Asia-Pacific Research and Training Network on Trade
Working Paper Series, No. 32, February 2007 (rev. 5/07)

Promoting Export: Some Lessons from Indonesian Manufacturing

By

Dionisius A. Narjoko*

Raymond Atje*

*Dionisius A. Narjoko and Raymond Atje are senior researcher Centre for Strategic and International Studies (CSIS), Jakarta, Indonesia. The authors would like to thank Imelada for an excellent research assistant. The views presented in this paper are those of the authors and do not necessarily reflect the views of CSIS, ARTNeT members, partners and the United Nations. This study was conducted as part of the Asia-Pacific Research and Training Network on Trade (ARTNeT) initiative, aimed at building regional trade policy and facilitation research capacity in developing countries. This work was carried out with the aid of a grant from the World Trade Organization (WTO). The technical support of the United Nations Economic and Social Commission for Asia and the Pacific is gratefully acknowledged. Any remaining errors are the responsibility of the author. The authors may be contacted at dion.ardiyanto@anu.edu.au and raymond_atje@csis.or.id

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Executive Summary

The improved terms of trade for Indonesia, as a result of the sharp exchange rate depreciation after the 1997/98 economic crisis, was expected to improve the country's export performance. As documented by some studies, however, the evidence conflicts the prediction. Although some explanations have been offered in the literature, those which focus on firm behaviour are scarce, and almost all of these concentrate on macroeconomic factors. This study attempts to fill this gap and aims to draw some lessons from Indonesia's experience, by examining the export-supply response of firms in Indonesian manufacturing. The study asks two questions. First, what is the picture of export-supply response of firms in Indonesian manufacturing during and after the 1997/98 economic crisis?, and second, which factors determine the firms' export-supply response?

Utilising the rich plant level data of non-oil and gas manufacturing, the descriptive analysis suggests that, among other, the strong persistency might have been the main explanation for the sluggish export performance. In other words, the lack of export response could be caused by the inability of firms in immediately engaging in export activities.

The description is confirmed by the econometric analysis. Being able to provide a more robust quantitative method, the econometric analysis is able to provide more insights into the issue. The following are the main points from the econometric analysis. First, the improved terms of trade from the exchange rate depreciation is likely to have been captured only by plants which had been exporting prior to crisis. This suggests it is likely to observe a success response from firms that have had some exporting experience, but not necessarily so for firms that sell their entire output to the domestic market. The redirection is likely to happen but with a lag. Second, the unsuccessful export supply response may have been because firms were not ready or not prepared to enter export markets. Third, the analysis support the Blomstrom and Lipsey's (1993) proposition that it is easier for foreign firms to increase their export or redirect sales in the event of positive economic shock.

The in-depth interviews provide more insights into the topic by supplementing the finding from the statistical analysis. Three main findings were derived. First, the availability of networks determines the success of firms in responding to the improved terms of trade. The interviews suggest companies that engage in industrial networks performed relatively better in terms of exports during and after crisis, than those that did not. Second, limited access to capital and deteriorated infrastructure were often mentioned as the main constraints for a successful response. Third, unlike what is commonly believed, the role of trade facilitators does not appear to have given significant positive impact to firm export supply response. This study suggests the role of trade facilitators could be industry specific.

The findings from this study are clearly relevant for policy making in Indonesia. The major implication is that the policy should be focused on encouraging firms to start exporting, even if a firm is domestically oriented. The reason for this is

obvious. The empirical analyses indicate and confirm that exporting in Indonesian manufacturing is costly and could be very slow business activity to be initiated.

Encouraging firms to start exporting could be done in many ways. One, which also indicated by the empirical findings, is by attracting much higher flow of foreign direct investment (FDI). Again, the reason is obvious, foreign ownership is shown to have been important for shaping a successful export supply response after the crisis. An important policy action is streamlining the procedure and process for establishing business or exporting from Indonesia. As also noted in many reports, Indonesia currently stays at the bottom of the global ranking in this particular area.

