

WORKING PAPER

Impact of the Global Financial Crisis on Households in Kota Pekalongan

Asri Yusrina

Akhmadi

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ABSTRACT

Impact of the Global Financial Crisis on Households in Kota Pekalongan

Asri Yusrina and Akhmadi

This study adds to the studies about the impact of the 2008 Global Financial Crisis (GFC) on Indonesia's economy both at the macro- and microeconomic levels. Kota (City of) Pekalongan was chosen because of the facts that the city is a Community-Based Monitoring System (CBMS) area in Indonesia and that there is household-level data available in the city.

The data analysis at the macroeconomic level was intended to find the occurrence of GFC and how it was transmitted to the city. Qualitative data collection through focus group discussions and in-depth interviews enrich the macroeconomic analysis. By combining data from the 2009 CBMS census and the GFC impact survey in five *kelurahan*ⁱ, the study aims to identify which household group was the most affected. Principal Component Analysis (PCA) is used to predict which households belong to which quintile of household welfare in each *kelurahan*.

The fall of prices of commodities, particularly cotton, and the depreciation of the Indonesian rupiah were the shocks of the GFC that significantly appeared at the macroeconomic level and were transmitted to the city's batik home industry, which later affected the households. There were also other local shocks that contributed to the GFC resulting in compound crises felt by the households.

The affected households are those that had a household member that switched jobs, even to a worse one, and experienced an income decline during June 2008–June 2009. Based on the household welfare quintile, the majority of the affected households come from the poorest household group (the first quintile). The poorest households, particularly the affected ones, reduced their food consumption, used the Health Insurance for the Poor, and had children (10–18) who dropped out of school during the crises and started work.

The provision of well-targeted social protection programs such as the Health Insurance for the Poor and Unconditional Cash Transfer 2009 (BLT 2009) programs helped the poor to cope with the compound crises. In Kota Pekalongan, the poor households benefited from the programs when they lost their financial ability during the crises. In times of crisis, the government should also provide incentives for industries that are vulnerable to external shocks and that many households rely on as a source of income.

In anticipation of future crises, a good database of targeted households and vulnerable industries will enable the government to create an effective early response system and take prompt action. Other than the database provided by the central government, databases initiated by the local governments, such as the household data from the CBMS project in Kota Pekalongan, can be of great benefit.

Keywords: CBMS, global financial crisis, Kota Pekalongan, impact

ⁱA *kelurahan* is a village-level administrative area located in an urban center.

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LIST OF ABBREVIATIONS

ASEPHI	:	Asosiasi Eksportir dan Produsen Handicraft Indonesia	Association of Indonesian Handicraft Producers and Exporters
BNP2TKI	:	Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia	National Agency for the Placement and Protection of Indonesian Migrant Workers
BOS	:	Bantuan Operasional Sekolah	School Operational Assistance
BLT	:	Bantuan Langsung Tunai	Unconditional Cash Transfer
CBMS	:		Community-Based Monitoring System
DR	:		dependency ratio
FSP	:		Fiscal Stimulus Package
GDP	:		gross domestic product
GFC	:		global financial crisis
GoI	:		Government of Indonesia
GRDP	:		gross regional domestic product
Jamkesmas	:	Jaminan Kesehatan Masyarakat	Health Insurance for the Poor
PCA	:		Principle Component Analysis
PNPM	:	Program Nasional Pemberdayaan Masyarakat	National Program for Community Empowerment
PPLS	:	Pendataan Program Perlindungan Sosial	Data Collection for Social Protection Programs
Raskin	:	Beras untuk Rumah Tangga Miskin	Rice for the Poor
RT	:	<i>rukun tetangga</i>	neighborhood unit
RW	:	<i>rukun warga</i>	unit of local administration consisting of several RT (neighborhood units)
SME	:		small- and medium-sized enterprise
US	:		United States
YoY	:		year-on-year

I. INTRODUCTION

The financial crisis that hit the United States (US) in mid-2008 had affected and spread all over the world, including to many European and Asian countries. The effect of this financial crisis was felt in numerous countries through the interconnectedness of the global economy in trade, finance, and investment. However, each country experienced a different level of impact depending on their economic structure and economic integration with the rest of the world's economies. The reaction from the affected countries also differs based on their policy responses.

Despite the countries' differences in impact and responses, the assumption of the transmission mechanism of the global financial crisis (GFC) to those affected countries is somewhat similar. With the credit crunches and borrowing-constrained households, the demand of the US economy for foreign products declined. Like other developing countries, Indonesia started to experience the impact of GFC in the last quarter of 2008. The impact was transmitted through the weakened export demand, fallen commodity and oil prices, and currency depreciation. Although—as a country that is dependent on imported oil—Indonesia should have been able to benefit from the downward trend in the oil price, it was unable to do so due to the rupiah depreciation.

As an economic entity, Indonesia consists of 33 provinces and 497 districts/cities with each region giving a different contribution and entailing a different economic sector. Despite the economic downturn that could be observed through the macroeconomic data at the national level, the regions experienced different levels of the GFC impact. The comparative advantage of a region determines how the GFC impact was transmitted.

Other than being one of the Community-Based Monitoring System (CBMS) locations in Indonesia, Kota Pekalongan is also important to be included in the GFC impact analysis due to the existence of manufacturing industries in the city that contributed around 20,87% of the country's gross regional domestic product (GRDP) and 25% of the exports value in 2008.¹ Based on interviews with local officials of the Association of Indonesian Handicraft Producers and Exporters (ASEPHI), these officials highlighted some potential effects of the GFC in Kota Pekalongan.² They stated that export had declined by 30% since mid-2008 and that it had dropped by 60% by the end of December 2008. In February 2009, only 20% of the products were exported, but by May 2009, the figure increased to 40%.

The proceeding sections of this paper are organized as follows. Section 2 presents several literature reviews on the global financial crisis at the macro- and microeconomic levels. Section 3 explains the impact of the GFC on Indonesia's macroeconomy. Section 4 describes to what extent the GFC had an impact on microeconomic conditions with regard to the households in the selected *kelurahan*³ in Kota Pekalongan. Section 5 explains the coping mechanisms adopted by the households in response to the shocks. Section 6 provides information about mitigating strategies in the form of policy responses with regard to the impact of the GFC.

¹Authors' calculation from the 2009 Statistics Indonesia (Badan Pusat Statistik) data and the 2009 Export Realization data by Kota Pekalongan's Agency for Industry, Trade, Cooperatives, and Small- and Medium-Sized Enterprises (SMEs), or Dinas Perindustrian, Perdagangan, Koperasi, Usaha Mikro, Kecil, dan Menengah Kota Pekalongan.

²Only temporary declining value.

³A *kelurahan* is a village-level administrative area located in an urban center.

II. REVIEW OF RELATED LITERATURE

When the GFC emerged, the Government of Indonesia (GoI) had estimated its transmission channels and impact on the economy (Murniningtyas, 2009). The predicted transmitted impacts were:

- reduced exports of commodities such as oil, crude palm oil, and other cash crops; textiles and garments; and craft and furniture—especially to the US, European Union, and Japan;
- weaker domestic production, especially in labor-intensive industries (indicators included reduced output of these industries, reduced production capacity at industrial estates in Java, and decreased exports from exporting manufacturers, resulting in decreased output and lower capacity utilization rates, estimated to have fallen from 76% in 2008 to 70% in 2009); and
- dismissals and lay-offs, as well as the return of overseas workers.

These are predicted to have an effect on the increasing numbers of people below the poverty line.

