

"Feasibility Survey and Pilot Project for  
Disseminating SME's Technologies to  
Developing Countries" under the  
Governmental Commission on the  
Projects for ODA Overseas Economic  
Cooperation in FY2012

Summary Report

Mozambique

Feasibility study on introducing VAT  
collection and management systems

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BMC International Inc. and  
Kaihatsu Management Consulting Inc.

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## Introduction

Increasing revenue from taxation and improving revenue administration are important for graduating from foreign aid dependency and to promote robust economic development. In many developing countries that depend heavily on indirect tax for their revenue, Value Added Tax (VAT) is an ideal tool for increasing revenue. In order to increase revenue from VAT, many developing countries have started to make taxpayers use tax machines called VAT collection and management systems, which store sales data as well as the amount of tax collected according to regulations.

BMC International Inc., a Japanese manufacturer and exporter of VAT collection and management systems, has extensive business experience in Europe and South America. It has had discussions with the government of Mozambique, which is planning to introduce regulations for the use of tax machines in mid-2013.

The purpose of the study was to examine the feasibility of using ODA finance to support efforts of the Government of Mozambique to increase revenue by introducing BMC VAT collection and management systems.

## I. Description of the current situation and development needs in

### Mozambique

Mozambique has been a model for other post-conflict countries as it has maintained political stability and has made steady progress in socio-economic development since its peace treaty in 1992. On the other hand, its per capita income is only 440 USD and 55 per cent of its population are below the poverty line.<sup>1</sup> Mozambique is ranked 184 out of 187 countries in the Human Development Index in 2011. There are many serious development issues to be solved in the country.

The fiscal structure of the Mozambique government is characterized by its high dependency on donor assistance. Although this has gradually decreased in recent years, 40 per cent of government revenue still comes from donor assistance. While government expenditure is expected to increase in future, it is unlikely that donor assistance will increase considering the economic crisis in Europe in recent years. With this background, the Mozambique government has to expand government revenue.

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<sup>1</sup> World Bank (2011) 'World Development Indicators 2011'

## II. Possible applicability of BMC's products and technologies, and prospects for future business development

### (1) Product and business strategy of BMC

BMC International Inc. started operations in 1976 by manufacturing and selling high spec calculators. It expanded its business to import Apple PCs and export PC-related products, and it started manufacturing cash registers in 1987. It has specialized in fiscal registers, with embedded memory to record the amount of VAT collected, and it has sold its VAT collection and management systems to those countries that make their population install fiscal registers by law. BMC's products have been adopted and contributed to increasing revenue in more than 20 countries.

The VAT collection and management systems that BMC developed have been sold in various countries in Europe, South America and Africa. BMC is the only company that manufactures both a conventional model with embedded memory, and the latest model which can be attached to Electronic Cash Registers (ECRs) or Point of Sale (POS) systems.

### (2) BMC and Official Development Assistance (ODA)

VAT collection and management systems, which can increase government revenue without raising tax rates, have been mainly introduced in developed countries where ECRs and POS systems are commonly used. While the market in developed countries has become saturated, there is increasing interest in VAT collection and management systems in developing countries that enjoy high economic growth and want to increase government revenue. However there are some difficulties that are peculiar to developing countries, which often lack either the necessary budget to introduce the system or the required industrial infrastructure, such as a supply chain of devices and skilled technicians for maintenance services. ODA can be utilized to fill the financial and technical gaps of governments in developing countries during the initial stage of introducing the systems. ODA used for this purpose ensures the successful introduction of the system and that the governments of recipient countries can increase tax revenue, which can be utilized for the social as well as economic development of the country. While demand for the devices will increase as the tax net expands, there will be intensive competition as the market expands, especially from local companies. It is extremely difficult for a small company like BMC to enter the market and increase its market share at this stage. Therefore it is critical for BMC to be selected as the first company to introduce the device in the market if it wishes to be successful. With this background, BMC is seeking the possibility of using ODA to help it to enter the market in developing countries.

### (3) Possible business model

Non-disclosure.

