performance in a manner which users can interpret accurately, and (3) the potential to impose sanctions (www.intosai.org, 16.3.2013).

With increased public consciousness, the demand for public accountability of persons

and bodies managing public resources has become increasingly evident so that there is a greater need for ensuring that the accountability process is in its rightful place and is effective (ASOSAI, 1985).

Accountability for the use of public funds is important for good public financial management. Government audit is a crucial element of an effective accountability framework, which is a cornerstone of all democratic governments. The elected legislature, acting on behalf of the citizens, authorizes the government (the executive) to: (i) raise revenues, receive grants and raise loans through legislative resolutions or laws; and (ii) authorize the use of resources for implementing programs and activities approved through the budget process (www.intosai.org, 16.03.2013).

In most countries, a supreme audit institution (SAI) conducts public sector auditing. The structure, functions, and the status of the SAI may vary from country to country due to their respective historic development, political systems, culture, language and regional affiliations. There are three major types of Supreme Audit Institutions as follows: (1) Westminster model, also known as the Anglo-Saxon or Parliamentary model, (2) Judicial or Napoleonic model, and (3) Board or collegiate model (DFID, 2004).

With the steady growth of public sector activities and spending by governments in pursuit of development, and with the expansion of public enterprises, greater autonomy in local authority administrations

and trends at privatization in some countries, the character, scope and dimensions of public accountability have now been extended over greater horizons. The demand for public accountability of persons and bodies managing public resources has become increasingly evident so that there is a greater need for ensuring that the accountability process is in its rightful place and is effective (ASOSAI, 1985).

Joseph (1987) showed in his research study that the accountability in government is the role of government audit office, which has a vital role in helping the executive and the legislature to ensure that public money is spent properly and to assure the public that it gets value for its money. The Indian constitution has conferred complete independence and extensive powers on the auditor general to enable him to discharge his functions unhindered by anyone. The general impression in the country now, however, is that in spite of the immense powers of the auditor general, there was a serious breakdown of accountability and enormous waste, fraud and misuse. Oshisami (1992) provides support for argument that certain conditions have to be met for the discharge of fiscal transparency and accountability of government. He states that financial accountability demands three prerequisite conditions to operate smoothly; i.e., good financial reporting, sound management system and effective external audit done by the supreme audit institution.

Most government concerns over the last three decades have been about how to control

public expenditure and how to strengthen public accountability with auditing and evaluation instruments. Auditor Generals have been aware that the result of audit report publication brings accountability and openness in the public sector and it allows the public to criticize the government (Gray et al., 1993). Financial accountability demands a properly functioning government accounting system for effective budgetary control and cash management. It also demands an external audit system, namely, supreme audit institution, which reinforces expenditure control by exposure and sanctions against misspending and corruption, and mechanism to review and act on the results of audits and to ensure that follow up action is taken to solve problems identified. He argued further that without a well-functioning supreme audit system, government efficiency is poor, the probability of corruption increases greatly, and the prospects of economic growth and development are impaired (Asselin, 1995).

Public sector auditing is the key element in examining and evaluating government accountability in using public money and providing services to the public. It is believed that the ability of bureaucracies to allocate public goods leads to a high level of inefficiency in the public sector. Public sector auditing can be an essential element in ensuring efficiency, effectiveness and accountability of the government to the public (Brooks and Parish, 1995).

The role of the Auditor General is a vital part of the Westminster accountability

mechanism to ensure the accountability of the Executive Government (the President, Governors, Regents and Mayors) to public needs and interests. It is noted that an independent audit institution has the function to examine government agencies in order to hold the executive to be accountable to the public in using public funds and resources (Guthrie and English, 1997). According to Idasa (1998), many countries are plagued by poor transparency and weak accountability as can be seen by their close door budget process, unforeseen expenditure, weak reporting and accounting systems and ineffective supreme audit institutions. Many countries also exclude the parliament and civil society from dialogue and budget issues. He concluded that capacity building of the supreme audit institutions must be enhanced through both legal system and professional quality of audit works.

The research on the role of auditor general in public accountability stated that the roles of auditor general cannot support the public accountability fully unless it had full mandate to conduct all types of audit such as financial statement audit, performance audit, and compliance audit without restraining resources and works independently. The study also stressed that the important roles of auditor general of Australia were mapped out by the public finance act and audit act in order to scrutinize the operations of government. The study recommended that the auditor general office should have sufficient resources, good relationship with government and stakeholders and made public to be aware of the roles of government

audit (Nosworthy, 1999).

Uhr (1999) underlined that a state audit body is an accountable agency that holds audited entities to be accountable in managing public funds and providing better public services. He claimed that supreme audit institutions are like a watchdog to detect and prevent misuse of public funds and provide appropriate recommendations for improvement of government operations. Accountability forms the backbone of good governance and without establishing credible systems of administrative and legislative accountability; it is not possible to ensure continued good governance. The independence of Supreme Audit Institution, the rule of law and effective legislative oversight are considered to be essential premises for independent and effective government auditing that promote government accountability. The systems of audit and accountability cannot function effectively without continued professional education of the auditors and the audited entities. He assured that in order to improve and strengthen public accountability, supreme audit institutions have to take some initiatives collectively (Khan, 2000).

The supreme audit institution has an important role in providing access to public information. It can play an effective role in ensuring that information provided by governments is adequate, true and fair. Recent reports of the supreme audit institution of Pakistan have informed the public that some extra-budgetary resources of the government have not been used for the purposes for which they were intended.

In some cases, funds created for specific and legitimate purposes have not been presented to the legislature for necessary authorization. The supreme audit institution reports also pointed out that the government provided some undisclosed (and unjustified) benefits worth millions of dollars to a private power producer. Public auditors play an important role in promoting good national governance and accountability through compliance audits, performance audits and other special audit (Hussan, 2001).

There are three discerning report paradigms, namely, stewardship, decision usefulness and public accountability. Stewardship entails accountability between agent and principal; decision usefulness considers the information needs of existing and potential investors, lenders and similar suppliers of capital; and public accountability takes a broader perspective that encompasses social, political and wider economic interest. The role of supreme audit institutions can help to enhance the three report paradigm (Coy and Dixon, 2004).

The Netherland's Court of Audit covered three elements of broad public accountability, namely: (1) vertical accountability to ministers and parliament; (2) internal accountability to a supervisory board; and (3) social accountability to society as a whole. There are some instruments to enhance broad accountability, among others, including (1) supervision and monitoring by the Netherland's Court of Audit, namely supreme audit institution, which has promoted the idea that government develops

a framework on the supervision; (2) use of third-party audits; and (3) external reviews (Hoek, 2005). Wang and Rakner (2005) wrote about the accountability function of Supreme Audit Institutions in Malawi, Uganda and Tanzania. They emphasized that a key element of economic accountability is to ensure that public resources are spent according to the electoral and administrative mandate; that funds are distributed in consistence with stated objectives, and that corruption is avoided. Weaknesses in the audit cycle may have serious implications for poverty reduction targets spelt out in a country's poverty reduction strategy. According to Bovens (2005), accountability is closely related to administrative accountability with a form of diagonal accountability between the public sector audit institution and with both, parliaments and government agencies as its stakeholders. Supreme Audit Institutions report their findings on financial accountability and performance of audited entities to their stakeholders.

Supreme Audit Institutions will succeed in their assigned role of being the watchdog over financial integrity and the credibility of government; it depends on the following factors: (a) supportive environment, (b) clear mandate, (c) independence, (d) adequate funding, facilities and staff, (e) sharing of knowledge and experience, and (f) adherence to international and local standards (Maimako, 2005). Buang (2006) stated that the National Audit Department of Malaysia (NAD) contributes effectively in ensuring better accountability through

different ways such as: to fulfill the current needs, the National Audit Department needs to give emphasis and report on measurement of results achieved against targets set; the National Audit department has realized the increasing expectation from all parties and it has taken some initiatives to enhance professionalism through its capacity building program; the National Audit department needs to adopt a participative or collaborative approach of auditing involving close consultation with auditees and thus creating a good auditor-auditee rapport; establishing government accountability is the direct impact of audit report to third parties such as the media, NGOs, the parliamentarians, central authorities and the public; and better government accountability could be achieved through adherence to high moral values by all parties in the accountability chain.

The principle of accountability of decision-makers, especially in government, is an element which is particularly significant for Supreme Audit Institutions within the framework of their tasks. Accountability is best reflected in the powers of Supreme Audit Institutions laid down in the Lima Declaration, namely, the power of investigation, the enforcement of Supreme Audit Institutions findings and the right of the Supreme Audit Institutions to provide expert opinions for the legislative and the administration. The accelerating pace of globalization in the 21st century prompted not only dynamic transformations of the state and society at large, but also of government audit. Supreme Audit Institutions are hence

called upon continuously to re-adjust their functioning to a changing environment to be able effectively to perform their constitutional tasks in the years to come. Supreme Audit Institutions no longer limit themselves merely to fault finding, but become advisers to policy-makers and administrators in parliament or government, aiming to prevent dissipation, misuse and corruption, and to contribute in a forward-looking manner to sound and transparent financial management in their countries to the ultimate benefit of the citizens. However, Supreme Audit Institutions face two challenges: (1) reforms in public administration resulting from a changed perception of the role of the state; and (2) the increasingly international implications of government audit issues (Moser, 2006).

In a number of different jurisdictions, Auditor-Generals have emerged as highly effective champions of public accountability, standing up for values such as transparency, probity and good governance. They have become central figures in the news, more pluralist version of public accountability, which seeks to supplement the traditional chain of ministerial accountability with alternative channels of accountability. The Supreme Audit Institutions can fit to the system of public accountability by fulfilling some factors such as: (1) roles and status of auditor general should be stated in the constitution; (2) parliament must take strong actions on the audit reports which are sent to parliament through the cooperation with the auditor general; (3) the audit law should be strong enough to implement audit works

without restraint from audited entities and any government's bodies; (4) the auditor General's reporting role should be extended and strengthened to the parliament and all stakeholders; (5) the variety of audit works conducted by the supreme audit institutions should be considered by many government bodies with many types of audits such as financial statement audit, performance audit, investigation audit, IT audit and so on; (6) the publication of audit reports must be made to all ordinary people to be aware of government's operations (Buchanan, 2006).

Borge (2006) highlighted the importance of the role of the Supreme Audit Institutions which plays in communicating corruption risks and cases of corrupt practice where these have been identified. This role includes raising public awareness of the importance of transparency and accountability by producing timely and relevant audit reports which are available to the public. He also found that many Supreme Audit Institutions have established links with the press to publicly disclose cases of fraud and corruption to improve public accountability.

Kaul (2007) examined the role of Comptroller and Auditor General of India in improving accountability of local government. The research stated that the issue of accountability in the larger perspective involves political, administrative as well as financial accountability. The paper however discusses the issues related to improving financial accountability with focus on Comptroller and Auditor General of India (CAG)'s initiatives in improving the accounting and

auditing arrangements at the grassroots level. The financial accountability involves accountability for whether the money and other resources have been utilized according to the legal requirements or not and the efficiency in utilization of resources.

The research on the Role of Supreme Audit Institutions in Combating Corruptions finds that the Supreme Audit Institutions (SAIs) oversee the management of public finances and operate within one of three established institutional models (Westminster, Judicial or Board). Traditionally, the role of Supreme Audit Institutions has been seen as promoting public sector transparency and accountability within a wider climate of good governance. Successful approaches include identifying and publicizing areas of corruption risk, working closely with other institutions, and publicizing the recommendations of audit reports more widely (Evans, 2008).

Supreme Audit Institutions are essential institutions for ensuring that governments are held accountable for their utilization of public funds. From the case studies, it is found that how civil society organizations utilize innovative methodologies to complement and strengthen the role that external auditors play in enforcing government accountability. According to them, Supreme Audit Institutions and civil society organizations can partner with each other to improve good governance through conducting audits to get accountability (Ramkumar and Krafchik, 2008). Dwiputrianti (2009) examined the role of the Indonesian Supreme Audit Institution in Financial Transparency and Performance

Accountability. He stated that the Indonesian Supreme Audit Institution cannot become a state finances audit institution, which is independent, professional and plays an active role in improving the accountability and transparency of state finances unless it fulfills (1) to establish the Indonesian Supreme Audit Institution as an independent and professional state finance audit institution, (2) to meet the needs and expectations of stakeholders, (3) to establish the Indonesian Supreme Audit Institution as the central regulator in the field of auditing state finance management and accountability in accordance with its legal and legislative mandates, and (4) to encourage the achievement of good governance of state finance management and accountability.

The Auditor General forms an important function in the process of national accountability and his role is wide as stated in the Constitution. The audit system that exists directly creates a relationship and a chain of accountability. In performing its functions to audit, the auditor general's roles to enhance public accountability are to: (a) ensure all forms of protective means towards assets and public property, (b) maintain all accounts and records, (c) give views on the national monetary statement and government agencies, (d) inspect comprehensively all the economic methods and the level of efficacy of a particular program, and (e) report to parliament and the relevant competent authorities (Yaakob, 2009).

The Supreme Audit Institution of Uganda is an effective accountability framework

that helps to ensure that public funds and resources are managed in a legal, competent, effective and efficient manner and the objectives of public programs are achieved. Enhancing and strengthening accountability is the central objective of the Supreme Audit Institution of Uganda's audit of public expenditure. Audit reports on the performance of the government provide opportunity to the legislators, public servants, investors, business leaders, citizen groups, media, development agencies, academicians and other stakeholders to know how public funds are spent and to assess the quality of public administration. This allows public scrutiny of government operations and generates pressure for honest and productive public servants and facilitates an accountable system of governance necessary for efficient service delivery (Muwanga, 2011).

The research conducted by Goldsworthy (2012) mentioned that across the commonwealth nations, audit offices play a vital role in improving accountability and combating waste and reporting on the extent to which public funds and resources have been used properly and effectively. For nations to prosper and for citizens to place their trust in the integrity of their governments, it is important that all commonwealth nations have strong and independent supreme audit institutions or national audit offices. These audit offices need to be staffed by well-trained professionals capable of producing high quality audit reports; they need to be able to choose when and what they will examine; they need to be able to report freely and quickly to parliaments and to the public;

they need to be free of any taint of political patronage or loyalty; and they need to be able to speak truth to power. Unfortunately, these practices are not universal across the commonwealth nations. Some audit offices lack the technical skills to audit according to modern international standards; others lack the resources to undertake regular and systematic audits of all government income and expenditure; and others lack the independence and political space to hold senior public figures to account and to place their findings before parliament, the people and the media. All too often audit offices operate in substandard working environments and without adequate technology. Skills are sometimes low, and poor wages make it difficult to retain good staff. Inadequate management styles, a lack of effective internal controls and opaque recruitment leave organizations vulnerable to corruption.