Based on a regional economic study conducted by Bank Indonesia (2008) about the impact of the GFC on Central Java Province, the dominant industries that were heavily affected by the crisis were the export-oriented industries such as textile and furniture industries. Since Kota Pekalongan is located in Central Java Province, the study gives a valuable insight about an indication of which industrial sector was affected by the GFC. The study predicted that the export volume would be stagnant until 2009, while the prices of export commodities would decline. The prices of import commodities used as raw material would increase due to the depreciation of the rupiah, despite the falls of prices of the world's commodities.

As others have predicted, The SMERU Research Institute (2009a), in its observation on various mass media, found that the manufacturing sector had also been affected by the GFC, with some industries suffering more than the others. The textile, footwear, electronics, and automotive industries were the worst affected. They had been forced to cut back on productions and eventually on work hours as well as the number of staff. The food and beverages industries as well as the cigarette industry, on the other hand, were the least affected. A number of handicraft-making industries which commonly export their products to some American and European countries have also suffered from reduced demands. Companies have attempted to gradually lessen the negative impact of the crisis by reducing their staff hours; discontinuing contract workers, who are mostly employed by labor outsourcing companies; no longer recruiting new employees; and downsizing their staff.

Regarding the effect of financial instability and the transmission of crisis at the microeconomic level, which later affected the households, Tennant (2009) explained that the business sector dealt with them by adopting some strategies such as (i) reducing the use of imported inputs, sourcing from alternative markets, or accessing new sources of finance; (ii) reducing non-staff expenses and expenses incurred by the usage of local inputs which transferred to a third party (home or small industry) with which the business interacts; and (iii) closing the business, laying off workers, and reducing the staff's wage and benefits.

Based on the immediateness of the impact on households, option (i) has the minimum impact and option (ii) has the medium impact in which the linkage is indirect to households. Option (iii) has the immediate impact on households' welfare with many of them losing their source of income.

A comprehensive study by The SMERU Research Institute and the Institute of Development Studies gives further analysis of the impact of the global financial crisis at the household level (McCulloh and Grover, 2010). In addition to the impact of the crisis on the employment sector, the study also explains about the impact of the crisis on food and fuel prices which directly affect households' well-being. Based on their qualitative findings, the GFC began to be felt in the export-oriented sector. In the case of Desa Gandasari, Jakarta, migrant workers working in this sector had already started to lose their jobs and returned home by November 2008. Thus, more changes were found with respect to the internal migrants. However, while internal migrant remittances continued to decline, the crisis was also pushing many into trying internal migration as a coping strategy. Workers in the informal sector and the self-employed were also affected by the global financial crisis although with various intensities.

Owing to the food and fuel crisis, instead of the GFC, the study finds that households were unable to compensate for the rise in food prices. Women and children were forced to diversify into new activities, often at a considerable cost to their time and status, or at some risk. However, the impact on children—their education and the likelihood that they would go into labor early—varied, depending on the severity of the impact on household finances, material support available for school-going children, attitudes towards education, and the availability of children's work. Apart from the possible changes in their children's education, households also use several coping strategies in terms of food consumption and healthcare patterns.

Findings of the studies above give us background information about the possible impact of the GFC and other shocks at the macro- and microeconomic levels—throughout the country, regions, economic sectors, and households—as well as the coping mechanism adopted by actors at each level. Regarding these issues, we would like to explore the possibilities in the Kota Pekalongan context. This study begins with the analysis of how the GFC was transferred and had affected the macroeconomic data at the national level as well as in the city, followed by an analysis of the city's affected economic sector.

III. MACRO IMPACTS

Since the collapse of major financial institutions in the US in mid-September 2008, official data from Statistics Indonesia shows that the Indonesian economy experienced a slower growth starting at the beginning of the fourth quarter of 2008. Sectors that experienced the slowest growth were the manufacturing and trade/hotel/restaurant sectors (Table 1). While the growth rate of the manufacturing sector had dropped more than 50% in the fourth quarter of 2008 (year-on-year, or YoY), the slowdown in the trade/hotel/restaurant sector's growth rate was moderate. However, the demand in the manufacturing sector remained positive since it was sustained by the domestic demand. The trade/hotel/restaurant sector's growth rate had worsened at the beginning of 2009. The growth rate was even negative in the following quarter. This was likely due to the decline in foreign tourists' financial ability regardless of rupiah depreciation.

Table 1. Year-on-Year GDP^a Growth in Indonesia, 2008 and 2009

Industrial Origin	2008				2009		
	I	II	III	IV	I	II	III
Agriculture	6.3	4.8	3.4	4.7	4.8	2.4	2.7
Mining and quarrying	-1.7	-0.5	2.1	2.1	2.2	2.4	6.5
Manufacturing	4.3	4.2	4.3	1.8	1.6	1.5	1.3
Electricity, gas, and clean water	12.3	11.8	10.4	9.3	11.4	15.4	14.6
Construction	8	8.1	7.6	5.7	6.3	6.4	8.8
Trade, hotel, and restaurant	6.9	8.1	8.4	5.6	0.6	-0.1	-0.6
Transport and communication	18.3	17.3	15.5	15.8	16.7	17.5	18.2
Finance, renting, and business service	8.3	8.7	8.6	7.4	6.3	5.5	4.9
Other services	5.9	6.7	7.2	6	6.8	7.4	5.8
GDP growth rate	6.2	6.4	6.4	5.2	4.4	4	4.2

Source: Bank Indonesia, 2008; and Badan Pusat Statistik, 2009.

^aGDP = gross domestic product.

Table 2 shows that in the third quarter of 2008, the growth of Indonesia's export and import was still positive, as the impact of the GFC had not yet occurred. Investment was at a growth rate of 12.2% compared to the same period of the preceding year, while the exchange rate was Rp9,331 against the US dollar, which was moving upward relatively above the average level of the current year. However, households experienced a high inflation growth (13.5%) due to the risen food and oil prices (McCulloh and Grover, 2010).

When households were able to adjust to the risen food prices, at the end of the first quarter of 2009, inflation rate was lower than that at the same period of the previous year. In regard to the trade balance, the growth of the export and import of goods in the first quarter of 2009 dropped considerably compared to their growth in the previous year's corresponding period. Both of them were affected by the volatility of the exchange rate, which was about Rp11,517 against the US dollar. Investment fell to 3.5% due to the crowding out of foreign investment.

Indonesia's macroeconomic condition began to stable in the third quarter of 2009; people benefited from the low inflation rate. However, there was a large decline in export compared to the same period in 2008, presumably caused by the broadening of the GFC impact experienced by developed countries outside the US.

Table 2. Macroeconomic Indicators for Indonesia Before, During, and After the GFC (%)

YoY Growth (%)	3 rd Quarter 2008	1 st Quarter 2009	3 rd Quarter 2009
GDP	6.4	4.4	4.2
Inflation	13.5 ^a	8.48 ^a	2.83 ^a
Export	10.6	-19.1	-22.3 ^b
Import	11	-24.1	-30.84 ^b
Exchange rate (IDR/USD)	9,331	11,517	9,633
Investment	12.2	3.5	4

Source: Badan Pusat Statistik and The World Bank in McCulloh and Grover, 2010.

^aInflation figures are YoY figures for the end of the last month of each quarter.

^bJanuary–October 2009 over January–October 2008.

However, macroeconomic data from Kota Pekalongan shows a slightly lower growth with the GRDP rate in 2008 0.07% lower than that in 2007 (the GRDP rates are not presented in the quarterly changes due to data limitation) (Table 3). It means that the city's production slightly decreased compared to the previous year.