## III . Verification of adaptability of BMC's products and technologies to Mozambique

For pilot testing purposes, SDCs were installed at four retailers, three in Maputo and one in Nampula. Technical aspects of the equipment were examined and the impact on VAT revenue was assessed. Overview of the pilot shops is as follows:

Table 1 Overview of pilot shops

Shop	A	B	C	D
Location	Maputo	Maputo	Maputo	Nampula
Type of business	Sale of shoes	Sale of stationery	Restaurant	Sale of stationery and tea
Scale	Small	Middle	Middle	Middle
ECR/POS	None (writing by hand)	None (writing by hand)	POS	None (writing by hand)
Devices installed	ECR + SDC	ECR + SDC	SDC	ECR + SDC
Duration	51 days	43 days	43 days	7 days

(Source) Study Team

The outcomes of technical examination such as wireless data transmission and machine movements are all favorable. Table 3 summarizes the assumed impact on VAT collection based on the sales transactions of the four shops.

Table 2 Summary of Pilot Outcomes

Shop	A	B	C	D
Daily transactions	13	3	89	4
Gross sales in the period (MT <sup>2</sup> )	484,791	54,594	1,909,383	4,677
Daily sales (MT)	9,507	1,270	44,404	668
Estimated annual sales (MT)	3,469,581	463,415	16,207,555	243,846
Estimated annual VAT collection (MT) *1	504,127	67,334	2,354,944	35,431
Estimated annual VAT payment after	126,032	16,833	588,736	8,858

<sup>2</sup> 1 MT = 0.0327 USD as of February 2013

deduction (MT) <sup>*2</sup>				
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\*1 : Estimated annual sales x 0.17/ 117

\*2 : A quarter of estimated annual VAT collection which is considered to be approximately same as actual VAT collection

(Source) Study Team

Out of the four shops, Shop C is supposed to be a typical VAT taxpayer. Although its size is in the middle range, the result indicates that MT 35.7 billion could be collected as VAT from 27,000 shops of this size. This is the total amount that was collected in VAT from the 70,000 registered VAT payers in Mozambique in 2011. This indicates that introducing the regulations could lead to a significant increase in VAT collection from existing taxpayers.

On the other hand, Shop A, which is very small and not assumed to be a registered VAT taxpayer, had estimated sales of more than MT three million, which is categorized as large by the Tax Authority of Mozambique (ATM). It suggests that there are large potential taxpayers among non-registered small businesses. Therefore it is expected that facilitating those non-registered taxpayers to register will considerably increase VAT collection.

#### IV . Expected development impact and effect on business development of BMC in Mozambique through proposed ODA projects

Table 4 summarizes the development impact, as well as concerns related to introducing tax machine regulations which make taxpayers install VAT collection and management systems.

Table 3 Development impact and concerns of tax machine regulations

Area	Development issues	Development impact and concerns
Poverty reduction	Reduction of food poverty	VAT system in Mozambique is designed to minimize the negative impact on the poor. Therefore there will be no negative impact on the poor resulting from introducing the VAT collection and management systems
Macro economy	Improving business environment	The new regulation can promote fair competition among businesses as it makes it difficult for tax payers to under-declare their tax