Noussi (2012) investigated the topical issue of public accountability and how it is effectively institutionalized with the case of external public auditing in global perspectives. A comparative assessment of the power of Supreme Audit Institutions world-wide has revealed that there are strong differences across countries. He suggested five main strategies for a comprehensive approach to consolidate supreme audit institutions as powerful accountability arrangements that endure: (1) analyze the problem correctly; (2) invest in capacity building; (3) empower the Supreme Audit Institutions' leadership; (4) build up coordinated pressure from all sides; and (5) nurture and spread a culture of

integrity. According to ASEANSAI's Joint Communiqué (2014), the role of supreme audit institution to support and improve public accountability is to strengthen legal framework for independency and audit functions by conducting financial, compliance and performance audits to ensure proper use of resources of government entities; report and publish the audit reports as well as monitor the follow up actions taken by audited entities. It also stated that the supreme audit institutions must enhance audit quality in compliance with international standards of Supreme Audit Institutions (ISSAIs), cooperate closely with the investigation agencies in combating corruption, actively collaborate with regional and international organization and exercising new approach in enhancing audit process such as IT-aided audit system.

Baimyrzaeva and Kose (2014) researched on the Role of Supreme Audit Institutions in Improving Citizen Participation in Governance. He wrote that Supreme Audit Institutions (SAIs) are in charge of checking whether public funds are being used for intended purposes efficiently, effectively, and economically in compliance with existing rules and regulations. Reliable and objective reporting is critical for SAIs to ensure accountability and transparency in public management. Such good quality reporting depends on whether the Supreme Audit Institutions are independent and insulated from those who they audit; whether their audit methods are based on scientific and technical standards; and whether the auditors have the necessary professional

qualifications and moral integrity.

The paper written by Odi (2014) on Performance Auditing and Public Sector Accountability in Nigeria examined that the Supreme Audit Institutions are usually not stand-alone institute; they are part of a public financial management (PFM) architecture like budgeting, accounting, internal control and legislature oversight and government must respond in improving the way the Supreme Audit Institutions function. They are integral to providing information for improving the overall public financial management system. The Supreme Audit Institutions are the national body responsible for sanitizing public expenditure and providing an independent opinion on how the executive has used public resources. They play an important role in strengthening accountability and good governance by helping various governments to improve performance, enhance transparency, ensure accountability, fight corruption, promote public trust and foster the efficient and effective receipt and use of public resources for their citizenry. They are watchmen of transparency and accountability, and promoting good governance in developing countries. Nevertheless their operations have met with some resistance in some countries.

The Office of the Auditor General of Newfoundland and Labrador stated that public sector accountability is based on the premise that governing bodies are best served by knowing whether the responsibilities conferred on government departments and agencies are satisfactorily performed and

intended results are achieved. The auditor general brings an independent audit process to the manner in which these conferred responsibilities are discharged in the public sector and reports directly to the house of assembly on the results of these audits (www.ag.gov.nl.ca, 27.5.2015).

Thus, there is no doubt that the role of Supreme Audit Institutions in the public sector has significantly enhanced the assurance of government's accountability in managing and using public funds and other public resources for providing better benefits and services to the public. The roles of these institutions can be made better by having sufficiency in quality of human resources, publication of audit reports, access to all government's information, active roles of parliament on audit reports, implementation of audit recommendation and so on.

In Cambodia, however, despite the challenges and unstable economy, public audit activities have always been playing a key role in maintaining and enhancing public confidence with regard to the public accountability of the country. The public audit institution in Cambodia, namely called the National Audit Authority of Cambodia (NAAC), plays a vital role in strengthening public financial management and performance by enabling oversight, accountability and governance. It is the supreme audit institution which is playing the role to audit all revenues and expenditure of the state. Under the Law on Audit of the kingdom of Cambodia, the NAAC as government audit or external audit has started operating its activity since

2002 and it is an independent entity that is responsible for executing the external auditing function of the Government. The Auditor General is empowered to conduct an audit of transactions, accounts, systems, controls, operations and programs of government institutions in accordance with generally accepted auditing standards and Government auditing standards. The main duty of the NAAC is to audit the draft of annual state budget settlement law and certify opinion on the fairness of revenues and expenditure of the government (NAAC, 2000).

More importantly, all public financial operations, regardless of whether and how they are reflected in the national budget, are subject to audit by the National Audit Authority of Cambodia. The concept and establishment of public audit is inherent in public financial administration as the management of public funds represents a trust. The public expects that those responsible for handling public money are held fully accountable for the use of that money. Making audit results transparent enables the public to understand how government is performing duties and whether the performance is being improved. It is an important channel and an indispensable part of a regulatory system whose aim is to reveal deviations from accepted standards and violations of the principles of legality, efficiency, effectiveness and economy of financial management early enough to make it possible to take corrective action and to enhance public accountability. Therefore, the present study has examined the role of

the National Audit Authority of Cambodia in public accountability.

2. Objectives of the Study

The study has the following objectives:

- i. To know the reliance of the Auditor General's opinions and conclusions on the financial statements prepared by the executive arms of the government.
- ii. To examine the quality of legislative oversight function on the performance of the National Audit Authority of Cambodia.
- iii. To find out the importance of the qualifications of the National Audit Authority's auditors on the quality and numbers of audit reports produced.
- iv. To identify the problems faced by the National Audit Authority of Cambodia in auditing public accounts and operations.

3. Hypotheses of the Study

The study has tested the following three null hypotheses:

- Ho1: The performance of the National Audit Authority of Cambodia is not significantly dependent on the financial statements prepared by the executive arms of government.
- Ho2: The National Audit Authority's performance is not significantly

dependent on the quality of legislative financial oversight.

Ho3: There is no significant association between the qualifications of the National Audit Authority's auditors and the numbers of audit reports prepared.

4. Research Methodology

The study has used both descriptive and quantitative approaches to meet the objectives of the study and test the hypotheses. In descriptive approach, the study has relied on relevant literatures, whereas, in the quantitative approach, tables, graphs and statistical models have been used for the analysis of the data. Both primary and secondary data have been collected for the study. Secondary data have been collected from internal and external sources. Internal sources of collecting the data are in-house publication, databases, website, and library of the National Audit Authority of Cambodia. External sources of secondary data are Ministry of Economy and Finance, Government of Cambodia, National Assembly and Senate, National Archives and website of international professional organizations relevant to public audits. Finally, primary data have been collected from the selected staff of the National Audit Authority of Cambodia.

Up to July, 2011, the National Audit Authority of Cambodia had 215 staff working in five departments. To determine the sample size of the present study, the following formula has been used (Mendenhall, 1973):

$$n = \frac{NS^2}{(N-1)\left(\frac{b}{z}\right)^2 + S^2}$$

Where,

n= The sample size

N= The population of the study=215

S²= The Sample Variance estimated from the survey of 30 respondents =187.7483

S² has been calculated as per the formula given below:

$$S^2 = \frac{1}{n-1} \left[\sum fx^2 - \frac{(\sum fx)^2}{n} \right]$$

b = The bond on the error of estimation=0.9 (chosen)

z = Value of Normal Random Variable corresponding to 95 per cent confidence level=1.96

On the basis of the above formula and mentioned values, the sample sized is calculated as:

n=173.34, which is rounded to 174.

Thus, 174 staff have been surveyed out of 215 staff working in the National Audit Authority of Cambodia in the five departments; i.e., (1) 48 staff in Department of Audit No.1, (2) 47 staff in Department of Audit No.2, (3) 43 staff in Department of Audit No.3, (4) 40 staff in Department of Technique, and (5) 37 staff in Department of Administration and Finance.

From these five departments, 174 sample

staff have been selected on the basis of proportional stratified random sampling method. The details of the numbers of staff of the five departments, and the numbers of staff surveyed from each department are mentioned below:

Total Number of Staff and Number of Sample Staff Surveyed from different Departments of the National Audit Authority of Cambodia

Sl. No.	Name of the Department	Total Staff	Percentage to Total	Sample Number of Staff
1	Department of Audit No.1	48	22.33	39
2	Department of Audit No.2	47	21.86	39
3	Department of Audit No.3	43	20.00	34
4	Department of Technique	40	18.60	33
5	Department of Administration and Finance	37	17.21	29
Total		215	100	174

Source: The National Audit Authority Annual Report, 2011 and Own Estimation.

The study has used different statistical tools such as percentage, average, graph, and table, etc. Further, Chi-square (X²) test has been used to test the hypotheses of the study. The formula is given below:

$$x^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where,

i = Number of classes in the distribution

O_i = Observed frequencies in class i

E_i = Expected frequencies in class i

C = Number of categories

d.f. = Degree of freedom = C - 1

For collecting primary data, direct personal

interview method and well-structured questionnaires have been used. For the collection of secondary data, detailed list of necessary secondary data have been prepared, and these data have been collected from the concerned organizations and websites. The study has covered the information of the last ten years (from 2002 to 2011) of operations of the National Audit Authority of Cambodia. Further, the study has only taken the respondents working in the National Audit Authority of Cambodia. In the study, the views of the respondents on the financial statements prepared by the executive arms of the government, quality of legislative oversight function on the performance of the National Audit Authority of Cambodia, importance of the qualifications of the

National Audit Authority's auditors and the problem faced by the National Audit Authority of Cambodia have been taken into account.

5. Results of the Study

5.1 Profile of the Respondents

Among the 174 surveyed auditors of the National Audit Authority of Cambodia (NAAC), 74.7 per cent were found to be males and the rest 25.3 per cent were females. This indicates that there was dominance of male auditors in the National Audit Authority of Cambodia.

The age-group wise classification of the surveyed auditors shows that about 88 per cent were in the age-group 31-45 years followed by seven per cent in 46-62 years age-group and five per cent in 22-30 years age-group. Thus, most of the auditors were young indicating a good sign of work efficiency of auditors in the organization.

The educational background of the respondents shows that 63 per cent had master degree education, 33 per cent bachelor degree education, 1.7 per cent Ph.D. degree education, and the remaining 0.6 per cent (one respondent) had CPA degree education. These figures indicate that majority of the auditors had master degree education.

5.2 Experience of Auditors

The National Audit Authority of Cambodia has started its operation for more than 12 years. Based on the survey, it was found that 71 per cent auditors had 6-10 years of audit experience followed by 24 per cent 11-15

years audit experience and five per cent 1-5 years audit experience. The National Audit Authority of Cambodia employs its staff from different work backgrounds. The total work experiences of selected staff show that 57 per cent auditors had 6-10 years total work experiences, 36 per cent 11-15 years and five per cent 16-30 years and two per cent had 1-5 years total work experiences. This shows that most of the staff working in NAA had more than six years of total work experience.

5.3 Training Courses Attended

The training courses such as financial audit course, performance audit course, compliance audit course and fraud and corruption detection course were conducted by the National Audit Authority of Cambodia in different time periods in order to build the capacity of its auditors. The survey reveals that 60.90 per cent surveyed auditors attended in performance audit training course followed by 50 per cent in financial audit training course, 37.90 per cent in compliance audit training course, 32.20 per cent in fraud and corruption detection training course and 28.70 per cent in other training courses such as environment audit training course, IT audit training course, and social audit training course and so on.

This shows that the training courses were provided by the National Audit Authority of Cambodia to many of its auditors. But there was a need to build the capacity of all the staff working in the NAAC through the provision of adequate training courses in order to improve the quality of audit standard.

5.4 Salary of Staff

The survey shows that 49 per cent of the respondents of the National Audit Authority of Cambodia had salary ranged from USD 301 to USD 500, and 46 per cent and three per cent of staff had salary ranged from USD 100 to USD 300 and from USD 501 to USD 1000 respectively. The highest salary of staff ranged from USD 1000 to USD 2000 in which there was only one respondent.

5.5 Audit Operations of the NAAC.

5.5.1 Audit Reports Completed

The survey of 174 auditors shows that 35.6 per cent had completed 1-5 audit reports; 32.2 per cent 6-10 audit reports; and 32.2 per cent more than 11 audit reports during the last five years. As per the standard, the more audit reports the auditors make the better audit works the auditors achieve. Based on the analysis, it can be seen the National Audit Authority of Cambodia was not providing enough audit jobs to the auditors (Table 1).

Table 1: Distribution of Respondents as per the Audit Reports Prepared by them During the Last 5 years

Sl. No.	Number of Audit Reports Prepared (Completed)	Number	Percentage
2	1-5	62	35.6
3	6-10	56	32.2
4	11-above	56	32.2
Total		174	100.0

Source: Own Survey.

5.5.2 Time Taken to Complete Audit Report

It is found from the survey that 51.1 per cent of respondents took more than 11 months to complete an audit report; 30.5 per cent took 6-10 months to complete an audit report; and

30.5 per cent took 1-5 months to complete an audit report. Thus, the analysis reveals that about 70 per cent of the surveyed auditors of the National Audit Authority of Cambodia took more time, i.e., six months and above to complete an audit report (Table 2).

Table 2: Distribution of Respondents as per the Time Taken to Complete an Audit Report

Sl. No.	Time Taken (In Months)	Number	Percentage
1	1-5 Months	53	30.5
2	6-10 Months	32	18.4

3	11 Months and Above	89	51.1
Total		174	100.0

Source: Own Survey.

5.5.3 Outsourcing of Experts

Based on the survey, it was seen that 60.9 per cent of respondents disclosed fully agreed opinion on the need of outsourcing experts;

34.5 per cent partially agreed and the rest 4.6 per cent disagreed. The analysis reveals that there was a need of foreign experts to assist in the audit works conducted by the National Audit Authority of Cambodia (Table 3).

Table 3: Distribution of Respondents as per their Opinions on the Need of Outsourcing Experts to Assist in Audit Works

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	106	60.9
2	Partially Agree	60	34.5
3	Disagree	8	4.6
Total		174	100.0

Source: Own Survey.

5.5.4 Amendment of the Audit Law of the Kingdom of Cambodia

The survey indicates that 54 per cent of respondents partially agreed to amend the

audit law; 29.3 per cent fully agreed and 16.7 per cent disagreed. This result shows that there was a need to amend the audit law (Table 4).