Based on the GRDP growth rate figures, in 2008, the manufacturing industry had a growth slowdown, the trend of which was similar to that of the national data. Other sectors except the trade, hotel, and restaurant sector also went through a slowdown. The agricultural sector faced a negative growth although the negative growth in 2008 slightly decreased compared to the percentage of negative growth in 2007. As an indication of the GFC impact, the manufacturing industry still faced a low growth in 2009 when the GRDP growth had increased throughout the year.

Table 3. Gross Regional Domestic Product of Kota Pekalongan at Constant 2000 Market Prices by Industrial Origin, 2007–2009 (Billion Rupiah)

Industrial Origin	2007	Growth Rate (%)	2008	Growth Rate (%)	2009 ^a	Growth Rate (%)
Agriculture	183.00	-7.08	171.59	-6.24	165.75	-3.52
Mining and quarrying	0	0	0	0	0	0
Manufacturing industry	382.47	4.48	394.04	3.02	402.37	2.07
Electricity, gas, and clean water	20.89	6.62	21.64	3.61	22.18	2.43
Construction	229.65	6.93	241.43	5.13	259.54	6.98
Trade, hotel, and restaurant	477.19	3.68	512.14	7.32	529.32	3.25
Transport and communication	189.79	5.85	193.74	2.08	207.24	6.51
Finance, renting, and business service	129.66	6.91	133.85	3.23	138.28	3.20
Other services	207.34	6.22	219.43	5.83	242.07	9.35
GRDP	1,820.00		1,887.85		1,966.75	
GRDP growth rate (%)		3.80		3.73		4.01

Source: Badan Pusat Statistik, 2009.

^aEstimate figures.

Table 4 shows the number of manufacturing industries based on their classification and scale. The data will help us to understand the manufacturing sector's contribution to the economy of Kota Pekalongan. Based on the scale, Kota Pekalongan is dominated by small-scale industries with investment values less than Rp200 million, such as home industries, employing numbers of laborers. The textile industry, including the batik industry, is part of the varied industries, along with the rubber and wood industries. The agricultural product industry includes the fishing industry and its products.

Regardless of the various industries in Kota Pekalongan, only several industries contribute to the city's exports value. Data shows that the fishing industry and its products contributed about 50% of Kota Pekalongan's exports value throughout January–November 2009 (Dinas Perindustrian, Perdagangan, Koperasi, dan Usaha Mikro, Kecil, dan Menengah, 2009). During the same period, the batik industry contributed about 25% of the city's exports value (approximately US\$5 million). The remaining 25% was contributed by the sarong industry and other garment industries.

Table 4. Characteristics of Industries in Kota Pekalongan

Classification of Industries Based on Investment Values		Numbers of Establishments			Numbers of Employees		
		2008	2009	2010	2008	2009	2010
Metal Machine and Chemistry Industries							
A	Large	--	--	--	--	--	--
B	Medium	9	10	11	449	495	379
C	Small	321	322	325	1,211	1,216	1,244
Varied Industries							
A	Large	3	3	3	1,216	1,216	1,216
B	Medium	31	32	32	2,907	3,792	3,017
C	Small	1,290	1,302	1,332	16,535	16,634	17,172
Agriculture Product Industries							
A	Large	1	1	1	137	137	137
B	Medium	14	15	16	3,694	3,792	3,803
C	Small	1,233	1,237	1,240	6,012	5,951	5,964

Source: Dinas Perindustrian, Perdagangan, Koperasi, dan Usaha Mikro, Kecil, dan Menengah Kota Pekalongan in Badan Pusat Statistik Kota Pekalongan, 2010.

Note: The classification of the industries is based on the investment value:

a) Large = investment value > Rp5 billion,

b) Medium = investment value between Rp200 million–Rp5 billion, and

c) Small = investment value < Rp200 million.

Based on the data presented, we can conclude that the industrial sector in Kota Pekalongan is characterized by several dominant industries, namely the fishing and batik industries, which are distributed numerously among small-scale industries. The existence of small-scale industries is vastly related with the households' livelihood since most of the industries are located in neighborhood units (*rukun tetangga*, or RT) and employ informal workers from the surrounding area.

Looking at the slowdown of Kota Pekalongan's economy shown by the GRDP growth rate, it is possible that the community felt some shocks through some channels that related to the city's economic sector, that is, the textile and fishing industries. To enrich the analysis, we include what happened to Kota Pekalongan's overseas workers during the GFC.

3.1 Impact on the Economic Sector: Textile/Batik Industries

Since the GRDP shows that there was a slowdown in the manufacturing industry's growth, we assumed that there were two channels of how the impact of the GFC was transmitted to the textile industry and then to the households in Kota Pekalongan. The first channel is through factories that reduced their input to cope with the weakened demand. An interview with the local Labor and Transmigration Agency states that a company named 'Tobal Batik', which regularly received orders from the US, had reduced their staff from 400 workers to 50 workers during 2008–2010.

There was also a closing of a garment factory that was caused by the mismanagement of the family business. It was said that the workers of this factory had been laid off gradually during 2007–2010 and that the workers had received some compensation. The impact of the closing

was therefore not immediate and the former workers were able to cope with it with the compensation they received.

The second channel assumed to have had an impact on the households was through the batik industry. Although the share of the batik industry in the national GDP is relatively steady, which is about 9% per year, the Ministry of Trade stated that the exports value of Indonesia's batik during 2004–2008 was in a positive trend, even though it weakened in 2005. In 2004, the exports value of the batik industry was US\$34.2 million and became US\$12.43 million in 2005. The export of batik increased in 2006 with a value of about US\$14.26 million, increasing to US\$20.87 million in 2007 and US\$32.27 million in 2008. The trend weakened again during January–November 2009 with an exports value of US\$17.35 million, as the targeted countries for Indonesia's batik export such as the US were in financial crisis. Based on a rough estimation, the batik industry in Kota Pekalongan contributed about 29% of Indonesia's batik exports value during January–November 2009 (Kementerian Perdagangan in PT Viva Media Baru, 2009).

Kota Pekalongan is one of the two major batik producers, besides Kota Cirebon, in the island of Java. The batik industry in Kota Pekalongan is typically not in the scale of a large factory. There are wholesalers that take major contracts of producing batik, but instead of producing it, they subcontract the demand to several home industries to produce the batik. These wholesalers provide white fabric (*mori* cloth) to the home industries that will then dye it in batik patterns. These home industries are paid for each square meter of patterned batik produced. In Kota Pekalongan, the batik industry is a labor-intensive industry where the batik is handmade.

The qualitative analysis reveals that the impact of the GFC in this city was mostly felt by the households through the hike in the cotton price in the batik industry. As explained in the related literature section, in reality, the GFC had caused the prices of commodities to decrease due to the converse shift of their supply and demand in the international trade as a result of the exchange rate hikes. The result was that the textile industry suffered because of the higher commodity values since most of their raw materials are imported.