I. Introduction

Indonesia enjoyed a more competitive terms of trade during and after the 1997/98 economic crisis, as a result of sharp exchange rate depreciation in 1998. The real effective exchange rates in the early 2000s were still considerably below their pre-crisis level, although they had been appreciating in the last few years. The exchange rate for the period 1999-2003, for example, on average was about 25 per cent lower than its real value in the 1996 (before the crisis). The better terms of trade was expected to have improved the country's export performance. However, several studies (e.g. Dwor-Frecaut et al. 2000; Duttagupta and Spilimbergo 2004; World Bank 2000) have demonstrated that the evidence conflicts this prediction. The growth of non-oil and gas exports in terms of value contracted by 4 per cent in 1998 (the peak of the crisis) and was about 2 per cent on average for the period 2000-2003, which was considerable low compared to about 12 per cent average growth during the period 1991-95 (pre-crisis period).

Although some explanations have been offered in the literature, those which focus on firm behaviour are scarce, and almost all of these concentrate on macroeconomic factors. This study attempts to fill this gap and aims to draw some lessons from Indonesia's experience, by examining the export-supply response of firms in Indonesian manufacturing. It asks, in particular, two questions. First, what is the picture of export-supply response of firms in Indonesian manufacturing during and after the 1997/98 economic crisis?, and second, which factors determine the firms' export-supply response? The second question essentially builds on the first, based on the empirical findings discussed in the study.

The study utilises a rich annual data set on medium and large plants in the Indonesian manufacturing from 1993 to 2004, which covers the high-growth pre-crisis period, the peak of the crisis and the recovery period. The choice of manufacturing industry was motivated mainly because of the data availability, and the fact that the industry had been the major source of Indonesia's export growth in the last two decades before the crisis (Hill 1996). The study adopts both quantitative and qualitative method. The former draws some descriptive statistics and conducts an econometric analysis, utilising the plant-level data. The latter, meanwhile, conducts a case study of few firms in textile-and-garment and electronics industry, by way of interviewing the senior managers of these firms. The case study aims to supplement to supplement the results from quantitative method.

This report is organised as follows. Section 2 reviews the relevant theoretical and empirical literature. Section 3 describes the methodology adopted by this study, including the description of the data base and list of topics for the firm-level interviews. Section 4 presents the results and analysis, consisting of the descriptive analysis, econometric analysis, and the results of the firm-level interviews. Finally Section 5 summarises the study, concludes, and outlines few possible policy implications.

II. Literature Review

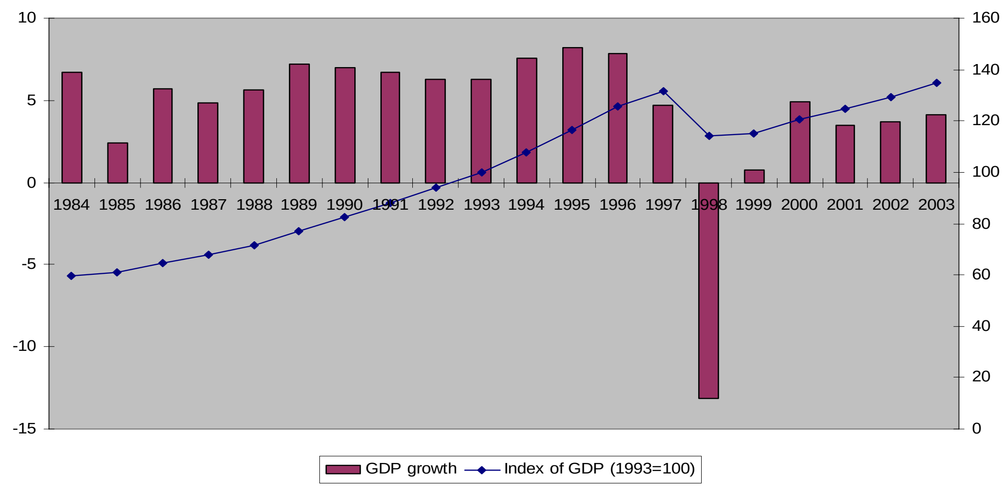
2.1 Overview of the macroeconomic situation during the 1990s and the early 2000s

This sub-section describes the performance of several macroeconomic indicators between the 1990s and 2000s, focusing on the impact of crisis and the macroeconomic performance after the crisis. The motivation for the description is twofold. First, export performance of a country does not only depend on the characteristics of industry and firm, but also on an overall macroeconomic performance. Second, it is important to provide the reader with background information about the macroeconomic situation during the period of the sluggish export-supply response.