Table 4: Distribution of Respondents as per their Opinions on Amendment of the Audit Law of the Kingdom of Cambodia

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	51	29.3
2	Partially Agree	94	54.0
3	Disagree	29	16.7

Total	174	100.0
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Source: Own Survey.

5.5.5 Establishment of Audit Guidelines

The quality of audit works of the National Audit Authority of Cambodia depends on audit standards or audit guidelines they have established. The main audit guidelines are financial audit guidelines, performance audit guidelines, compliance audit guidelines, IT

audit guidelines and other audit guidelines. The percentages of respondents having opinions in favor of establishment of specific audit guidelines, financial audit guidelines, IT audit guidelines, performance audit guidelines, compliance audit guidelines, and other audit guidelines were 93.7, 91.95, 91.4, 88.5, 84.5, and 76.4 respectively (Table 5).

Table 5: Distribution of Respondents as per their Opinion on the Establishment of Different Audit Guidelines

Sl. No.	Type of Audit Guidelines	Opinion		
		Yes	No	Total
1	Establishment of Financial Audit Guidelines	160 (91.95)	14 (8.05)	174 (100)
2	Establishment of Performance Audit Guidelines	154 (88.5)	20 (11.5)	174 (100)
3	Establishment of Compliance Audit Guidelines	147 (84.5)	27 (15.5)	174 (100)
4	Establish of IT Audit Guideline	159 (91.4)	15 (8.6)	174 (100)
5	Establishment of Specific Audit Guideline	163 (93.7)	11 (6.3)	174 (100)
6	Establishment of Other Audit Guideline	133 (76.4)	41 (23.6)	174 (100)

Note: Figures in the parentheses indicate percentage to corresponding row total.

Source: Own Survey.

5.5.6 Dissemination of the Audit Law to Stakeholders

The percentage of surveyed respondents who had fully agreed on the opinions that there

was the dissemination of the audit law of Kingdom of Cambodia to stakeholders was 74.7, and those who had partially agreed was 25.3. This shows that most of the auditors

want to have the audit law be disseminated to stakeholders to be aware of functions and roles of public audit (Table 6).

Table 6: Distribution of Respondents as per their Opinions on the Dissemination of the Audit Law of Kingdom of Cambodia

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	130	74.7
2	Partially Agree	44	25.3
Total		174	100.0

Source: Own Survey.

5.5.7 Establishment of Audit Quality Assurance Mechanism

It is seen that 54.6 per cent respondents had fully agreed on the establishment of audit quality assurance mechanism; 44.8 per cent of respondents partially agreed and

0.6 per cent respondents disagreed on the establishment of audit quality assurance mechanism. The result indicates that most auditors want to have audit quality assurance mechanism in place for improvement of audit works done by auditors (Table 7).

Table 7: Distribution of Respondents as per their Opinions on Establishment of Audit Quality Assurance Mechanism

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	95	54.6
2	Partially Agree	78	44.8
3	Disagree	1	0.6
Total		174	100.0

Source: Own Survey.

5.5.8 Satisfaction on the Audit Queries Response from Audited Entities

It is found that 33.9 per cent respondents were satisfied with the response from audited entities on audit queries, 4.6 per cent respondents highly satisfied, 60.3 per cent respondents dissatisfied, 0.6 per cent

respondents highly dissatisfied, and the remaining 0.6 per cent respondents were not sure. The surveyed data show that most respondents were dissatisfied with the response from audited entities on audit queries (Table 8).

Table 8: Distribution of Respondents as per their Opinions on Satisfaction on the Audit Queries Response from Audited Entities

Sl. No.	Opinion	Number	Percentage
1	Satisfied	59	33.9
2	Highly satisfied	8	4.6
3	Dissatisfied	105	60.3
4	Highly dissatisfied	1	0.6
5	Not Sure	1	0.6
Total		174	100.0

Source: Own Survey.

5.5.9 Satisfaction with the Implementation on Recommendations of the National Audit Authority of Cambodia by Audited Entities

Based on the table below, 33.9 per cent respondents expressed satisfaction on the implementation on recommendations of the National Audit Authority by the audited

entities; 0.6 per cent respondents were highly satisfied; 59.8 per cent dissatisfied; 3.4 per cent highly dissatisfied; and the rest 2.3 per cent respondents had no response. The data analysis showed that majority of respondents were not satisfied with the implementation on audit recommendations by the National Audit Authority of Cambodia (Table 9).

Table 9: Distribution of Respondents as per their Opinion on Satisfaction with the Implementation on Recommendations of the National Audit Authority of Cambodia by Audited Entities

Sl. No.	Opinion	Number	Percentage
1	Satisfied	59	33.91
2	Highly satisfied	1	0.57
3	Dissatisfied	104	59.77
4	Highly dissatisfied	6	3.4
5	Not Sure	4	2.3
Total		174	100.0

Source: Own Survey.

5.5.10 Opinion on the Funding to the National Audit Authority of Cambodia

From the among the survey respondents, 96 per cent opined that the current fundings of the National Audit Authority of Cambodia was provided by the Ministry of Economy and Finance; four per cent of respondents had opinion that funding of the National

Audit Authority of Cambodia was from parliament; 1.1 per cent was from revenue fund; and 0.6 per cent was from other source. Thus, the survey result shows that the National Audit Authority of Cambodia operates audit works by getting funds from the Ministry of Economy and Finance. The Ministry of Economy and Finance has full right to control budget of the National Audit Authority of Cambodia (Table 10).

Table 10: Distribution of Respondents as per their Opinions on the Funding to the National Audit Authority

Sl. No.	Opinion	Number	Percentage
1	The Executive arm of government(MEF)	167	96.0
2	Parliament	4	2.3
3	Direct funding from the consolidate revenue fund	2	1.1
4	Others	1	0.6
Total		174	100.0

Source: Own Survey.

5.5.11 Satisfaction with the Financial and Material Supports for Carrying out Audit Work

The survey revealed that 51.7 per cent of respondents were dissatisfied with the

financial and material supports provided by the Ministry of Economy and Finance followed by 37.4 per cent satisfied, 9.8 per cent highly dissatisfied and 1.1 per cent highly satisfied (Table 11).

Table 11: Distribution of Respondents as per their Opinions on Satisfaction with the Financial and Material Supports for Carrying out Audit Works

Sl. No.	Opinion	Number	Percentage
1	Satisfied	65	37.4
2	Highly satisfied	2	1.1
3	Dissatisfied	90	51.7

4	Highly dissatisfied	17	9.8
Total		174	100.0

Source: Own Survey.

5.5.12 Influence of the Financial Support on Auditor Performance

The survey result shows that 29.3 per cent respondents had the opinions of effective influence of financial support provided by the Ministry of Economy and Finance on auditor performance followed by 10.3 per

cent highly effective influence, 59.8 per cent highly ineffective influence and 0.6 per cent other opinion. Thus, the majority of respondents recognized that the financial support provided by the Ministry of Economy and Finance on auditor performance was ineffective (Table 12).

Table 12: Distribution of Respondents as per their Opinions on Influence of the Financial Support on Auditor Performance

Sl. No.	Opinion	Number	Percentage
1	Effective	51	29.3
2	Highly effective	18	10.3
3	Highly ineffective	104	59.8
4	Other	1	0.6
Total		174	100.0

Source: Own Survey.

5.5.13 Independence of the National Audit Authority of Cambodia

Based on the opinion on the independence of the National Audit Authority of Cambodia, 24.1 per cent respondents opined that the

National Audit Authority of Cambodia was 76-100 per cent independent, 52.9 per cent opined 51-75 per cent independent and 23 per cent opined 26-50 per cent independent (Table 13).

Table 13: Distribution of Respondents as per their Opinions on the Independence of the National Audit Authority of Cambodia

Sl. No.	Opinion	Number	Percentage
1	76-100%	42	24.1
2	51-75%	92	52.9
3	26-50%	40	23.0
Total		174	100.0

Source: Own Survey.

5.5.14 Budget of the National Audit Authority of Cambodia

Among the 174 auditors surveyed, 91.4 per cent respondents fully agreed that future

budget of the National Audit Authority of Cambodia should be independent and made directly by parliament, whereas, eight per cent partially agreed, and 0.6 per cent disagreed with the opinion (Table 14).

Table 14: Distribution of Respondents as per their Opinions on the Independence and Direct Provision of Budget made by Parliament for the National Audit Authority of Cambodia

Sl. No.	Opinion	Number	Percentage
1	Fully agree	159	91.4
2	Partially agree	14	8.0
3	Disagree	1	0.6
Total		174	100.0

Source: Own Survey.

5.5.15 Supports from Development Partners to the National Audit Authority of Cambodia

The surveyed data indicates that 83.3 per cent of respondents fully agreed that the National Audit Authority of Cambodia should have technical support from development

partners followed by 11.5 per cent partially agreed and 5.2 per cent disagreed with the above opinion (Table 15). Thus, most of the auditors were willing that the National Audit Authority of Cambodia should receive financial and technical supports from development partners.

Table 15: Distribution of Respondents as per their Opinions on Supports from Development Partners to the National Audit Authority of Cambodia

Sl. No.	Opinion	Number	Percentage
1	Fully agree	145	83.3
2	Partially agree	20	11.5
3	Disagree	9	5.2
Total		174	100.0

Source: Own Survey.

5.6 Opinion on Government and Parliament, Ministry of Economy and Finance, and Anti-Corruption Unit

5.6.1 Setting up Public Accounting Standards by Government

Public Accounting Standard is necessary for recording of revenue and expenditure of

government, and it is even more necessary for auditors of the National Audit Authority of Cambodia to use it as criteria for conducting audit works. Based on the survey, 86.2 per cent respondents fully agreed that the National Audit Authority of Cambodia had public accounting standards set up by the government followed by 13.8 per cent partially agreed on the above opinion (Table 16).

Table 16: Distribution of Respondents as per their Opinions on Setting up Public Accounting Standards by Government

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	150	86.2
2	Partially Agree	24	13.8
3	Disagree	0	0
Total		174	100.0

Source: Own Survey.

5.6.2 Consolidated Financial Statement of Government Submitted to the National Audit Authority of Cambodia for Audit

According to the audit law, the government must send the state's consolidated financial statement to the National Audit Authority for auditing within nine months after fiscal year

completion. The survey result shows that 84.5 per cent respondents fully agreed on the opinion of submitting consolidated financial statement to the National Audit Authority of Cambodia on proper time, whereas, 14.9 per cent respondents partially agreed and 0.6 per cent respondents disagreed on this opinion (Table 17).

Table 17: Distribution of Respondents as per their Opinions on Timely Submission of Consolidated Financial Statement by Government to the National Audit Authority of Cambodia

Sl. No.	Opinion	Number	Percentage
1	Fully Agree	147	84.5
2	Partially Agree	26	14.9
3	Disagree	1	.6

Total	174	100.0
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Source: Own Survey.

5.6.3 Sufficient Staff and Lawmakers Having Experiences in Accounting and Auditing to Work for the Commission on Economy, Finance, Bank and Audit of Parliament

The function of the Commission on Economy, Finance, Bank and Audit of Parliament is to examine all audit reports in order to force the audited entities to follow audit recommendations made by the National Audit Authority. As per survey

result, 58.6 per cent fully agreed on the matter that the Commission on Economy, Finance, Bank and Audit of Parliament had sufficient staff and lawmakers having experiences in accounting and auditing; 40.2 per cent respondents partially agreed and 1.1 per cent respondents disagreed on the above statement (Table 18). Thus, most of the auditors thought that the Commission on Economy, Finance, Bank and Audit of Parliament should have sufficient staff and lawmakers having experiences in accounting and auditing.

Table 18: Distribution of Respondents as per their Opinions on Sufficient Staff and Lawmakers Having Experiences in Accounting and Auditing to Work for the Commission on Economy, Finance, Bank and Audit of Parliament

Sl. No.	Opinion	Number	Percentage
1	Fully agree	102	58.6
2	Partially agree	70	40.2
3	Disagree	2	1.1
Total		174	100.0

Source: Own Survey.

5.6.4 Cooperation between the National Audit Authority of Cambodia and Anti-Corruption Unit

Among the surveyed respondents, 32.8 per cent fully agreed with the opinion that there was cooperation between the National Audit Authority of Cambodia and Anti-Corruption

units followed by 61.5 per cent partially agreed and the remaining 5.7 per cent disagreed with the above opinion (Table 19). Thus, most of the auditors expressed their partial agreement on the opinion that there was cooperation between the National Audit Authority of Cambodia and Anti-Corruption unit.

Table 19: Percentage Distribution of Respondents as per their Opinions on Cooperation between the National Audit Authority of Cambodia and Anti-Corruption Unit

Sl. No.	Opinion	Number	Percentage
1	Fully agree	57	32.8
2	Partially agree	107	61.5
3	Disagree	10	5.7
Total		174	100.0

Source: Own Survey.

5.7 Reliance of the NAAC

5.7.1 Level of Reliance of the National Audit Authority on Financial Statements Prepared by the Executive Arms of Government

According to the views of 62.6 per cent surveyed auditors, the level of reliance of the National Audit Authority of Cambodia

on the financial statement prepared by the Ministry of Economy and Finance (Executive Arm of Government) for the purpose of auditing was 51 to 75 per cent. Similarly, 25.9 per cent auditors opined 26 to 50 per cent reliance, 6.3 per cent auditors 76 to 100 per cent reliance and the rest 5.2 per cent had the opinion of 1 to 25 per cent reliance (Table: 20).

Table 20: Distribution of Respondents as per their Opinions on the Level of Reliance of the National Audit Authority on Financial Statements Prepared by the Executive Arm of Government

Sl. No.	Level of Reliance	Numbers of Respondents	Percentage
1	1-25%	9	5.2
2	26-50%	45	25.9
3	51-75%	109	62.6
4	76-100%	11	6.3
Total		174	100.0

Source: Own Computation.

5.7.2 Level of Performance of Auditors dependent on Financial Statements Prepared by the Executive Arms of Government

The performance of the auditors in audit works was found to be influenced by the financial statements prepared by the Executive Arm of Government (Ministry

of Economy and Finance). Among the surveyed respondents, 59.8 per cent viewed that the level of performance was significant followed by 34.5 per cent had the opinion of highly significant performance. Only 4.6 and 1.1 per cent had the views of insignificant and highly insignificant levels of performance respectively (Table 21).