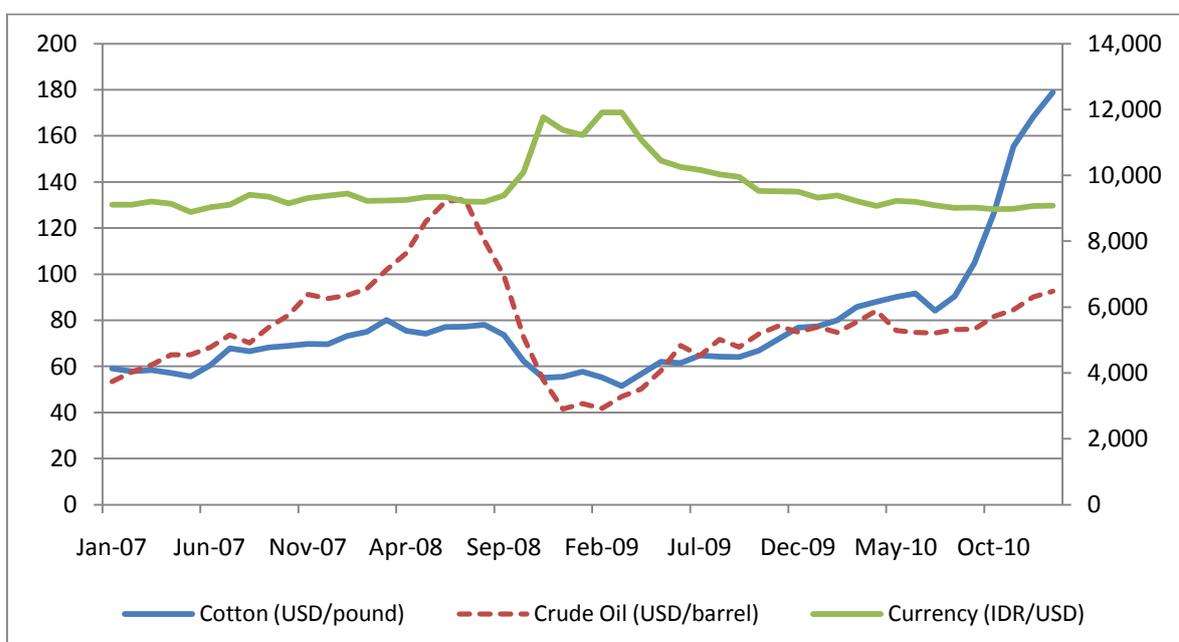


Figure 1. Cotton and crude oil prices and currency levels (IDR/USD) on a monthly basis, 2007–2010

Source: Authors' calculation based on the data from www.indexmundi.com and www.bi.go.id.

Figure 1 shows that during January 2007–July 2008, the crude oil price increased; this was recognized as a food and oil crisis, whose effect also contributed to the upcoming shocks felt by the households. As the GFC impact started to be felt in Indonesia, between October 2008 and January 2009 (3rd and 4th quarters of 2008 and 1st quarter of 2009), the crude oil price, as well as the cotton price, fell sharply. On the contrary, the exchange rate increased and reached a peak at Rp11,700–Rp11,900.

The increasing price of imported cotton had increased the price of *mori* cloth produced by the textile industry. The batik industry heavily depends on *mori* cloth to make batik. The higher price of *mori* cloth meant a higher cost spent on producing batik. Wholesalers that provided *mori* cloth to home industries had to cut down on their cost. They did it by reducing the home industries' payment for producing batik patterns per square meter of fabric. These home industries were not in a strong bargaining position and thus could not do anything but to take the offer.

In the making process, the batik also uses some chemical colorants and batik wax the prices of which had also increased since the rupiah had depreciated. The focus group discussion with the community in Kota Pekalongan revealed that, at the beginning of 2009, the price of chemical colorants escalated to Rp33,000 per kg from about Rp25,000 per kg in the previous year. The price of wax used in the dyeing process of batik had increased from Rp15,000 per kg in 2008 to Rp25,000 per kg in 2009. To minimize their burden, home industries reduced the number of workers or the workers's payment. Since most of the workers in home industries are casual workers, the choice was either looking for another source of income or accepting the offered lower payment. Thus, the increasing price of cotton, namely due to the GFC, contributed to the shocks felt by the households.

The crisis was compounded by Indonesia's stiff competition against China in the export of batik. An interview with an official from the Labor and Transmigration Agency of Kota Pekalongan revealed that during 2008–2009, the local batik merchandize was in fierce competition in price and market share with Chinese batik. The city's producers of batik cloth (raw product) to batik shirts and skirts (finished products) faced shocks caused by the competition.

Indications of the GFC, through weakened exports of textile and batik demands and increases in the cotton price, as well as the local crises (the closing of factories due to mismanagement and shocks caused by fierce competition) were potential shocks that created compound crises felt by the households.

3.2 Impact on the Fisheries Industries

The SMERU Research Institute (2009b) stated on their media monitoring update that Indonesia's fishery exports fell immediately when demand from the US fell 30%–40% during the 2008/2009 GFC. The US is the main market for Indonesia's fishery exports and takes, on average, 40% of the total national exports. Since the fishing industry of Kota Pekalongan contributes to approximately 50% of the city's exports value, weakened export demand means a lower amount of fish that would be bought by wholesalers. However, the quantitative and qualitative analyses conducted in Kota Pekalongan do not reveal how households felt the impact of the GFC through the fishing industry.

Some interviews with the households revealed the closing of the only local fishers' trading place located north of Kota Pekalongan. Due to the closing of a local ice factory, local fishers could not buy ice that they use to freeze fish they catch. The fishers sold their catch on transactions at sea; they did not sell their fish on land. Therefore, the local fishers trading place was deserted from any transaction and it eventually closed down. It was said that the closing of the fish trading place had affected households that relied their source of income on several activities at the fish trading place as, for example, fishing deck hands and small resellers of fish.

Weakened export demands for fishery commodities due to the GFC and the closing of the local fish trading place were additional shocks that contributed to the compound crises that transmitted through the textile and batik industries and had impacts on the households.

3.3 Impact in the Return of Overseas Workers

There are assumptions that the GFC also affected overseas workers that worked in the industrial sector and that they were laid off due to the weakened export demands. The SMERU Research Institute (2009c) stated that the economic sectors in South Korea and Malaysia that were affected were the automotive, textile, and electronic injection industries. The companies managed the GFC's impact through reductions in the numbers of working days and hours. Even if layoffs were experienced by the overseas workers, they did not immediately return home; they sought work in other companies. On the other hand, the impact of the GFC was not particularly felt by Indonesian women migrant workers that were employed as domestic workers.

When the issue was brought to attention of the Labor and Transmigration Agency of Kota Pekalongan, they informed that most of the overseas workers from Kota Pekalongan work as domestic workers rather than industrial laborers. Therefore, it is very likely that their return was not caused by the GFC. The country destination for most of the overseas workers from Kota Pekalongan is Saudi Arabia. The agency also advised that the overseas workers that are registered with private recruitment agencies located in the city are not only local residents but also workers from Kabupaten (District of) Pekalongan, which is a fringe area of Kota Pekalongan.

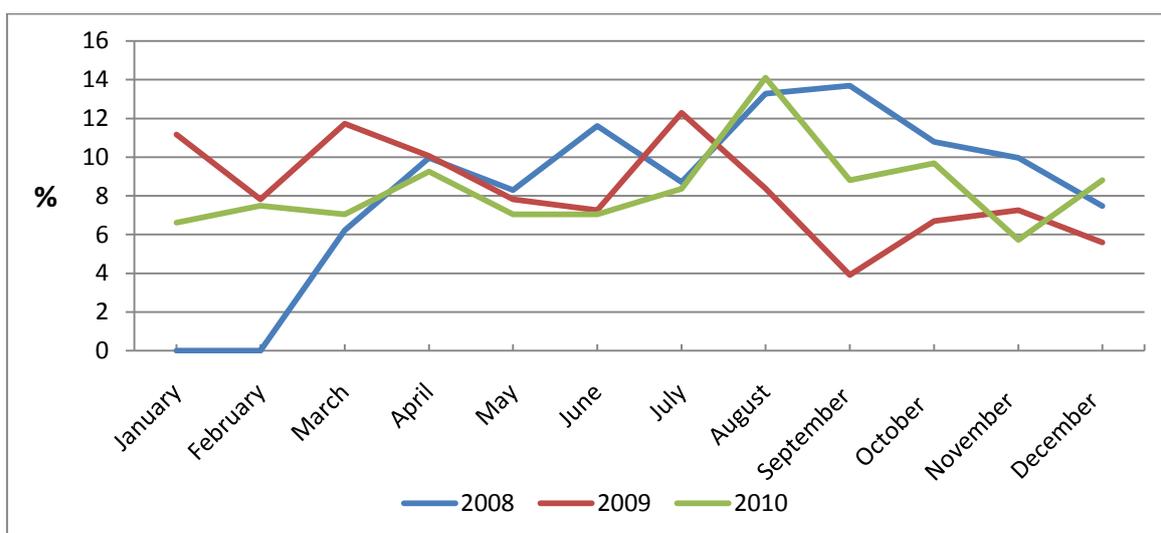


Figure 2. Incidences of returning overseas workers of Kota Pekalongan

Source: Authors' calculation based on the National Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI) data.