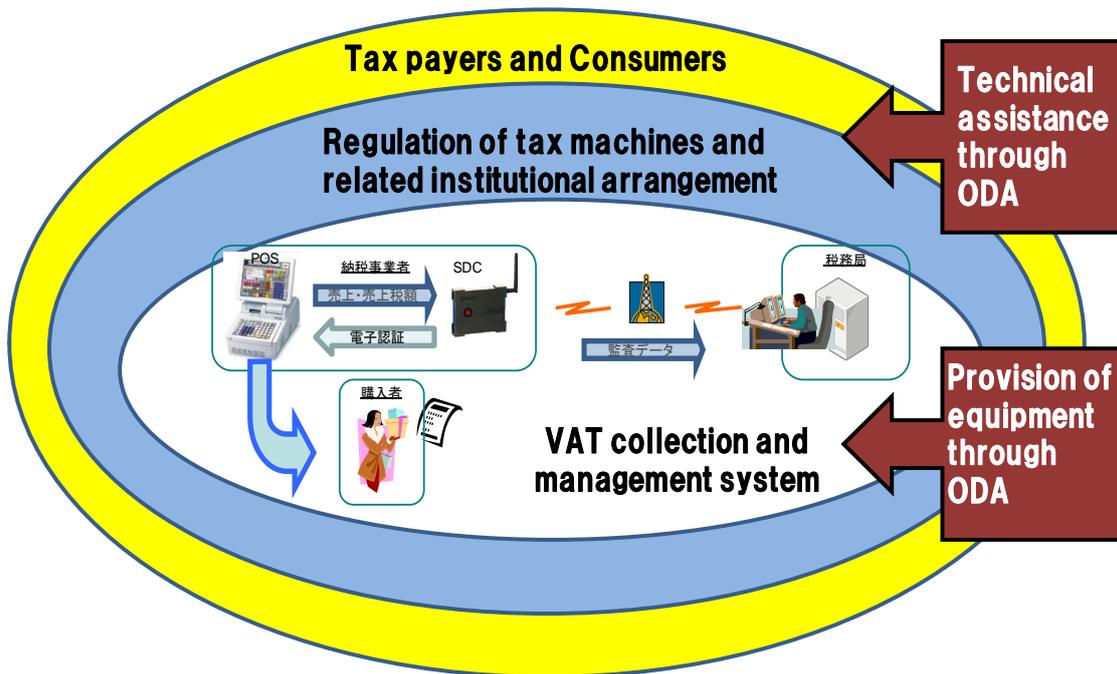
Fiscal management	Increasing revenue through sustainable and fair method	VAT collection and management system enables Mozambique Government to increase revenue without raising the tax rate. It increases fairness of tax by making tax evasion difficult and makes taxpayers more aware of the need for tax.
Governance	Improving service delivery	VAT collection and management systems reduce the possibility of corruption as well as the cost of paying taxes by eliminating contact between taxpayers and tax officials.

(Source) Study Team

By introducing the regulations for tax machines, it is expected to have broad development effects that include not only increased revenue, but also promoting fair competition and reducing opportunities for corruption. However, in order to achieve the expected effects and to make the regulations function effectively, there has to be a conducive environment such as appropriate enforcement mechanisms, financial and technical support to businesses, and taxpayer education.

## V . Proposals for formulating ODA projects

In order for the VAT collection and management system of BMC to produce the expected outcome, it is not enough only to install machines, but it is also necessary to have enabling institutional arrangements, such as an appropriate legal framework to ensure effective introduction and utilization of tax machines, and awareness campaigns for both taxpayers who use tax machines as well as consumers who pay VAT. The Government of Mozambique does not have enough knowledge and experience in this area. It will be necessary to provide technical assistance in the areas of institutional development as well as taxpayer education, in parallel with providing equipment, in order to increase the effectiveness and to reduce risks of implementing the regulations.



(Source) Study Team

Figure 1 Concept of ODA for VAT collection and management systems

Therefore the planned ODA project should include both provision of equipment and technical assistance in the areas of institutional development, capacity building of ATM staff and taxpayer education.

## Attachment: Outline of the Survey

### SMEs and Counterpart Organization

- Name of SME : BMC International
- Location of SME: Osaka
- Survey Site ▪ Counterpart Organization : Maputo, Autoridade Tributaria de Mocambique

### Concerned Development Issues

- Weak governance and public institutions (acquisition of uncollected tax due to tax evasion, corruptions, and inefficient tax collection mechanism)
- Graduation from aid dependency

### Products and Technologies of SMEs

- The most advanced model of VAT collection and management system with high security and user friendly operation
- Provide consulting services necessary for successful implementation of tax machine regulations
- Provide comprehensive service including not only devices but also server machine

### Proposed ODA Projects and Expected Impact

- Possible ODA scheme: Financial resources of Mozambique Government and Technical Cooperation
- Increasing VAT revenue through BMC's VAT collection and management system through ODA
- Maximizing effectiveness of system with technical assistance for institutional development and operation management system
- Increasing tax revenue, expanding tax net, improving management capacity of economic agents and generating employment as a result of effective operation of the system
- Graduating from aid dependency, securing sufficient budgets for socioeconomic development and poverty reduction

### Future Business Development of BMC

- Establishing competitive advantage by selling BMC device through ODA
- Entering server operation and management service business
- Entering value-added service business such as providing management information based on data collected by its devices