Table 21: Distribution of Respondents as per their Opinions on the Level of Performance of Auditors dependent on Financial Statements Prepared by the Executive Arm of Government

Level of Performance	Number of Respondents	Percentage
Highly Significant	60	34.5
Significant	104	59.8
Insignificant	8	4.6
Highly insignificant	2	1.1
Total	174	100.0

Source: Own Computation.

5.7.3 Level of Reliance of the National Audit Authority of Cambodia on the Financial Statements prepared by the Executive Arms of Government and Level of Performance of Auditors in Audit Works

Among the 60 surveyed respondents having the opinion of highly significant, 66.7 per cent expressed the reliance of 51 to 75 per cent on the financial statements prepared by the Ministry of Economy and Finance

followed by 16.7 per cent had the view of 26 to 50 per cent reliance, 10 per cent for 1 to 25 per cent reliance and 6.7 per cent for 76 to 100 per cent reliance. Similarly, the percentages of respondents of the category of significant level of performance having the opinions of 51 to 75 per cent reliance, 26 to 50 per cent reliance, 76 to 100 per cent reliance and 0.9 per cent reliance on the financial statement prepared by the Executive Arm of the Government were 61.5, 30.7, 6.7, and 0.9 respectively (Table 22).

Table 22: Distribution of Respondents as per their Opinions on Level of Reliance of the National Audit Authority of Cambodia on the Financial Statements prepared by the Government and Level of Performance in Audit Works

Level of Performance	Level of Reliance				Total 5.2
	1-25%	26-50%	51-75%	76-100%	
Highly Significant	6 (10.0)	10 (16.7)	40 (66.7)	4 (6.7)	60 (100)

Significant	1 (0.9)	32 (30.7)	64 (61.5)	7 (6.7)	104 (100)
Insignificant	2 (25)	3 (37.5)	3 (37.5)	0 (0)	8 (100)
Highly insignificant	0 (0)	0 (0)	2 (100)	0 (0)	2 (100)
Total	9 (5.1)	45 (25.8)	109 (62.6)	11 (6.3)	174 (100)
$X^2=18.42$, d.f.=9, Sig. Level=0.031					

Note: Figures into the parentheses indicate percentage to the corresponding row total.

Source: Own Computation.

The study reveals that there was strong association between the levels of reliance of the National Audit Authority of Cambodia on the Financial Statements prepared by the Ministry of Economy and Finance and the level of performance of auditors in audit works. This can be known from the X^2 value (18.42) with 9 degrees of freedom and 0.031 significance levels. Hence, the null hypothesis “Ho 1: The performance of the National Audit Authority of Cambodia is not significantly dependent on the financial statements prepared by the executive arms of government” is rejected.

5.8 Performance of the Commission on Economy, Finance, Bank and Audit of Parliament

5.8.1 Performance of the Commission on Economy, Finance, Bank and Audit of Parliament in Controlling Public Funds

Based on the opinion of 48.9 per cent surveyed auditors, the level of reliance on the performance of the Commission on Economy, Finance, Banking and Audit of Parliament in Controlling Public Fund for the purpose of auditing was average (from 51 to 75 per cent). Similarly, 31.6 per cent auditors opined poor (1 to 25 per cent) as the level of performance, 13.2 per cent auditors as good (51 to 75 per cent) performance and the rest 6.3 per cent had the opinion of very good (76 to 100 per cent) performance of the commission (Table 23).

Table 23: Distribution of Respondents as per their Opinions on the Performance of the Commission on Economy, Finance, Bank and Audit of Parliament in Controlling Public Funds

Reliance of Performance	Number of Respondents	Percentage
Very Good (76-100%)	11	6.3

Good (51-75%)	23	13.2
Average (26-50%)	85	48.9
Poor (1-25%)	55	31.6
Total	174	100.0

Source: Own Computation.

5.8.2 Influence of the Commission on Economy, Finance, Banking and Audit of Parliament in Audit Works

The performance of the auditors in audit works was found to be influenced by

Commission on Economy, Finance, Banking and Audit of Parliament. Around 70.7 per cent respondents viewed that the influence of the commission on auditor's works was negative followed by 23 per cent had the opinion of positive influence and 6.3 per cent had the views of no influence (Table 24).

Table 24: Distribution of Respondents as per their Opinions on the Influence of the Commission on Economy, Finance, Banking and Audit of Parliament in Audit Works

Influence on Auditor Work	Frequency	Per cent
Positive influence	40	23.0
Negative influence	123	70.7
No influence	11	6.3
Poor (1-25%)	55	31.6
Total	174	100.0

Source: Own Computation.

5.8.3 Opinions on the Performance of the Commission on Economy, Finance, Banking and Audit of Parliament and Influence in Audit Works

There were 40 surveyed respondents having the opinion of positive influence among which 27.5 per cent expressed level of very good performance of the commission followed by 35 per cent had the view of good performance, 25 per cent of average performance and 12.5 per cent

of poor performance. On the other hand, among the 123 respondents having the opinion of negative influence, 26 per cent expressed good performance, 60.9 per cent average performance and 34 per cent poor performance. Among the remaining 11 respondents having opinion of no influence, 27.3 per cent expressed good and 72.7 per cent poor performance (Table 25).

Table 25: Distribution of Respondents as per their Opinions on the Performance of the Commission on Economy, Finance, Banking and Audit of Parliament and Influence of the Commission in Audit Works

Influence on Auditors' Works	Performance of the Parliament Commission				Total
	Very Good (76-100%)	Good (51-75%)	Average (26-50%)	Poor (1-25%)	
Positive influence	11 (27.5)	14 (35)	10 (25)	5 (12.5)	40 (100)
Negative influence	0 (0)	6 (26)	75 (60.9)	42 (34)	123 (100)
No influence	0 (0)	3 (27.3)	0 (0)	8 (72.7)	11 (100)
Total	11 (6.3)	23 (13.2)	85 (48.8)	55 (31.6)	174 (100)
$X^2 = 83.812$, d.f. = 6, and Sig. Level = 0					

Note: Figures in the parentheses indicate percentage to the corresponding row total.

Source: Own Computation.

The analysis reveals that there was strong association between the performance of the Commission on Economy, Finance, Banking and Audit of Parliament and the level of influence of the commission in audit works. This can be known from the X^2 value (83.182) with 6 degrees of freedom and 0.00 significance levels. Thus, the null hypothesis "Ho 2: The National Audit Authority's performance is not significantly dependent on the quality of legislative financial oversight" is rejected.

5.9 Professional Qualification and Audit Report Production

5.9.1 Audit Reports Completed by Auditors of the National Audit Authority of Cambodia

The performance of audit works is decided by the number of audit reports produced by the auditors. The survey of 174 auditors shows that 35.6 per cent had completed 1-5 audit reports; 32.2 per cent had completed 6-10 audit reports and another 32.2 per cent had completed more than 11 audit reports. As per the standard, the more audit reports the auditors make the better audit works the auditors achieve. Based on the analysis, it can be observed that the production of audit reports by auditors in the National Audit

Authority of Cambodia during the last five years was very less. The reason was that the National Audit Authority of Cambodia was not able to provide enough audit works to its auditors (Table 26).

Table 26: Distribution of Respondents as per the Number of Audit Reports Completed by them during the Last Five Years

Sl. No.	Audit Report (In number)	Number of Respondents	Percentage
1	1-5	62	35.6
2	6-10	56	32.2
3	11-above	56	32.2
Total		174	100

Source: Own Survey.

5.9.2 Educational/Professional Qualification and Number of Audit Reports Prepared during the Last Five Years

Based on the survey, it is seen that among the three respondents having Ph.D. qualification, 33.3 per cent completed 1 to 5 audit reports and 66.6 per cent more than 11 audit reports during the last five years. Only one respondent having CPA degree

completed 6-10 audit reports. Among the 111 respondents having master degree, 35.1 per cent conducted 1-5 audit reports, 29.8 per cent 6-10 audit reports and 35.1 per cent more than 11 audit reports. Out of the remaining 59 respondents having bachelor degree, 37.2 per cent completed 1-5 audit reports, 37.2 per cent 6-10 audit reports and 25.4 per cent more than 11 audit reports (Table 27).

Table 27: Distribution of Respondents as per their Educational/ Professional Qualifications and Number of Audit Reports Prepared during the Last Five Years

Educational/ Professional Qualification	Number of Audit Reports Prepared during the Last Five Years			Total
	1-5	6-10	11-above	
Ph.D.	1 (33.3)	0 (0)	2 (66.6)	3 (100)
CPA	0 (0)	1 (100)	0 (0)	1 (100)
Master Degree	39 (35.1)	33 (29.8)	39 (35.1)	111 (100)
Total	62 (35.6)	56 (32.2)	56 (32.2)	174 (100)
$X^2 = 6.662$, d.f. = 6 and Sig. Level = 0.416				

Note: Figures in the parentheses indicate percentage to the corresponding row total.

Source: Own Computation.

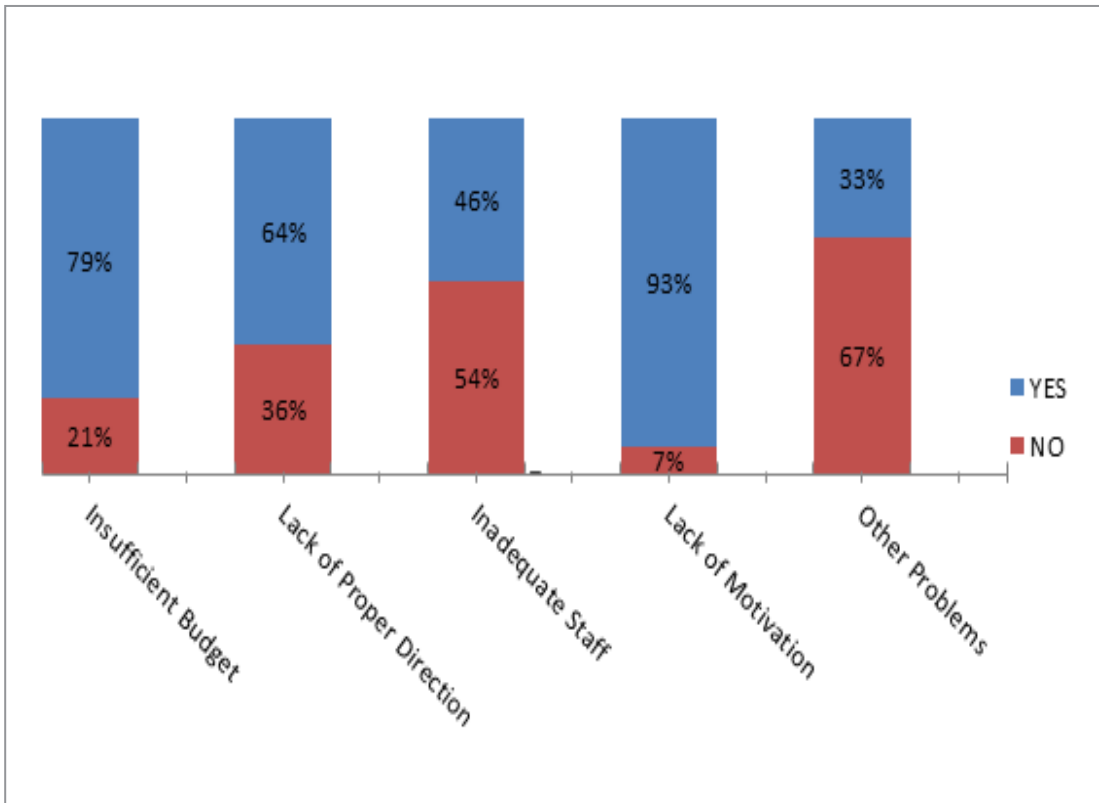
The result mentioned in the table indicates that there was no strong association between educational/professional qualifications and number of total audit reports prepared by the auditors during the last five years. This can be known from the X^2 value (6.662) with 6 degrees of freedom and 0.416 significance levels. Thus, the null hypothesis “Ho 3: There is no significant association between the qualifications of the National Audit Authority’s auditors and the number of audit reports prepared” is not rejected.

5.10 Problems Faced by the National Audit Authority of Cambodia

5.10.1 Operational Problems

The National Audit Authority of Cambodia was facing a number of operational problems. Out of total number of respondents, 79.3 per cent opined that the National Audit Authority of Cambodia had insufficient budget; 63.8 per cent mentioned about no clear organization structure; 46 per cent viewed on inadequate staff; and 92.5 per cent mentioned on low salary to the staff. Thus, the operational problems were low salary and insufficient budget (Figure 1).

Figure 1: Percentage Distribution of Respondents as per their Opinions on Operational Problems at the National Audit Authority of Cambodia

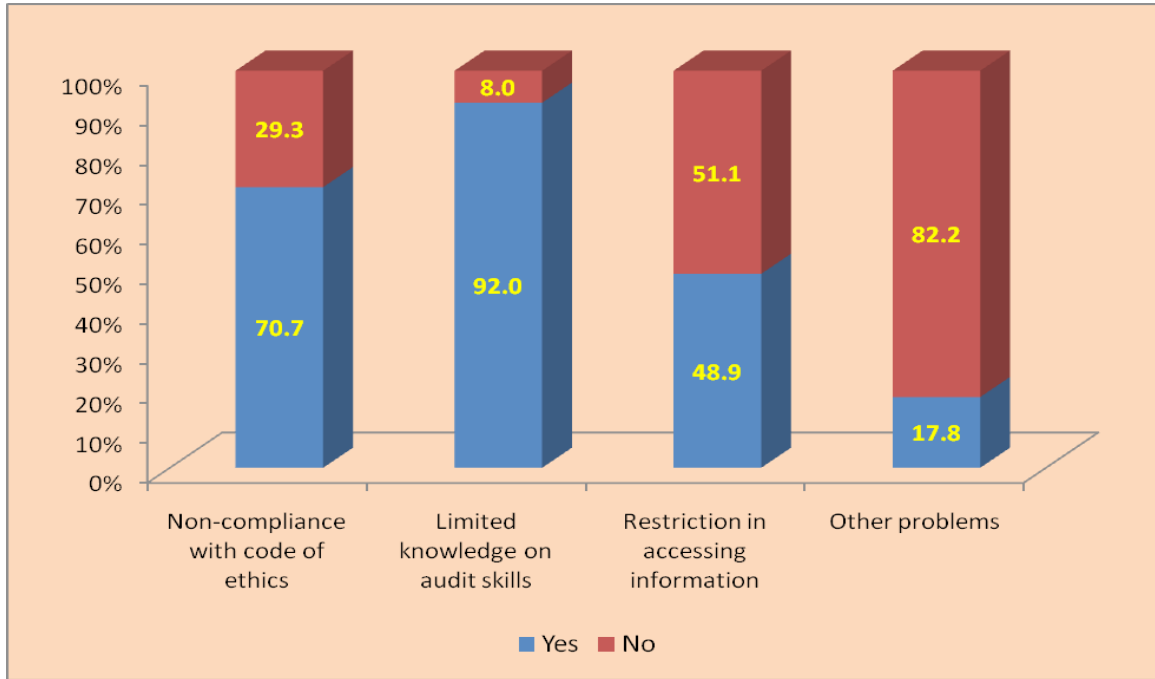


5.10.2 Audit Problems

It is found from the survey that the National Audit Authority of Cambodia was also facing audit problems. In this regard, 92 per cent respondents opined that the employees had limited knowledge on audit skills followed by 70.7 per cent had the opinion of non-compliance with code of ethics, 48.9 per cent

on restriction in assessing the information, and 17.8 per cent on other problems. Thus, most of the respondents emphasized limited knowledge on audit skills and non-compliance with code of ethics as the major audit problems (Figure 2).