2.1.1 Economic growth

The crisis severely affected Indonesia's economy. The economy contracted by 14.1 per cent in 1998 after growing rapidly in the 30 years before the crisis (see Figure 2.1). In historical context, the contraction in 1998 was far deeper than any other recession that Indonesia had experienced (Hill 1999). The severe impact of the crisis appears even harsher when the short-term trend in the GDP is considered. The GDP index in the figure shows that the level of the GDP in 1998 was about the same of that in 1995, implying that the crisis had 'cost' Indonesia three years of economic growth.

Figure 2.1 Annual GDP growth and Indices, 1984-2003 (%, 1993=100)



Source: National Income Statistics, Indonesia.

In spite of the deep contraction, the economy began to recover in 1999, which was indicated by 0.8 per cent growth in they year. By 2000, the rate of growth was back to the 1997 rate at the beginning of the crisis, although well below the pre-crisis trend growth.

The momentum of recovery, however, was only short-lived. The growth fell by about 2 per cent in the following year, and was only picking up at much slower than the pre-crisis period. The latter is shown by a much-lower slope of the over-time growth trend over the period 2001-04, compared to the trend over the early 1990s to just before the crisis.

Table 2.1 shows that the impact of the crisis was different across sectors in the economy. Focusing first on the peak of the crisis (1998) construction, finance and trade, hotel and restaurant were the most severely affected sectors. The massive contraction in construction sector was probably caused by the delay of many projects. As noted by Johnson (1998), the demand for cement in Indonesia's major cities was substantially reduced in early 1998. The contraction in the finance sector largely reflected the difficulties faced by the banks. As shown by the figures, the contraction in this sector was largely explained by the bank, rather than the non-bank, financial sectors. Manufacturing, particularly non-oil and gas, contracted at about the economy-wide average.

Table 2.1 GDP growth by broad sectors of economy (%), 1996-2003

Sectors	1996	1997	1998	1999	2000	2001	2002	2003
Agriculture	**3.1**	**1.0**	**-1.3**	**2.2**	**1.9**	**1.7**	**2.0**	**2.5**
Mining & Quarrying	**6.3**	**2.1**	**-2.8**	**-1.6**	**5.5**	**1.3**	**2.5**	**0.5**
Manufacturing Industries	**11.6**	**5.3**	**-11.4**	**3.9**	**6.0**	**3.1**	**3.4**	**3.5**
Oil & Gas	11.1	-2.0	3.7	6.8	-1.7	-3.5	1.2	0.6
Non-oil & Gas	11.7	6.1	-13.1	3.5	7.0	3.9	3.7	3.8
Electricity, Gas & Water Supply	**13.6**	**12.4**	**3.0**	**8.3**	**7.6**	**8.2**	**6.0**	**6.8**
Construction	**12.8**	**7.4**	**-36.4**	**-1.9**	**5.6**	**4.4**	**4.9**	**6.7**
Trade, Hotel & Restaurant	**8.2**	**5.8**	**-18.2**	**-0.1**	**5.7**	**3.7**	**3.8**	**3.7**
Transport & Communication	**8.7**	**7.0**	**-15.1**	**-0.8**	**8.6**	**7.8**	**8.0**	**10.7**
Finance	**6.0**	**5.9**	**-26.6**	**-7.2**	**4.6**	**5.4**	**5.7**	**6.3**
Bank	3.0	5.1	-37.9	-13.6	5.5	6.8	6.4	6.2
Other non-bank financial sectors	10.4	8.5	-17.2	1.8	3.9	4.8	4.2	4.4
Services	**3.4**	**3.6**	**-3.8**	**1.9**	**2.3**	**3.1**	**2.1**	**3.4**
Public Administration	1.3	1.2	-7.3	1.7	1.4	1.1	0.4	0.9
Private Services	7.4	7.9	1.9	2.4	3.8	6.2	4.5	6.8
Gross Domestic Product (GDP) growth	**7.82**	**4.70**	**-13.13**	**0.79**	**4.92**	**3.45**	**3.69**	**4.10**