Figure 2 shows the number of overseas workers from Kota Pekalongan that returned to Indonesia on a monthly basis throughout 2008–2010. In 2008, the highest return rate of overseas workers occurred in September. The percentage decreased in the following months.

Other than the monthly return rate of overseas workers throughout 2008–2010, the National Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI) also recorded the reasons of their return (Table 5). There were 241 recorded overseas workers that returned home and 67.2% of them returned from Saudi Arabia. They had finished their contract of employment (78.01%), were taking a leave (7.47%), or returned because of a certain employment problem (14.52%). Compared to the previous year, the number of returning overseas workers of Kota Pekalongan in 2009 decreased to only 179 workers with 69.27% of them having worked in Saudi Arabia. The total number of returning overseas workers of the city in 2010 increased to 227 workers with 74.45% of them having worked in Saudi Arabia. From this data, there is no indication of whether those who had finished their contract of employment had actually reached the agreed end date or were denied continuance of employment.

Table 5. The Number of Returning Overseas Workers and Their Reasons

Reason for Returning	2008	2009	2010	Total
Troubled	35 14.52%	21 11.73%	38 16.74%	94 14.53%
On leave	18 7.47%	6 3.35%	18 7.93%	42 6.49%
Had finished their contract of employment	188 78.01%	152 84.92%	171 75.33%	511 78.98%
Total	241	179	227	647

Source: Authors' calculation based on the BNP2TKI data.

Besides the BNP2TKI data, the GFC Impact Survey also reveals that 41 households experienced the return of their members that worked as an overseas worker during the period of the GFC, June 2008–June 2009 (Table 6).⁴ Kelurahan Medono has the highest number of households with returning working members. Kelurahan Panjang Wetan contributes the lowest number, while Kelurahan Krapyak Lor has zero number of returning overseas workers.

Table 6. Households with Members as Returning Overseas Workers from June 2008–June 2009

Kelurahan	N	%
Medono	16	39.02
Tirto	10	24.39
Pasirsari	12	29.27
Krapyak Lor	0	0
Panjang Wetan	3	7.32
Total	41	100

Source: Authors' calculation based on the GFC Impact Survey data.

⁴A qualitative study through focus group discussions with the community confirms the data with the information that as many as 15 Indonesian migrant workers working in countries such as Saudi Arabia came back to their hometown in Kelurahan Pasirsari during 2009–2010.

The secondary and survey data about the returning overseas workers cannot explain the source of the shock, i.e., whether it was due to the GFC or not. The impact of the GFC on the overseas workers from Kota Pekalongan was unlikely to happen since most of them worked as domestic workers. Regardless of the GFC, the occurrence of the return of household members working as overseas workers to Kota Pekalongan had affected the households in terms of source of income, which experienced a decline.

IV. MICRO IMPACTS

The macroeconomic data shows that Indonesia, as well as Kota Pekalongan, experienced economic downturn due to the GFC. However, there were other local shocks that occurred in the city such as the closing of a local factory due to mismanagement, shocks due to the fierce competition faced by the local batik industry, and the closing of a local fish trading place. The crises had affected the economic sector and in turn had an impact on households that depended on the sector as their source of income. Thus, households' experiences and responses at any given moment would indicate not only effects of economic downturn but also accumulated effects of more localized shocks that compound the effects (Hossain and Fillaili, 2010).

To understand which groups of households were affected by the compound crises during June 2008–June 2009, a combined analysis on results of the 2009 CBMS Census and the GFC Impact Survey are needed. The 2009 CBMS Census is a data collection of all households in West and North Pekalongan. It provides information about household members' characteristics and their living condition. The census does not include an instrument on households' income or expenditure. As for the GFC Impact Survey, it is a survey that piggybacks the 2009 CBMS Census. The GFC Impact Survey is aimed to provide information about the impact of the crisis on the households. With a certain time frame, from June 2008 to June 2009, the survey tries to capture the changes in the households' livelihood (employment) and the socioeconomic impact of the crisis on the households (food consumption, healthcare, and education patterns). The survey was conducted in five *kelurahan* in Kota Pekalongan that were assumed to have been affected by the GFC. Each *kelurahan* represents the core industries with indications of the GFC impact. According to Kota Pekalongan's Industry, Trade, Cooperatives, and SMEs Agency, the core industry in each *kelurahan* is as follows: batik, sarong, and other garments (Kelurahan Medono); batik (Kelurahan Tirto), batik (Kelurahan Pasirsari), batik (Kelurahan Krapyak Lor), and fishing and its products (Kelurahan Panjang Wetan).

Table 7. Poverty Situation in the Sample *Kelurahan* (%)

Poverty Situation	Medono	Tirto	Pasirsari	Krapyak Lor	Panjang Wetan
Total households (n)	3,178	2,326	2,066	2,606	3,207
Household head never attended or had not finished primary school	13.86	13.33	22.65	17.27	17.76
High dependency ratio (DR) ^a	6.23	4.94	5.86	7.64	5.89
Living in a house with dirt floor	2.71	5.55	8.13	3.65	5.52
Received the Health Insurance for the Poor	18.69	23.99	38.29	22.76	36.23
Recipient of the 2008 Unconditional Cash Transfer (BLT ^b 2008)	14.85	18.7	30.88	18.23	33.61
Recipient of Kota Pekalongan's House Renovation program	8.78	8.94	17.52	5.37	8.61

Source: Authors' calculation based on the 2009 CBMS Census data.

^aHouseholds with DR > 0.5. DR is the number of household members aged below 15 years old compared to the total number of household members.

^bBLT = Unconditional Cash Transfer.

Table 7 shows several poverty indicators and their status as the results of the 2009 CBMS Census. In general, Kelurahan Pasirsari exhibits the strongest indication of poverty among the five *kelurahan*. Kota Pekalongan's House Renovation program is a way to improve households' standard of living. The basic idea is that better living condition would result in better health status. The local government helped to renovate the households' houses with regard to the availability of toilets, protected water sources, and appropriate roofing and flooring.

With a lack of income or expenditure data, the Table 7 can only show the difference in poverty situation among the five *kelurahan* without being able to indicate the households' welfare status and identify the poor. We use the Principal Component Analysis (PCA) method to develop groups of households' welfare based on the variance of the households' socioeconomic background variables such as education, occupation, and ownership of assets.⁵ The variables used also include the poverty indicators shown in Table 7. The PCA was conducted in each *kelurahan*. Therefore, the household welfare is local specific to each *kelurahan*.