Figure 2: Percentage Distribution of Respondents as per their Opinions on Audit Problems at the National Audit Authority of Cambodia



6. Conclusion

The National Audit Authority of Cambodia (NAAC) was dominated by male auditors, and most of them were young with master degree qualifications. They had good work experience, but only a few of them had taken some training courses. The NAAC was not providing enough audit works to the auditors. Most of the auditors expressed that there was a need of foreign experts in the NAAC, and also the need to amend the audit law. Most of the respondents were dissatisfied with the response from audited entities on audit queries. The reliance of the Auditor General of the National Audit Authority of Cambodia on the financial statements prepared by the executive arm of government significantly influences his performance as government auditor, and the National Audit Authority's

performance is significantly dependent on the quality of legislative financial oversight. The study shows that there is no significant association between the qualifications of the National Audit Authority's auditors and the number of audit reports prepared. The annual budget of the NAAC was also not sufficient to cover audit work operations such as audit mission expense, research and development expense, in-house and oversea training, transportation expense, purchase of tools and materials expense. The current organizational structure was not clear to carry out audit works in the most effective way. There were inadequate staffs to cover a large number of audited entities. The NAAC had no clear internal policy to promote and motivate competent auditors. Most of the auditors did not comply with the code

of ethics, and had limited knowledge on audit skills. Finally, the stakeholders of the NAAC were not fully aware of the role and functions of the National Audit Authority of Cambodia.

The recommendations for strengthening the role of the National Audit Authority of Cambodia in public accountability are: (1) the Law on Audit of the Kingdom of Cambodia should be widely disseminated to relevant stakeholders such as public institutions, local authorities and ordinary people; (2) the National Audit Authority of Cambodia should be funded directly by the government after the approval of parliament; (3) all audit queries issued should be informed to the Commission of Economy, Finance, Banking and Audit of parliament for taking actions on ministries which failed to respond to the audit query within the time schedule; (4) the National Audit Authority of Cambodia should have close cooperation with parliament and Anti-Corruption Unit to take actions on serious irregularities in audit reports or add up the investigation audit; (5) the publication of audit reports on website or other means of media should be made timely; (6) the National Audit Authority of Cambodia should encourage auditors to pursue professional audit training relating to audit topics, especially to study certified public accountancy; (7) the National Audit Authority of Cambodia should have good cooperation with parliament and support technical audit skills to parliament so that the parliament can understand the audit reports; (8) the National Audit Authority should sign

Memorandum of Understanding (MOU) with Anti-Corruption Unit in order to share information, and jointly investigate fraud and corruption occurring in government's institutions; (9) the National Audit Authority of Cambodia should create audit quality and audit assurance mechanism to sustain audit works as per international standards on auditing for public sector and help auditors to abide by the code of ethics; and (10) the Law on Audit of the Kingdom of Cambodia needs to be amended in order to provide more autonomy to the National Audit Authority of Cambodia.

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Customer Satisfaction in Transport Services: An Empirical Study in Phnom Penh

Chhem Chomnan¹

ABSTRACT

The present study attempts to understand the level of satisfaction of the users/ passengers of transport services offered by Phnom Penh Sorya Dekchumchoun Nakdamnoeur Co. Ltd. (PPSDN), Phnom Penh, Cambodia. Transport sector is considered as an important component of the economy and due to its intensive use, the sector is taken as a common tool used for development. When transport systems are efficient, they provide economic and social opportunities. The result of the study reveals that passengers were satisfied with the transport services in terms of reliability of the system, assurance, simplicity of information and tangibles provided by PPSDN. However, as the competition in the transport sector is growing fast, to keep current passengers as well as to attract the potential passengers, PPSDN requires to improve the services to accommodate wide range of customers' need and expectations.

Keywords: Transport; reliability of system; assurance; simplicity of information; tangibles

1. Introduction

Mobility is one of the most basic and important characteristics of an economic activity. In today's global economy, economic opportunities are increasingly related to the mobility of information, people and goods. Evidence shows that countries that possess greater mobility enjoy better prospects of development than others. In this context, transport sector is considered as an important component of an economy. Due to its intensive use, the sector is taken as a common

tool used for development. When transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multiplier effects such as better accessibility to markets, employment and additional investments (Rodrigue and Notteboom, 2013). In the country, a rise in population generates increase in travel demand. To meet such demands, both public and private transports play important roles. However, in a poor country in the absence of government transport system, the role of

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public transport operated by private owners is crucial for the movement of people and goods across the country and outside.

In the present cut-throat business environment, customer satisfaction plays an important role within all kinds of business. Generally, it measures how products or services supplied by a company meet or surpass a customer's expectation. It is commonly believed that a satisfied customer is likely to send more business back to the company, while an unsatisfied customer may be more active to prevent the business from soaring. Customer satisfaction is not only the main indicator to measure customer loyalty, but it also helps the company to attract new customers in the face of competition. Further, through customers' satisfaction, the company with a metric can use to manage, monitor and improve its business. Thus, the level of satisfaction a customer has with a company has profound effects on sales revenue and achieving customer loyalty. Creating loyalty among customers can help the company to increase purchases of existing products, charge premium prices for appreciation of added-value services, and create positive word-of-mouth promotion for the company. According to Oliver (1997), satisfaction is defined as the customer's fulfillment. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment. Need fulfillment is a comparative processes giving rise to the satisfaction responses. Any

gaps lead to disconfirmation; i.e., positive disconfirmation increases or maintains satisfaction and negative disconfirmation creates dissatisfaction.

In order to develop and create attractive public transport, several studies regarding satisfaction and dissatisfaction in public transport have been carried out in different countries. Andreassen (1995) conducts a survey among public transport users in Norway and argues that in order to keep market share, public transport should provide service for different types of customers. Differentiation of service will lead to increasing customer satisfaction because of higher degree of congruence between supply and demand. Most important factors to work with are travel time, fare level and design of public transport. Edvardsson (1998) reveals that the combination of information and the driver is the key success for customer satisfaction, as the driver is the main means of interaction with the customers. However, he felt that the unhappy and dissatisfied customers continued to utilize public transportations and that was because of the nature of public transportation. According to Cavana and Corbett (2007), reliability and convenience are considered to be important in customer satisfaction. Specifically, reliable and convenience transportation means increase customer satisfaction. Similarly, in another research, Beira and Cabral (2007) point out that reliability, travel time and comfort have great impact on customer satisfaction in relation with the type of the trip. For example, those who utilize buses

for professional reasons consider time as the most important dimension. An interesting result found from their research was that the price of the ticket was not considered being significant and did not affect customer satisfaction directly. Studies conducted by several researchers such as Zineldin (2005) and Zheng and Jiaqing (2007) reveal that customers want the best service whether it would be given by private companies or public companies. By improving quality and responsiveness, customers could be satisfied which would ultimately be helpful for the reputation and profit of the companies. Based on their researches, they concluded that in transportation sector, service quality plays an important role with some other moderating variables which could be stability, capacity, and security.

By focusing on factor “time”, Bielen and Demoulin (2007) show that customer satisfaction is being determined by dimension waiting time, in which three determinants are included; perceived waiting time, satisfaction which is related with information in occasion of delays and finally with satisfaction which is related with the waiting environment. As long as the above three determinants function well, customers will stay satisfied. According to Wall and McDonald (2007), bus route frequency has a major impact on customer’s satisfaction. In particular, increasing route frequency in strategic bus channels can lead to an increase in customer’s satisfaction and bus patronage. Moreover, an improvement to the existing services in the bus or present new buses is a

way for customer satisfaction to be achieved. Furthermore, Tyrinopoulos and Antoniou (2008) reveal that service frequency, vehicle cleanness and coverage of network are the most important dimensions for customer satisfaction followed by waiting conditions and tidiness, especially in buses.

A study on transnational comparison of customers’ public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe was carried out by Felleson and Margareta 2008. It was revealed that four general factors: system such as traffic supply, reliability and information; bus and bus stop design that makes customer comfortable and enjoy the travel experience; staff skill, knowledge and attitude toward customer; and safety not only both in the bus and bus stop but also safe from traffic accident. The empirical research carried out by Kostakis and Pandelis (2009) deals with customers’ satisfaction in urban transportation in the city of Larissa. In specific, the research was mainly intended to know the degree of the customers’ satisfaction on the provided services and the strong and weak points of urban buses provider in the city of Larissa. The results revealed that customers of urban buses in the city of Larissa present a medium satisfaction level but global customers’ satisfaction, destination satisfaction and usage frequency satisfaction as well as the factors which affect satisfaction varies according to the lines. Moreover, route safety, service of personnel, and service

inside the bus constitute the strong points of the company. However, all the above have a common characteristic and that is, the dimension “time” with sub criterion “route waiting time” and dimension “availability” with sub criterion “route frequency” which affect direct customer satisfaction as they are considered to be critical. Khursid et al. (2012) in their research highlight the current issues of transport sector in Pakistan and how service quality affects customer satisfaction. With a sample study of 120 respondents, the empirical analysis proved that there was a positive relationship between service quality and customer satisfaction in the public transport sector of Pakistan. Islam et al. (2014) examine the factors measuring customers’ satisfaction, especially the impact of service quality on customers’ satisfaction in public transportation industry in the university town of Sintok located in Kedah province of Malaysia. The results of the study indicate that satisfaction in customers varies in line with the service dimensions which affect total satisfaction. More precisely, the results show that customers present a moderate to strong level of satisfaction along the line of service dimensions. The sub-criteria “route safety”, “service of personnel and “service inside the bus” comprise the strong points of the company. The overall results show that service quality attributes influence overall customer satisfaction in using public bus transport.

Empirical researches show that high quality public bus transport not only keeps customers to continue using public bus transport to

fulfill their travel demand but also attracts potential customers. Thus, in order to keep current passengers, public transport has to improve the service to accommodate wide range of customers’ needs and expectations. The results of several studies reveal that behavior of personnel and specifically, behavior of bus driver, frequency of services, reliability of services as well as time and particularly waiting time are the most crucial factors affecting customers’ satisfaction among others. Based on results of several studies, it is possible to classify important service quality attributes into at least four broader categories. These categories are equivalent to categories pointed out by Friman et al. (2001): first, reliability of the system consists of different dimensions like punctuality, travel time, and reliability in the service; second, treatment by employee includes driving skills and employee knowledge; third, simplicity of information contains service attributes related to information, price and availability of ticket retailers; and the last category design is related to comfort in the vehicle, cleanliness and safety from traffic accidents.

In order to understand the service quality offered by a growing transport company along with the extent to which customers are satisfied, the present study has been carried out in the capital city of Cambodia, i.e., Phnom Penh. The study has taken the case of Phnom Penh Sorya Dekchumchoun Nakdamnoeur Co. Ltd. (PPSDN) which was founded on 16th October 2006, by take-over from Phnom Penh Ho Wah Genting

Transport Co. Ltd. PPSDN is proud to be one of the nation's leading transportation companies, which offers best services to passengers. It fulfills the aspirations of the passengers and extends travel schedules to all of the provinces which make the company an excellent choice for people to travel around Cambodia and nearby countries. Presently, PPSDN has 450 staff members, which include 396 male and 54 female staffs and the total number of buses running to different destinations is 152. Currently, the company has 37 ticket counters located around the country. Besides, it has overseas counters in three countries, such as Vietnam, Lao PDR and Thailand. The company has travel agencies spread around Cambodia as well as overseas. In total, there are 565 travel agencies which include 526 local travel agencies and the remaining are the overseas agencies.

PPSDN has gained national reputation for its commitment to provide the best services to all of its passengers. It has great pride in extending excellent services to around 1800 to 2700 passengers per day and has earned recognition from National Committee of Roads Traffic Safety in 2013. To build strong corporate relationship with others, PPSDN has made agreements with many local and international NGOs, Banks, Embassy of America, United Nations, Embassy of Korea, International travel agencies, Vietnam travel agencies, Thailand travel agencies, Lao PDR travel agencies, etc. The company promotes daily departure awareness and also has become a member of the Cambodia Bus

Association (CAMBA).

2. Study Objectives

The study is mainly intended to measure the level of satisfaction of the passengers using the transport services offered by PPSDN. As public transport is an effective travel mode of choice for many people living in Cambodia as well as foreign visitors, it is important to improve the service to accommodate wide range of customer needs and expectations. Understanding this is important for PPSDN to continue its bus services satisfactorily for greater productivity and enhanced performance.

3. Study Methodology

The study is based on both primary and secondary data. The primary data have been collected from sample passengers through a survey. For this purpose, selected respondents have been interviewed as per the structured schedules. The secondary data used in this study have been collected by reviewing both published and unpublished documents and reports of PPSDN. To understand and assess the level of satisfaction of the customers/users (passengers) of PPSDN services, 450 passengers have been selected as samples based on a percentage of passengers using the company services daily at Phnom Penh. It has been observed from the company records that everyday approximately 1,800 to 2,700 passengers use transport services at company headquarters (Phnom Penh). Thus, based on this information and after

carrying out discussions with the senior manager of the company, it is estimated that on an average, 2,250 passengers use transport services of the company daily at its headquarters located in Phnom Penh. Keeping the constraints of the study in mind, 20 per cent of total passengers availing the services of the company everyday, i.e., 450 have been taken into account for the study purpose and by following convenience sampling, the selected respondents have been interviewed over a period of one week.