Source: National Income Statistics

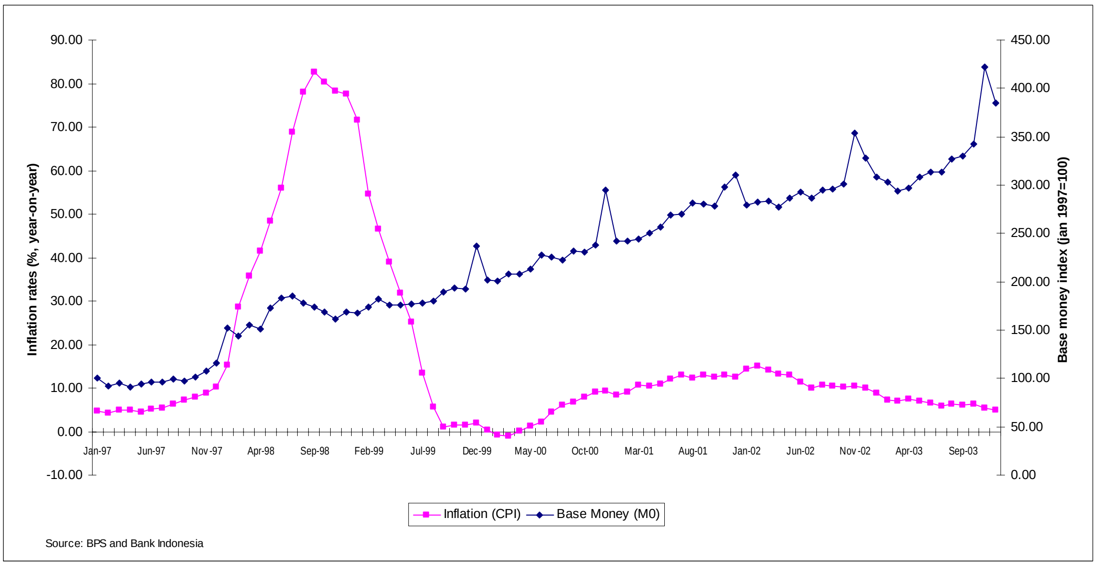
Turning to the early recovery period (1999-2000), much of the large variation and patterns recorded in 1998 persisted into the following year. Bank-financial and construction sectors contracted further, by 15 and 1.9 per cent respectively. Meanwhile, non-oil and gas manufacturing seemed to begin recovering as it grew by 3.5 per cent.

As noted, however, the sign of recovery appeared unstable. Excluding finance and services sector, and to some extent agriculture sector, the growth declined in the following year until 2003. The table shows that manufacturing experienced a rather large downfall, from about 5 per cent in 2000 to a rather flat rate of growth of 3 per cent over the period 2001-03.

2.1.2 Monetary indicators

To get a picture of the performance of monetary indicators, it is useful to examine the trend of money supply, inflation and interest rates over the period 1997-2003/04. Money supply is represented by base money (M0), inflation is computed using the consumer price index (CPI) and the interest rates are represented by one-month Bank Indonesia Certificate (SBI) and the three-month time deposit. The trends are given in Figures 2.2 and 2.3.

Figure 2.2 Inflation (%, year-on-year) and base money (M0) (indexed at Jan 1997=100), January 1997 - December 2003



Source: BPS and Bank Indonesia

Figure 2.3 Interest rate (% p.a.), January 1997 – December 2004