Table 8 shows the number of households from the merged data and the number of households after the PCA is applied. There are 10,111 households (75,55% of the total households) with complete variables that can be used for the PCA. The PCA ranks each household in each *kelurahan* and splits up a set of ranked data into quintiles (five groups). It produces households with the lowest rank, the lowest 20% of the total households per *kelurahan*, which are indicated as the poorest. Households with the highest rank, the highest 20% of the total households per *kelurahan*, are indicated as the richest.

⁵The PCA method develops an artificial index that can only be applied if the variables needed from each observation are complete.

Table 8. The Number of Households in the Sample *Kelurahan*

<i>Kelurahan</i>	Before the PCA		After the PCA	
	N	%	N	%
Medono	3,178	23.74	2,431	24.04
Tirto	2,326	17.38	1,803	17.83
Pasirsari	2,066	15.44	1,568	15.51
Krapyak Lor	2,606	19.47	1,931	19.11
Panjang Wetan	3,207	23.96	2,378	23.52
Total	13,383	100	10,111	100

Source: Authors' calculation based on the 2009 CBMS Census data.

From those five groups, we can analyze the location of the poorest based on their neighborhood unit.⁶ Table 9 shows that in *Kelurahan* Medono, the poorest are mostly located in RT 3 of RW 4, while in *Kelurahan* Panjang Wetan, most of the poorest live in RT 5 of RW 13.

Table 9. Location of the Poorest in Each *Kelurahan* by RW and RT

<i>Kelurahan</i>	The Poorest (the Lowest 10% of the Total Households)	RW with the Most Number of the Poorest in Each <i>Kelurahan</i>		RT with the Most Number of the Poorest	
	n	RW	N	RW, RT	N
Medono	486	RW 4	96	RW 4, RT 3	36
Tirto	360	RW 5	89	RW 5, RT 3	34
Pasirsari	313	RW 1	56	RW 1, RT 3	21
Krapyak Lor	386	RW 1	137	RW 1, RT 5	27
Panjang Wetan	475	RW 13	90	RW 13, RT 5	27

Source: Authors' calculation based on the 2009 CBMS Census data.

4.1 Impact of the Crises on Households

Aside from allowing us to locate the poorest group within each *kelurahan* by using PCA, the merged data also enabled us to identify households that experienced the compound crises. Job switching can indicate that quite a lot of households in the *kelurahan* work in the informal sector and hence are vulnerable to economic crisis. The impact of the crises could also have affected the income received by households since informal workers employed in the batik industry worked on less square meters of *mori* cloth to be painted with batik patterns and dipped in dye and contract laborers in the garment industry worked less hours. This was also partly because most of the household members switched to worse jobs.

⁶RT, or neighborhood unit, is the smallest unit of local administration consisting of a number of households. RW is a unit of local administration consisting of several RT within a *kelurahan*.

Table 10. Households with Members Switching to a Worse Job during June 2008–June 2009 by Household Welfare Quintile

<i>Kelurahan</i>	Quintile										Missing Values	Total n (100%)
	1		2		3		4		5			
	n	%	n	%	n	%	n	%	n	%		
Medono	30	33.71	16	17.98	17	19.10	7	7.87	5	5.62	14	89
Tirto	17	26.56	12	18.75	12	18.75	6	9.38	3	4.69	14	64
Pasirsari	6	13.95	10	23.26	9	20.93	4	9.30	5	11.63	9	43
Krapyak Lor	17	28.81	8	13.56	8	13.56	6	10.17	2	3.39	18	59
Panjang Wetan	48	34.78	24	17.39	13	9.42	12	8.70	4	2.90	37	138
Total	118	30.03	70	17.81	59	15.01	35	8.91	19	4.83	92	393

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

Table 10 shows the cross tabulation of households' welfare based on the PCA with 393 households (2.93% of 13,383 households) switching to a worse job than the previous one. Across all the *kelurahan*, 30.03% of the households that reported to have switched to a worse job during June 2008–June 2009 belong to the poorest quintile. The occurrences of missing values are due to the incomplete data of living conditions and assets used to develop the wealth index in the PCA process.

There were 601 households (4.49%) of the total households across all the *kelurahan* that experienced a declining income during June 2008–June 2009. Most of them are from the poorest group (Table 11). Both tables show that during June 2008–June 2009, the compound crises felt by the households had made them switch jobs and experience a decline in income. Households in the lowest quintile are the most affected group.

Table 11. Households with Declined Income during June 2008–June 2009 by Household Welfare Quintile

<i>Kelurahan</i>	Quintile										Missing Values	Total n (100%)
	1		2		3		4		5			
	n	%	n	%	n	%	n	%	n	%		
Medono	43	33.86	22	17.32	20	15.75	9	7.09	4	3.15	29	127
Tirto	30	31.91	18	19.15	13	13.83	7	7.45	5	5.32	21	94
Pasirsari	14	21.54	11	16.92	12	18.46	7	10.77	4	6.15	17	65
Krapyak Lor	20	26.32	15	19.74	14	18.42	6	7.89	3	3.95	18	76
Panjang Wetan	66	27.62	43	17.99	34	14.23	25	10.46	4	1.67	67	239
Total	173	28.79	109	18.14	93	15.47	54	8.99	20	3.33	152	601

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

By combining two subsets of households—one that switched jobs, particularly to the worse job, and another one with a declining income, we could determine the households that were affected by the crises. It resulted in a total of 326 affected households (2.44% of the total households).

Table 12. Characteristics of Affected Households Compared to Those of Non-affected Households

Indicator	Description	Number of Affected Households (A)	Percentage of A Compared to the Total Affected Households (N = 326)	Number of Non-affected Households (B)	Percentage of B Compared to the Total Non-affected Households (N = 13,057)
<i>Kelurahan</i>	Medono	68	20.86	3,110	23.82
	Tirto	51	15.64	2,275	17.42
	Pasirsari	32	9.82	2,034	15.58
	Krapyak Lor	48	14.72	2,558	19.59
	Panjang Wetan	127	38.96	3,080	23.59
Sex of household head	Male	289	88.65	11,207	85.83
	Female	37	11.35	1,850	14.17
Household head never attending or not finishing primary school	Yes	69	21.17	2,131	16.32
	No	257	78.83	10,926	83.68
Household head's working sector	Agriculture	23	7.06	748	5.73
	Industry	117	35.89	3,670	28.11
	Trade	25	7.67	1,258	9.63
	Services	96	29.45	5,581	42.74
	Receiving transfer	16	4.91	573	4.39
	Others	12	3.68	415	3.18
	<i>Missing values</i>	37	11.35	812	6.22
Quintile of households	Quintile 1	106	32.52	1,914	14.66
	Quintile 2	53	16.26	1,970	15.09
	Quintile 3	47	14.42	1,973	15.11
	Quintile 4	29	8.90	1,994	15.27
	Quintile 5	12	3.68	2,013	15.42
	<i>Missing values</i>	79	24.23	3,193	24.45
Dependency ratio of the household member aged < 15	DR <= 0.5	296	90.80	12,265	93.93
	DR > 0.5 (high)	30	9.20	792	6.07
Living in a house with dirt floor	Yes	38	11.66	617	4.73
	No	288	88.34	12,440	95.27
Receiving the Health Insurance for the Poor	Yes	137	42.02	3,561	27.27
	No	189	57.98	9,496	72.73
Receiving the 2008 Unconditional Cash Transfer (BLT 2008)	Yes	99	30.37	2,999	22.97
	No	227	69.63	10,058	77.03
Receiving the House Renovation program	Yes	55	16.87	1,210	9.27
	No	271	83.13	11,847	90.73

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

Table 12 shows that 21.17% of the affected households are households with a household head who never attended or did not finish primary school. This is higher than the proportion in the non-affected group (16.32%). About 35.89% of the household heads in the affected group work in the industrial sector. Based on the quintile, most of the affected households come from the poorest group (the first quintile). In the first quintile, the proportion of the affected households is higher than that of the non-affected households, 32.52% compared to 14.66%. The socioeconomic condition of the affected group is also reflected in the other indicators. The proportion of the affected households is higher in indicators such as living in a house with dirt floor, receiving the Health Insurance for the Poor, receiving the 2008 Unconditional Cash Transfer, and receiving the House Renovation program compared to that of the non-affected households.