Data collected for the purpose of the study have been processed and tabulated keeping the objectives of the study in mind. To measure the level of satisfaction of the users (passengers) on the services provided by PPSDN, the following 'Satisfaction Index' has been used:

$$SI = (1.0 \times f_1) + (0.5 \times f_2) + (0.0 \times f_3) + (-0.5 \times f_4) + (-1.0 \times f_5) / N$$

Where,

SI = Satisfaction Index

f_1 = Frequency of responses indicating high satisfaction

f_2 = Frequency of responses indicating satisfaction

f_3 = Frequency of responses indicating neutral

f_4 = Frequency of responses indicating dissatisfaction

f_5 = Frequency of responses indicating high dissatisfaction

4. Study Results and Analysis

4.1 Socio-economic and Demographic Profile of Passengers

Gender and Age-Group wise Classification of Respondents

Among 450 selected respondents (users/passengers), 61.3 per cent were found to be males and the remaining 38.7 per cent were females. This indicates that among the sample respondents, there was dominance of male respondents (users/passengers). The age-group wise classification of the surveyed respondents shows that among 450 selected respondents (users/passengers), about 75 per cent were in the age-group of 21-40 years followed by 11.8 per cent each were in the age-groups of 41-60 years and up to 20 years. The remaining about two per cent respondents were found to be in the age-group of 61 and above years. Thus, it indicates that more users of road transport services were young people within the age-group of 21-40 years. Further, among male respondents it was found that the highest percentage, i.e., about 74 per cent respondents belong to age-group of 21-40 years. Similarly, among female respondents around 75 per cent belonged to the same age-group. Thus, it is revealed that highest percentage of respondents in both male and female categories in the age-group of 21-40 years were using transport services of the company. The distribution of sample respondents as per gender and age-group is shown in Table 1, while Figures 1 (A) and 1 (B) present percentage distribution of respondents as per gender and age-group respectively.

Table 1: Distribution of Sample Respondents as per Gender and Age-Group

Sl. No.	Gender	Age-Group (years)				Total
		Up to 20	21 to 40	41 to 60	61 and above	
1	Male	30 (10.9)	205 (74.3)	40 (14.5)	1 (0.4)	276 (61.3)
2	Female	23 (13.2)	131 (75.3)	13 (7.5)	7 (4.0)	174 (38.7)
3	Total	53 (11.8)	336 (74.7)	53 (11.8)	8 (1.8)	450 (100.0)

Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).

(ii) Figures in the parentheses of rows showing male and female category data indicate percentage to total males (276) and females (174) respectively.

Source: Own Computation from Primary Data.

Figure 1 (A): Percentage Distribution of Respondents as per Gender

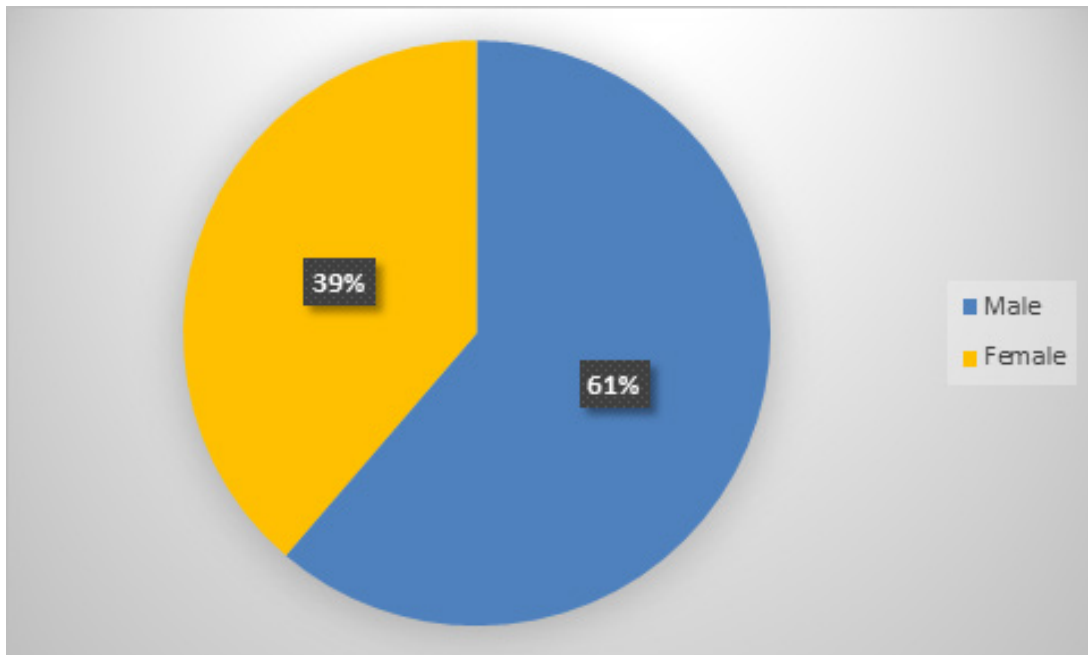
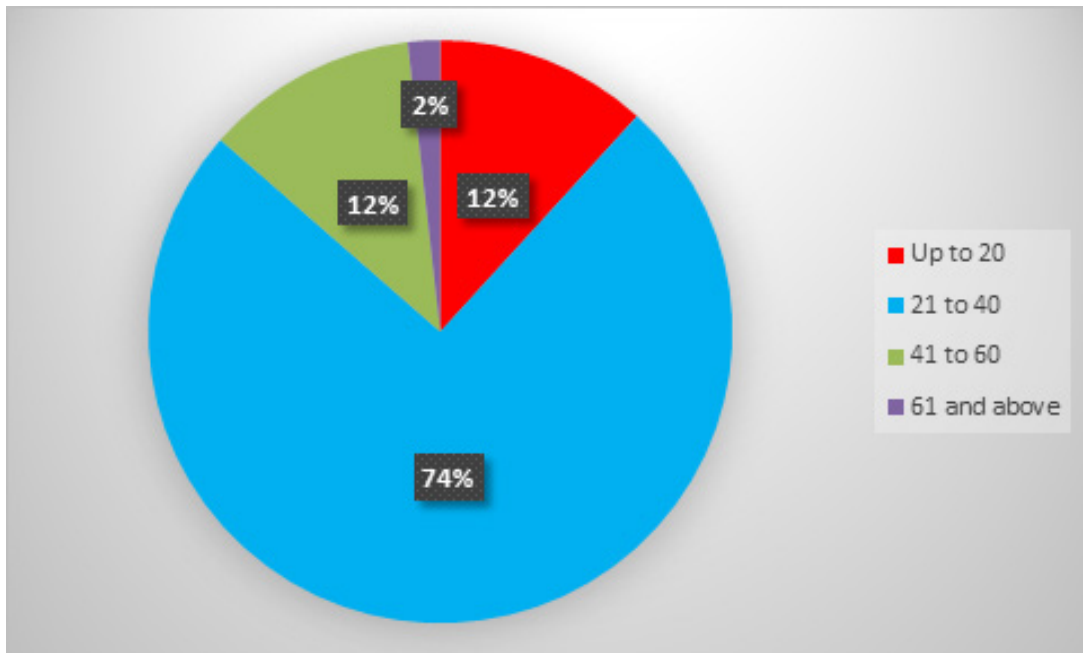


Figure 1 (B): Percentage Distribution of Respondents as per Age-Group

Gender and Occupation-wise Classification of Respondents

The occupation-wise classification of the surveyed respondents shows that among 450 selected respondents (users/passengers), about 27 per cent respondents were pursuing their studentship followed by about 26 per cent were self-employed. The remaining about 24 per cent and 23 per cent respondents were government employees and working in private companies respectively. Among the male category respondents, around 27 per cent while were working in the private company, 26.5 and 24.6 percentages were involved in self-employment activities and studentship. The remaining about 22 per cent male respondents were working in the

government. In case of female respondents, the highest, i.e., about 30 per cent respondents were students while the lowest, i.e., about 17 per cent were employees of private companies. Thus, it shows that in total and among the female respondents, more users of road transport services of the company were students. In contrast, in case of male respondents, it shows that more users were employees working in private companies. The distribution of sample respondents as per gender and age-group is shown in Table 2, while Figure 2 presents various occupations of the respondents.

Table 2: Distribution of Sample Respondents as per Gender and Occupation

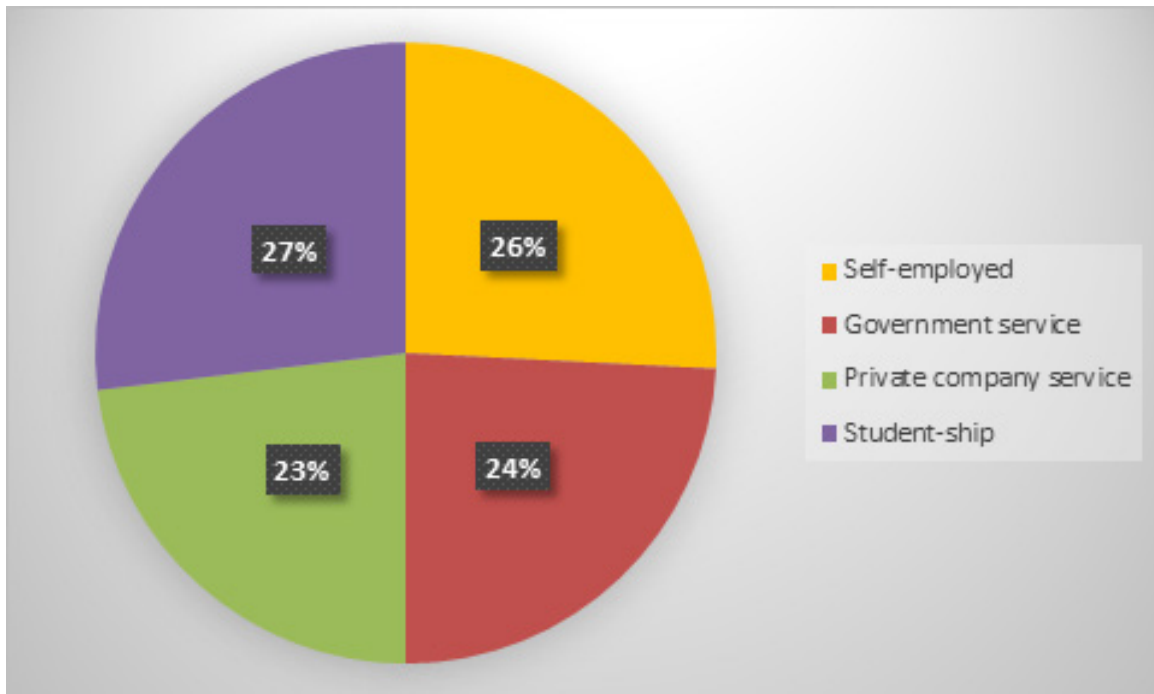
Sl. No.	Gender	Occupation				Total
		Self-employed	Government service	Private company service	Student-ship	
1	Male	73 (26.5)	60 (21.7)	75 (27.2)	68 (24.6)	276 (61.3)
2	Female	43 (24.7)	49 (28.2)	29 (16.7)	53 (30.4)	174 (38.7)
3	Total	116 (25.8)	109 (24.2)	104 (23.1)	121 (26.9)	450 (100.0)

Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).

(ii) Figures in the parentheses of male and female category rows indicate percentage to total male (276) and female (174) respectively.

Source: Own Computation from Primary Data.

Figure 2: Percentage Distribution of Respondents as per Occupation



Age and Occupation-wise Classification of Respondents

The data on age-group wise occupation of respondents show that the highest percentage of respondents (56.6 per cent) in the age-group of up to 20 years were students. In case of 21 to 40 years of age-group, majority (27.4 per cent) respondents were involved in carrying out jobs in private companies, whereas, in 41 to 60 years age-

group the highest percentage of respondents, i.e., 39.6 per cent were government service holders. However, as explained in earlier sections, among the total, the highest 74.7 per cent respondents were grouped under the age-group of 21 to 40 years, and the highest percentage respondents (26.9 per cent) were found to be students. The distribution of sample respondents as per their age-group and occupation is shown in Table 3.

Table 3: Distribution of Sample Respondents as per Age-Group and Occupation

Sl. No.	Age-Group (years)	Occupation				Total
		Self-employed	Government Service	Private Company Service	Student-ship	
1	Up to 20	9 (17.0)	7 (13.2)	7 (13.2)	30 (56.6)	53 (11.8)
2	21 to 40	85 (25.3)	78 (23.2)	92 (27.4)	81 (24.1)	336 (74.7)
3	41 to 60	20 (37.7)	21 (39.6)	3 (5.7)	9 (17.0)	53 (11.8)
4	61 and above	2 (25.0)	3 (37.5)	2 (25.0)	1 (12.5)	8 (1.8)
5	Total	116 (25.8)	109 (24.2)	104 (23.1)	121 (26.9)	450 (100.0)

Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).

(ii) Figures in the parentheses of various age-groups as shown in the rows indicate percentage to total respondents of respective rows.

Source: Own Computation from Primary Data.

Gender and Education-wise Classification of Respondents

The educational level of respondents shows that 30.4 per cent of total respondents had up to university level of education followed

by 27.3 per cent up to high school level of education. A small percentage, i.e., 4.7 per cent of total respondents was illiterates. Further, it is also revealed that 14.5 per cent of total respondents had technical education. In the male category, the highest percentage

of respondents (32.3 per cent) had up to university level of education followed by 24.3 per cent respondents had up to high school level of education. In contrast to that, in the female category, the highest percentage of respondents, i.e., 32.2 per cent while had up to high school level of education, 27.6 per cent respondents had up to university level of

education. However, it is observed that both in the male and female categories, the lowest percentage respondents were illiterates. The distribution of sample respondents as per their gender and educational level is shown in Table 4, and Figure 3 shows educational levels of respondents.

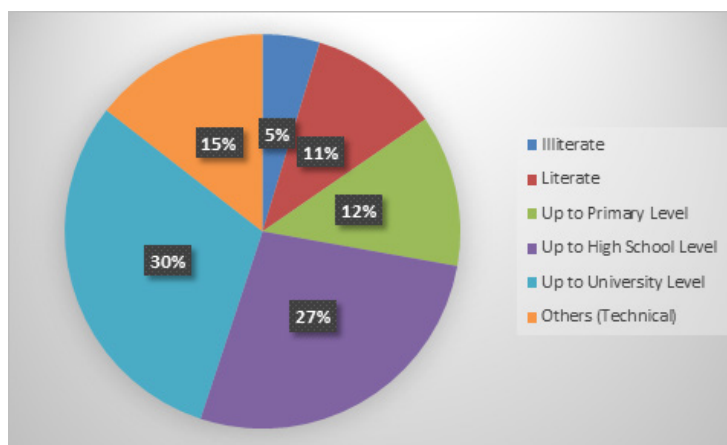
Table 4: Distribution of Sample Respondents as per Gender and Level of Education

Sl. No.	Gender	Level of Education						Total
		Illiterate	Literate	Up to Primary Level	Up to High School Level	Up to University Level	Others (Technical)	
1	Male	09 (3.2)	27 (9.8)	43 (15.6)	67 (24.3)	89 (32.3)	41 (14.8)	276 (61.3)
2	Female	12 (6.9)	21 (12.1)	13 (7.5)	56 (32.2)	48 (27.6)	24 (13.7)	174 (38.7)
3	Total	21 (4.7)	48 (10.7)	56 (12.4)	123 (27.3)	137 (30.4)	65 (14.5)	450 (100.0)

Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).
 (ii) Figures in the parentheses of male and female category rows indicate percentage to total males (276) and females (174) respectively.

Source: Own Computation from Primary Data.

Figure 3: Percentage Distribution of Respondents as per Educational Level



Purpose of Travelling by Respondents

The purpose-wise travel of the surveyed respondents shows that among 450 selected respondents (users/ passengers), the highest, i.e., 37.3 per cent respondents had carried out travel for holidays purpose followed by 31.8 per cent respondents for official mission. The remaining 15.3, 10.4 and 5.1 per cent respondents had travelled for other purposes such as to visit someone, business and

study respectively. It is further revealed that both among male and female respondents, majority of them carried out travel for holidays purpose (34.1 per cent males and 42.5 per cent females) followed by official mission (29.7 per cent males and 35.1 per cent females). The distribution of sample respondents as per their gender and purpose of travel is shown in Table 5, and Figure 4 shows purpose of travel of respondents.

Table 5: Distribution of Sample Respondents as per Gender and Purpose of Travel

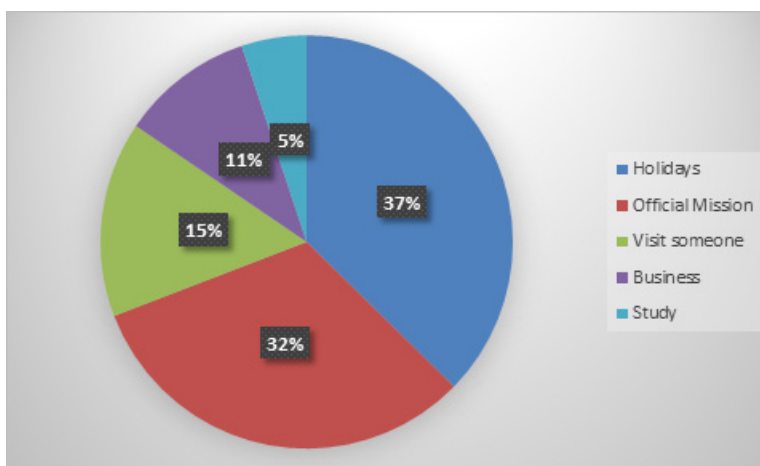
Sl. No.	Gender	Purpose of Travel					Total
		Holidays	Official Mission	Visit someone	Business	Study	
1	Male	94 (34.1)	82 (29.7)	45 (16.3)	34 (12.3)	21 (7.6)	276 (7.6)
2	Female	74 (42.5)	61 (35.1)	24 (13.8)	13 (7.5)	2 (1.1)	174 (38.7)
3	Total	168 (37.3)	143 (31.8)	69 (15.3)	47 (10.4)	23 (5.1)	450 (100.0)

Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).

(ii) Figures in the parentheses of male and female category rows indicate percentage to total males (276) and females (174) respectively.

Source: Own Computation from Primary Data.

Figure 4: Percentage Distribution of Respondents as per Purpose of Travel



Purpose and Frequency of Travelling of Respondents

It is revealed from the survey that 65.1 per cent of total respondents had travelled on an average up to five times in a month for different purposes and a negligible percentage of total respondents, i.e., 1.8 per cent had carried out travel for more than 15 times in a month. Thus, it is observed that lesser percentage of respondents had travelled frequently for different purposes in a particular month. Among the total respondents travelled up to five times in a month, the highest percentage, i.e., 40.6 per cent had travelled for holiday purposes followed by 27 per cent for official mission. The remaining 16.4 per cent, 9.9 per cent and 6.1 per cent respondents had undertaken travel for visiting someone, business and study purposes respectively. Among the respondents travelling on an average six to

10 times in a month, it is found that 46.7 per cent had travelled for official mission followed by 35 per cent for holidays. An equal per cent of respondents, i.e., 8.3 per cent had travelled for visiting someone and business purposes. The remaining 1.7 per cent respondents had travelled for study purposes. Among the respondents travelling between 11 to 15 times in a month, 31 per cent had travelled for visiting someone followed by 24.1 per cent for business purposes. Finally, among the respondents travelling more than 15 times on an average per month, an equal percentage, i.e., 25 per cent respondents had travelled for different purposes such as holiday, official mission and visiting someone. Thus, as revealed, lesser number of respondents had carried out travelling frequently in a month for different purposes. The distribution of sample respondents as per their purpose and frequency of travel is shown in Table 6.

Table 6: Distribution of Sample Respondents as per their Purpose and Frequency of Travelling in a Month

Sl. No.	Number of Times Travelling	Purpose of travelling					Total
		Holidays	Official Mission	Visit someone	Business	Study	
1	Up to 5 times	119 (40.6)	79 (27.0)	48 (16.4)	29 (9.9)	18 (6.1)	293 (65.1)
2	6 to 10 times	42 (35.0)	56 (46.7)	10 (8.3)	10 (8.3)	2 (1.7)	120 (26.7)
3	11 to 15 times	5 (17.3)	6 (20.7)	9 (31.0)	7 (24.1)	2 (6.9)	29 (6.4)
4	More than 15 times	2 (25.0)	2 (25.0)	2 (25.0)	1 (12.5)	1 (12.5)	8 (1.8)

5	Total	168 (37.3)	143 (31.8)	69 (15.3)	47 (10.4)	23 (5.1)	450 (100.0)
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Note: (i) Figures in the parentheses of the total categories indicate percentage to grand total (450).

(ii) Figures in the parentheses of each row indicate percentage to the total of respective row.

Source: Own Computation from Primary Data.

Destination-wise Travel of Respondents

It is observed from the survey that all the 450 selected respondents (users/ passengers), had travelled to different destinations both inside and outside of Cambodia. However, while about 12 per cent and above respondents had travelled to provinces/municipal areas such as Sihanouk Ville, Kampot and Kep, around seven per cent and below percentage respondents had travelled to other provinces/

municipal areas in the country. It is also revealed that 7.8 per cent, two per cent and 1.3 per cent of total surveyed respondents had travelled to destinations outside the country such as Vietnam, Lao PDR and Bangkok respectively. The distribution of sample respondents as per their travel destination is presented both in Table 7 and Figure 5 respectively.

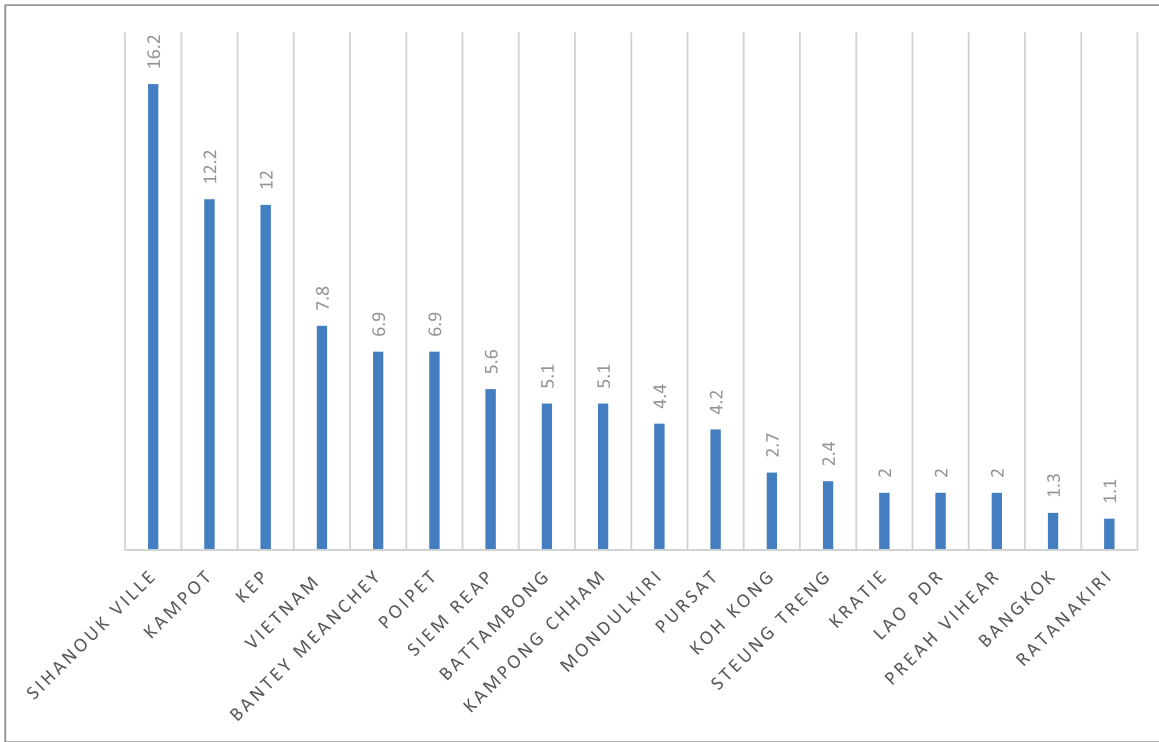
Table 7: Distribution of Sample Respondents as per Destination of Travel

Sl. No.	Place of Destination	Number of Respondents	Sl. No.	Place of Destination	Number of Respondents
1	Sihanouk Ville	73 (16.2)	10	Mondulkiri	20 (4.4)
2	Kampot	55 (12.2)	11	Pursat	19 (4.2)
3	Kep	54 (12.0)	12	Koh Kong	12 (2.7)
4	Vietnam	35 (7.8)	13	SteungTreng	11 (2.4)
5	BanteyMeanchey	31 (6.9)	14	Kratie	09 (2.0)
6	Poipet	31 (6.9)	15	Lao PDR	09 (2.0)
7	Siem Reap	25 (5.6)	16	PreahVihear	09 (2.0)
8	Battambang	23 (5.1)	17	Bangkok	06 (1.3)
9	Kampong Chham	23 (5.1)	18	Ratanakiri	05 (1.1)
Total		450 (100.0)			

Note: Figures in the parentheses indicate percentage to total (450).

Source: Own Computation from Primary Data.

Figure 5: Percentage Distribution of Respondents as per Travel Destination



4.2 Level of Satisfaction of Users of PPSDN Services

As mentioned in the methodology section, 450 customers (users/passengers) have been taken into account to understand their level of satisfaction on the services provided by PPSDN. For this purpose, under the categories such as reliability of the system, assurance, simplicity of information and

tangibles, various indicators are taken to get the opinions of the passengers.

Considering the reliability of the system, right departure time, on time arrival of bus, appropriate travel duration and reliable services are taken into consideration. The opinions of the respondents on these indicators are shown in Table 8.

Table 8: Opinions of the Respondents on Reliability of the System

Sl. No.	Reliability of the system	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	SI
1	Departure time of bus is maintained	21 (4.7)	21 (4.7)	141 (31.3)	139 (30.9)	128 (28.4)	450 (100.0)	0.37

2	Bus arrives the destination on time	8 (1.8)	11 (2.4)	79 (17.6)	101 (22.4)	251 (55.8)	450 (100.0)	0.64
3	The travel duration is appropriate	28 (6.2)	21 (4.7)	129 (28.7)	101 (22.4)	171 (38.0)	450 (100.0)	0.41
4	Services provided are reliable	8 (1.8)	18 (4.0)	106 (23.6)	123 (27.3)	195 (43.3)	450 (100.0)	0.53

Note: SI = Satisfaction Index; Figures in the parentheses indicate percentage to row total.

Source: Own Computation of Primary Data.

From Table 8, it is revealed that among all the indicators of the reliability of the system, the highest percentage of respondents (55.8) strongly agreed that the bus arrives the destination on time followed by services provided by PPSDN are reliable (43.3). The Satisfaction Index (SI) shows positive values for all indicators implying thereby that customers were satisfied on the reliability of the system of PPSDN. The highest value of SI (0.64) is attained on the indicator 'bus arrives the destination on time' followed by'

services provided are reliable' which mean customers were more satisfied with these indicators as compared to others.

Keeping assurance into account, the indicators taken in the study are safe driving of drivers, politeness of drivers and staff, sufficient driving skills of the drivers, giving respect to traffic rules by drivers and secured feeling during travelling by passengers. Table 9 shows the opinions of the respondents on the above indicators.

Table 9: Opinions of the Respondents on Assurance

Sl. No.	Assurance	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	SI
1	Drivers drive safely	9 (2.0)	8 (1.8)	83 (18.4)	118 (26.2)	232 (51.6)	450 (100.0)	0.62
2	Drivers and staff are consistently polite	5 (1.1)	9 (2.0)	107 (23.8)	113 (25.1)	216 (48.0)	450 (100.0)	0.58
3	Drivers have sufficient driving skills	6 (1.3)	4 (0.9)	107 (23.8)	110 (24.4)	223 (49.6)	450 (100.0)	0.60
4	Drivers respect traffic rules	14 (3.1)	27 (6.0)	136 (30.2)	114 (25.3)	159 (35.3)	450 (100.0)	0.42
5	Feeling secured while traveling	7 (1.6)	10 (2.2)	81 (18.0)	108 (24.0)	244 (54.2)	450 (100.0)	0.64

Note: SI = Satisfaction Index; Figures in the parentheses indicate percentage to row total.

Source: Own Computation of Primary Data.