4.2 Coping Mechanisms Adopted by Households

Since the most affected group is the poorest group, we will focus on the analysis of what the poorest households did to cope with the crises they experienced. Some indicators that were assumed to be the coping mechanisms that the households adopted include:

- a) changing the food consumption pattern,
- b) changing the healthcare payment method,
- c) selling or pawning assets,
- d) having household members aged below 15 work,
- e) having household members aged 15–18 work,
- f) discontinuing the schooling of household members aged 6–15, and
- g) transferring children from private school to government school.

a) Changing the food consumption pattern

During June 2008–June 2009, 8.47% of the total number of households (1,134 of 13,383 households) experienced a reduction in the quantity and quality of food consumption (Table 13). Of the 1,134 households, 81.83% reduced their meal frequency from three times per day to twice per day, while 16.14% had a meal frequency reduction from twice per day to once per day. Some households (0.88%) had smaller portions of meals consumed, while 1.15% of the households had to turn to less quality foods (Table 13).

Table 13. Changes in Frequency and Quality of Meals by Kelurahan

Kelurahan	Negative Changes in Food Consumption Pattern Made by Households				Total
	From 3x to 2x	From 2x to 1x	Reduced Quality of Food	Reduced Quantity of Food	
Medono	257 88.01%	28 9.59%	2 0.68%	5 1.71%	292 100%
Tirto	142 72.08%	41 20.81%	9 4.57%	5 2.54%	197 100%
Pasirsari	66 66.00%	34 34.00%	0 0%	0 0%	100 100%
Krapyak Lor	238 87.82%	31 11.44%	2 0.74%	0 0%	271 100%
Panjang Wetan	225 82.12%	50 17.88%	0 0%	0 0%	274 100%
Total	928	183	13	10	1,134
%	81.83%	16.14%	1.15%	0.88%	100%

Source: Authors' calculation based on the GFC Impact Survey data.

Out of 1,134 households, 115 households (35.28%) were affected, while 1,019 (7.80%) were non-affected households (Table 14). The majority of households changed their food consumption by reducing their meal frequency from three times to twice. This strategy was reported by 27.30% of the affected households and 6.43% of the non-affected households. The proportion of households reducing their frequency of meals from twice to once is higher in the affected households than in the non-affected households (7.36% compared to 1.22%).

Table 14. Households with Negative Changes in Food Consumption Pattern during June 2008–June 2009 by Affected and Non-affected Groups

Negative Changes in Food Consumption	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
From 3x to 2x	89	27.30	839	6.43
From 2x to 1x	24	7.36	159	1.22
Reduced Quality of Food	2	0.61	11	0.08
Reduced Quantity of Food	0	0	10	0.08
Total	115	35.28	1,019	7.80

Source: Authors' calculation based on the GFC Impact Survey data.

By combining the results of the survey and the household welfare results from the PCA (Table 15), it turns out that the highest number of households that made negative changes to their food consumption pattern is in the poorest quintile/group, i.e., comprising 314 households, or 27.69%. The number of households that made negative changes to their food consumption pattern due to the shocks decreases as their welfare increases. Selected changes

of reducing quantity of food—such as from a whole chicken to half of it—were made by the upper (3rd and 4th) quintiles, respectively about 20% (2 out of 10 households) and 40% (4 out of 10 households).

Table 15. Households with Negative Changes in Food Consumption Pattern during June 2008–June 2009 by Household Welfare Quintile

Negative Changes in Food Consumption Pattern	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
From 3x to 2x	251	27.05	158	17.03	121	13.04	85	9.16	58	6.25	928
From 2x to 1x	61	33.33	33	18.03	25	13.66	7	3.83	4	2.19	183
Reduced Quality of Food	1	7.69	3	23.08	2	15.38	3	23.08	3	23.08	13
Reduced Quantity of Food	1	10	1	10	2	20	4	40	0	0	10
Total	314	27.69	195	17.2	150	13.23	99	8.73	65	5.73	1,134

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

b) Changing the healthcare payment method

Between June 2008 and June 2009, there were 647 households (4.83% of the total households) that changed their healthcare pattern (Table 16). The highest number of households that changed their healthcare pattern is in Kelurahan Pasirsari. When this data is combined with the household welfare data based on the PCA, it does not give a clear pattern to determine whether the changes mean that the households' financial ability becomes less or not. It is possible that the changes in the access to healthcare occur because the households are forced to deal with a serious illness and hence change to advanced healthcare treatment. About 40% of 647 households across all the *kelurahan* that previously used the services of private midwives, private practices, and government hospitals had changed their preference and currently use the community health center (*puskesmas*) as their healthcare provider.

Table 16. The Number of Households Changing Healthcare Pattern and Payment Method

Kelurahan	Changes in Healthcare Pattern		Changes in Payment Method	
	n	%	n	%
Medono	156	24.11	66	17.98
Tirto	59	9.12	15	4.09
Pasirsari	196	30.29	139	37.87
Krapyak Lor	125	19.32	40	10.9
Panjang Wetan	111	17.16	107	29.16
Total	647	100	367	100

Source: Authors' calculation based on the GFC Impact Survey data.

Table 17. Household Changes in Healthcare Payment Method during June 2008–June 2009 by Affected and Non-affected Groups

Payment Method		Affected Households (N = 326)		Non-affected Households (N = 13,057)	
Past	Current	n	%	n	%
Personal pocket	Health insurance	3	0.92	30	0.23
	Health Insurance for the Poor	15	4.60	195	1.49
	Reimbursement from the company	0	0	11	0.08
	Loan	4	1.23	42	0.32
Health insurance	Personal pocket	0	0	13	0.10
	Health Insurance for the Poor	0	0	3	0.02
	Loan	0	0	2	0.02
Health Insurance for the Poor	Personal pocket	2	0.61	33	0.25
	Health insurance	0	0	1	0.01
	Loan	0	0	2	0.02
Reimbursement from the company	Personal pocket	1	0.31	5	0.04
	Health Insurance for the Poor	0	0	1	0.01
Loan	Personal pocket	0	0	4	0.03
Total		25	7.67	342	2.62

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

Moreover, 367 of 13,383 households (2.74%) experienced a change in the payment for healthcare services, while others did not. Twenty-five out of 367 households (6.81%) are from the affected households (Table 17). The percentage of non-affected households is about 93.19% (342 out of 367 households).

The negative changes that households made to cope with the crises were concentrated in the change of payment method from using their personal fund to using the Health Insurance for the Poor, which existed in both categories, the affected households (4.60%) and non-affected households (1.49%). The incidence of this change in the affected households was slightly higher. The change of payment method from using personal fund to obtaining a loan (borrowing money) was the second most selected change by the affected households (1.23%) and non-affected households (0.32%).