Table 9 shows that among all indicators of the assurance, the highest percentage of respondents (54.2) strongly agreed that they felt secured while travelling followed by safe driving of the drivers (51.6). Like above, the Satisfaction Index (SI) shows positive values for all indicators implying thereby that customers were satisfied on the assurance of PPSDN. The highest value of SI (0.64) is attained on the indicator ‘feeling secured while travelling’ followed by

‘drivers drive safely’ which mean customers were more satisfied with these indicators as compared to others.

With regard to simplicity of information, the indicators taken in the study are on time information received by passengers, appropriate fare, and availability of tickets without difficulties and on time provision of information to passengers in case of change of schedule. Table 10 shows the opinions of the respondents on the above indicators.

Table 10: Opinions of the Respondents on Simplicity of Information

Sl. No.	Simplicity of information	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	SI
1	Passengers receive information on time	17 (3.8)	14 (3.1)	119 (26.4)	112 (24.9)	188 (41.8)	450 (100.0)	0.49
2	Fare charged is appropriate	30 (6.7)	29 (6.4)	132 (29.3)	104 (23.1)	155 (34.4)	450 (100.0)	0.36
3	Tickets are available without any difficulties from agencies	28 (6.2)	21 (4.7)	129 (28.7)	101 (22.4)	171 (38.0)	450 (100.0)	0.41
4	Any change of schedule is informed to passengers on time	14 (3.1)	18 (4.0)	142 (31.6)	103 (22.9)	173 (38.4)	450 (100.0)	0.45

Note: SI = Satisfaction Index; Figures in the parentheses indicate percentage to row total.

Source: Own Computation of Primary Data.

Table 10 presents customers’ opinion on simplicity of information. Among the four indicators, the highest percentage of respondents (41.8) strongly agreed that passengers receive information on time followed by any change of schedule is informed to passengers on time (38.4). The Satisfaction Index (SI) shows positive values for all indicators implying thereby that customers were satisfied on simplicity

of information of PPSDN. The highest value of SI (0.49) is attained on the indicator ‘passengers receive information on time’ followed by ‘any change of schedule is informed to passengers on time’ which mean customers were more satisfied with these indicators as compared to others.

Considering tangibles, good bus condition, adequate cleanliness of bus interiors,

availability of proper shelter and rest seats at stops, comfortableness of bus seats and provision of seats belts are taken into consideration. The opinions of the respondents on these indicators are shown in Table 11.

Table 11: Opinions of the Respondents on Tangibles

Sl. No.	Tangibles	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	SI
1	Bus condition is very good	14 (3.1)	27 (6.0)	136 (30.2)	114 (25.3)	159 (35.3)	450 (100.0)	0.42
2	Cleanliness of bus interiors are sufficient	11 (2.4)	15 (3.3)	107 (23.8)	115 (25.6)	202 (44.9)	450 (100.0)	0.54
3	Proper shelter and rest seats are available at stop	17 (3.8)	24 (5.3)	140 (31.1)	103 (22.9)	166 (36.9)	450 (100.0)	0.42
4	Seats are enough comfortable	19 (4.2)	29 (6.4)	149 (33.1)	113 (25.1)	140 (31.1)	450 (100.0)	0.36
5	Seatbelts are offered in the bus	53 (11.8)	31 (6.9)	114 (25.3)	83 (18.4)	169 (37.6)	450 (100.0)	0.32

Note: SI = Satisfaction Index; Figures in the parentheses indicate percentage to row total.

Source: Own Computation of Primary Data.

Opinion of the respondents on tangibles is presented in Table 11. Among all the indicators, highest percentage of respondents (44.9) strongly agreed that PPSDN maintains cleanliness of bus interiors followed by the company offers of seatbelts in the bus (37.6). The Satisfaction Index (SI) shows positive values for all indicators implying thereby that customers were satisfied on tangibles provided by PPSDN. The highest value of SI (0.54) is attained on the indicator 'cleanliness of the bus interiors are sufficient' followed by 'bus condition is very good' and 'Proper shelter and rest seats are available at stop' which mean customers were more satisfied with these indicators as compared to others. Thus, it is revealed from the study that

overall the customers were satisfied with all the indicators relating to reliability of the system, assurance, simplicity of information and tangibles as provided by the company.

5 Conclusion

A rise in population generates an increase in travel demand in a country. In the absence of government provision of public transport, private transport plays an important role. High quality public bus transport not only keeps customers to continue using public bus transport to fulfill their travel demand but also attracts potential customers. The results of the study show that passengers were satisfied with the transport services provided by PPSDN. However, in the

light of growing competition, to keep current passengers and attract the potential passengers, PPSDN is required to improve the services to accommodate wide range of customers' need and expectations.

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A Study on Growth and Disparity in School Education in Cambodia

Prum Sarin¹

RESEARCH ABSTRACT

Title	A Study on Growth and Disparity in School Education in Cambodia
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Department/School/University	Graduate School of Economics and Agricultural Sciences
Degree Awarded	Ph.D. in Economics
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Education has a positive influence on economic growth. The growth of school education depends on students' family backgrounds, enrollments and education policy. Disparity in education is concerned as a crucial factor in economic development in many countries in the world. In Cambodia, human resources were devastated during the Khmer Rouge Regime (1975-1979), and the country needs educated people who can help it to grow.

The objectives of the study are as follows:

- i. To review the related literatures of the study.
- ii. To analyze the development of

primary and secondary education in Cambodia.

- iii. To examine the growth of primary and secondary education in terms of enrollment ratio, attendance rate, repetition rate, and drop-out rate as per gender and across different provinces/cities in Cambodia.
- iv. To examine the disparities/inequalities in primary and secondary education in terms of enrollment ratio, attendance rate, repetition rate, drop-out rate, and pupil-teacher ratio as per gender and across different provinces/cities in Cambodia.
- v. To examine the inequalities in

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- sex ratio in terms of enrollment, attendance, repetition, drop-out and teachers across different provinces/cities in Cambodia.
- vi. To examine the disparities/inequalities in primary and secondary education in terms of per capita expenditure, and number of schools per 10,000 population and per 100 square kilometers of area across different provinces/cities.
 - vii. To draw policy recommendations on the basis of findings of the study.

The secondary data related to enrollment ratio, attendance rate, repetition rate, drop-out rate, pupil-teacher ratio, numbers of schools, land areas of provinces and cities, per capita expenditure, etc. for the period 1997-98 to 2008-09 (from 1997-98 to 2007-08 for attendance rate, repetition rate and drop-out rate) across 24 provinces/cities of the country have been collected from MoEYS and the National Institute of Statistics, Phnom Penh. The data have been used for the calculation of growths and disparities in primary and secondary education in Microsoft Excel. Further, the significance of growth has been verified by t-Stat and its p-value. Similarly, the cases of disparities have been calculated by using Microsoft Excel. The targeted schools of the study are only the public primary and secondary education of the country during the period of the study. The study has measured the growths in school education in terms of the indicators such as: enrollment ratio, attendance rate, repetition rate and drop-out rate; and the disparities/inequalities

in terms of the indicators such as: enrollment ratio, attendance rate, repetition rate, drop-out rate, pupil-teacher ratio, per capita expenditure, number of schools per 10,000 population and number of schools per 100 square kilometers of area.

The main findings of the study are as follows:

First, human resources have played a significant role in the improvement of people's living standard. The developed countries in the world have devoted a large portion of their budget to the development of human resources. They have used human resources as an important key to achieve their national economic goals.

Second, during the reform period, notable progress in education was seen in many countries in the world. This was because the governments in those countries concentrated more on the expansion of educational facilities and recruitment of more teachers to meet the growing populations.

Third, the increases in drop-out rates and repetition rates of pupils in school education reduced the educational standard in many countries in the world. In some countries, the reason for slow school education development was the occurrence of civil wars.

Fourth, disparities between boys and girls in primary and secondary education were found in many countries of the world, especially in the educationally backward countries. The countries which had high net enrollment

ratios had small disparities between males and females, and the countries which had low net enrollment ratios had high disparities.

Fifth, different models of school education were found in Cambodia at different stages such as Khmer traditional education, modern education (France-model), non-education (the killing field of the Pol Pot regime), the education of the socialism model and the global education model (the current school education).

Sixth, the development of school education in Cambodia did not reach the targets set by ESSP which attempted to achieve the net enrollment rate in primary education of 95 per cent by 2005. The net enrollment rate reached only to 50 per cent in 2005. In 2006-07 and 2007-08, the net enrollment rates in primary education also did not reach the targets set by ESSP. The enrollment rate in secondary education at the national level was found to have reached only 63.6 per cent in 2008-09.

Seventh, the drop-out rate in secondary education in Cambodia was found to be high, and the repetition rate in primary education also remained high during 1997-98 to 2007-08. The highest repetition rate was found in grade one, which was around 40 per cent to 50 per cent in 1998-99.

Eighth, the growths of average annual gross enrollment ratios in both primary and secondary education were significant during the academic years 1997-98 to 2008-09.

During this period, the growth rate of gross enrollment ratio in secondary education was higher than that of primary education. Also, the growths of gross enrollment ratios of females were higher than that of males both in primary and secondary education.

Ninth, the average annual attendance rates both in primary and secondary education increased during 1997-98 to 2007-08. The growth of attendance rate was significant in primary education, whereas, it was not significant in secondary education during the same period. Moreover, the attendance rates of females were more than that of males in both primary and secondary education.

Tenth, at the national level, the growths of average annual repetition rates in both primary and secondary education were found to be negative over the study period. This indicates that the repetition rates of students declined in both primary and secondary education during the study period.

Eleventh, the growth of average annual drop-out rate of students in primary education at the national level was negative during the study period, but in secondary education it was positive, i.e., 0.11 per cent. While the drop-out rate of females in secondary education declined, in the case of males it increased during the study period.

Twelfth, the gap between males and females in gross enrollment ratio in primary education declined during 1997-98 to 2008-09 as the GPI was 0.85 in 1997-98, which increased

to 0.97 in 2008-09. In secondary education also, the disparity between males and females in gross enrollment ratio declined in 2008-09 compared to that in 1997-98 as the GPIs of gross enrollment ratio in secondary education at the national level were 0.87 in 2008-09 and 0.55 in 1997-98.

Thirteenth, there was a positive sign that the attendance rate of females was almost equal to that of males in primary education at the national level in 2007-08. The reduction in the disparity of attendance rate in secondary education was as good as that in primary education during the study period.

Fourteenth, the gender disparity in repetition rate in primary education did not decrease in 2007-08 compared to 1997-98, which can be seen from the GPIs of repetition rate in primary education in 1997-98 (0.92) and in 2007-08 (0.76). The reason was that the repetition rate of females was higher than that of males in 2007-08 compared to 1997-98. The GPI in repetition rate in secondary education was 0.58 in 2007-08, which was higher than the GPI of 0.48 in 1997-98. This shows that the disparity between males and females in repetition rate in secondary education declined in 2007-08 compared to that in 1997-98.

Fifteenth, there was disparity between males and females in drop-out rate in primary education in 2007-08. In 1997-98, the drop-out rate of females was higher than that of males, but the drop-out rate of females became lower than males in 2007-08. Though

the disparity between males and females in drop-out rate in primary education remained high in 2007-08, it was a good sign that the drop-out rate of females declined in 2007-08 compared to 1997-98.

Sixteenth, the pupil-teacher ratio at the national level increased to 50 in 2008-09 from 46 in 1997-98, which was not a good sign. The increase in pupil-teacher ratio in primary education at the national level in 2008-09 adversely affected the teaching effectiveness in primary education in the country during the study period.

Seventeenth, the inequality in gender ratio of enrollment in primary education was small. The inequality was 115 males per 100 females during the academic years 1997-98 to 2008-09. There was large inequality in the gender ratio of enrollment in secondary education. The inequality was 155 males per 100 females.

Eighteenth, there was a small gap between males and females in terms of attendance in primary school during the study period. The inequality in gender ratio of attendance in primary education was 117 males per 100 females. In secondary education, the gender ratio of attendance was very large: 164 males per 100 females during the study period.

Nineteenth, the repetitions of males were more than those of females in primary education. It was 134 males per 100 females during the study period. On the other hand, the inequality in the gender ratio of

repetitions in secondary education was 289 males per 100 females over the study period.

Twentieth, the drop-out rate of males in primary education was almost equal to that of females in primary education during the study period. The average inequality in gender ratio of drop-out in secondary education was large. The inequality was 139 males per 100 females during the study period.

Twenty-first, the situation of inequality in gender ratio of secondary school teachers at the national level was similar to that of primary school teachers, and this was two male teachers per female teacher during the study period in the country.

Twenty-second, there were considerable differences in per capita expenditures between primary and secondary education in the country. The inequality in per capita expenditure was at the ratio 3:1.

Twenty-third, there were much variations in the numbers of primary and secondary schools across the 24 provinces/cities in the country during 1997-98 and 2008-09 per 10,000 population. The number of primary schools per 10,000 population increased much higher than secondary schools during the period.

Twenty-fourth, small increases in the numbers of primary and secondary schools per 100 square kilometers of area were found in 2008-09 compared to 1997-98 across the

24 provinces/cities in the country. Thus, considerable disparities were found across the provinces/cities in the country with regard to number of primary and secondary schools per 100 square kilometers of areas; the numbers of primary schools increased higher than secondary school under the study period.

To conclude, during the period of study, there were improvements in school education in Cambodia. The growth of primary education in the country was better than that of secondary education during the study period. The growths in primary and secondary education in terms of gross enrollment ratio and attendance rate, and the declines in repetition rate and drop-out rate (except the attendance rate and drop-out rate in secondary education) were significant during the period under study. Overall disparity/inequality both in primary and secondary education also declined in 2008-09 and in 2007-08 (for attendance rate, repetition rate and drop-out rate) compared to that in 1997-98. Considerable development took place in both primary and secondary education in the country during the study period.

Specific recommendations are given for both quantitative and qualitative improvements of school education in Cambodia, and these improvements would lead to further growth and reduction of disparities in school education in the country. Adequate numbers of both primary and secondary schools should be set up by the government at different locations by looking to the need

and backwardness of areas in the country. The schools should be equipped with adequate numbers of teachers, teaching aids and other necessary infrastructure facilities. The salaries of the school teachers and staff should be increased along with the provision of annual increment in the salary. Steps should be taken by the government to stop the informal fees collected by the teachers from the students. There should be adequate budget provision for the development of primary and secondary education in the

country. More developmental activities should be undertaken by the concerned ministries of the government so that the incomes of the poor parents will be increased. As a result, these parents will be interested and able to send their children to the schools for study. Developments of primary and secondary education can be enhanced in the country if the above recommendations would be implemented strictly.

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