Table 18 shows that 66 of 367 households (18%) across all the *kelurahan* that made some changes in the payment of healthcare during June 2008–June 2009 are from the poorest group. For starters, these households reduced their health expenses by using the Health Insurance for the Poor. They also borrowed money when it was not enough or when they were not eligible to receive the health insurance. The proportion of households changing their healthcare payment from using personal fund to obtaining a loan is 19.6% (9 out of 46 households) in the 3rd quintile, the highest percentage among all the quintiles. The fact that households in the highest quintile had access to the Health Insurance for the Poor indicates an inclusion error of the social protection program.

Table 18. Household Changes in Healthcare Payment Method during June 2008–June 2009 by Household Welfare Quintile

Payment Method		Quintile										Total
Past	Current	1		2		3		4		5		
		n	%	n	%	n	%	n	%	n	%	
Personal pocket	Health insurance	3	9.1	3	9.1	5	15.2	2	6.1	9	27.3	33
	Health Insurance for the Poor	49	23.3	38	18.1	37	17.6	25	11.9	5	2.4	210
	Reimbursement from the Company	0	0	0	0	2	18.2	3	27.3	5	45.5	11
	Loan	7	15.2	7	15.2	9	19.6	4	8.7	2	4.3	46
Health insurance	Personal pocket	0	0	2	15.4	3	23.1	3	23.1	2	15.4	13
	Health Insurance for the Poor	0	0	1	33.3	0	0	1	33.3	0	0	3
	Loan	0	0	0	0	0	0	0	0	0	0	2
Health Insurance for the Poor	Personal pocket	4	11.4	7	20	5	14.3	7	20.0	1	2.9	35
	Health insurance	1	100	0	0	0	0	0	0	0	0	1
	Loan	1	50	0	0	1	50	0	0	0	0	2
Reimbursement from the company	Personal pocket	0	0	0	0	1	16.7	1	16.7	2	33.3	6
	Health Insurance for the Poor	0	0	0	0	0	0	0	0	1	100	1
Loan	Personal pocket	1	25	1	25	2	50	0	0	0	0	4
Total		66	18	59	16.1	65	17.7	46	12.5	27	7.4	367

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

Positive changes in healthcare payment are shown by the incidences of using health insurance and reimbursement facility from the company during the current period. However, the proportion of these changes is the highest in the 5th quintile, respectively 27.3% (9 of 33 households) and 45.5% (5 of 11 households).

c) Pawning or selling assets

During June 2008–June 2009, 1,599 households (11.94% of 13,383 households) sold or pawned their assets (livestock, motorcycle, land, poultry, etc.). There were 144 (out of 326) affected households, or 0.44%, that adopted this coping strategy, while 1,455 (out of 13,057) non-affected households, or 11.14%, did the same thing.

The reasons for pawning or selling assets are categorized based on the sample households' statements. We have divided them into general/unspecified reasons and specific reasons. The general/unspecified reasons include the following: earning an inadequate salary, not having money, meeting an urgent need, not wanting to borrow money from others, and having no idea what another household member had used the money obtained from pawning or selling an asset for. The specific reasons for pawning or selling an asset include to meet the household's daily needs, to pay the children's school fee, to pay the family's debt, etc.

Table 19. Households Pawning or Selling Their Assets during June 2008–June 2009 by Affected and Non-affected Groups

Reason for Pawning or Selling an Asset	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
To meet a daily need	66	0.20	575	4.40
To pay the school fee	14	0.04	111	0.85
To pay a debt	10	0.03	72	0.55
To pay a health expense	5	0.02	62	0.47
To obtain business capital	2	0.01	59	0.45
To get a job	2	0.01	22	0.17
To meet daily and school needs	1	0.003	22	0.17
To renovate the house	0	0	14	0.11
To meet a daily need & obtain business capital	0	0	10	0.08
To celebrate a family occasion	0	0	7	0.05
To meet a secondary need	0	0	5	0.04
To pay a debt & school needs	1	0.003	3	0.02
To pay a debt & meet a daily need	1	0.003	2	0.02
To meet a school need & obtain business capital	1	0.003	2	0.02
Earning an inadequate salary	1	0.003	13	0.10
Not having money	7	0.02	72	0.55
Meeting an urgent need	1	0.00	85	0.65
Not wanting to borrow money from others	1	0.003	1	0.01
Others	0	0	12	0.09
No idea	31	0.10	306	2.34
Total	144	0.44	1,455	11.14

Source: Authors' calculation based on the GFC Impact Survey data.

The percentage of households that used money from pawning or selling assets to fulfill daily needs is high in both groups. However, the proportion is higher for the non-affected households, 4.40%, compared to 0.20% for the affected households (Table 19). The affected households also adopted this coping strategy to pay their children's school expenses and their debts. Some reasons for pawning or selling assets such as to renovate their house, to celebrate a family occasion, and to meet a secondary need were revealed by the non-affected households.

A cross tabulation of reasons for pawning or selling assets and households' welfare gives an explanation about which groups make use of pawning or selling assets as their coping mechanism. Although the majority of the households come from the first quintile or the poorest group (22.89%), it appears across quintiles (Table 20). Several reasons such as to fulfill daily needs, to pay the children's school expenses, to pay a debt, and to pay health expenses emerged among the poorest households. Households in the fourth and fifth quintiles admitted that they pawned or sold their assets to increase their business capital, respectively 31.15% and 22.95%. Another reason for pawning or selling assets was to get a job. Possibilities of why this reason occurred include to win a competition for a job position in a private or public institution or to buy off an official to get an overseas worker's license. However, there is no further explanation for this kind of reason.

Table 20. Households Pawning or Selling Their Assets during June 2008–June 2009 by Household Welfare Quintile

Reason for Pawning or Selling an Asset	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
To meet a daily need	191	29.80	131	20.44	105	16.38	62	9.67	23	3.59	641
To pay the school fee	25	20	23	18.4	25	20	22	17.6	9	7.2	125
To pay a debt	19	23.17	12	14.63	10	12.20	13	15.85	8	9.76	82
To pay a health expense	14	20.90	9	13.43	9	13.43	9	13.43	9	13.43	67
To obtain business capital	2	3.28	8	13.11	7	11.48	19	31.15	14	22.95	61
To get a job	8	33.33	7	29.17	0	0	2	8.33	1	4.17	24
To meet daily and school needs	8	34.78	2	8.70	4	17.39	4	17.39	0	0	23
To renovate the house	2	14.29	4	28.57	1	7.14	2	14.29	4	28.57	14
To meet a daily need & obtain business capital	0	0	5	50	1	10	1	10	1	10	10
To celebrate a family occasion	1	14.29	1	14.29	2	28.57	1	14.29	0	0	7
To meet a secondary need	0	0	0	0	1	20	2	40	1	20	5
To pay a debt & school needs	1	25	1	25	0	0	2	50	0	0	4
To pay a debt & meet a daily need	1	33.33	0	0	0	0	1	33.33	1	33.33	3
To meet a school need & obtain business capital	0	0	0	0	1	33.33	0	0	1	33.33	3
Earning an inadequate salary	1	7.14	4	28.57	4	28.57	0	0	1	7.14	14
Not having money	11	13.92	19	24.05	19	24.05	9	11.39	6	7.59	79
Meeting an urgent need	10	11.63	11	12.79	15	17.44	19	22.09	12	13.95	86
Not wanting to borrow money from others	1	50	0	0	0	0	0	0	0	0	2
Others	0	0	0	0	4	33.33	5	41.67	1	8.33	12
No idea	71	21.07	70	20.77	47	13.95	37	10.98	35	10.39	337
Total	366	22.89	307	19.20	255	15.95	210	13.13	127	7.94	1599

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

d) Having household members aged below 15 work

For a definite analysis, the merged data from the 2009 CBMS Census and the GFC Impact Survey is also used as a cross-checking condition. We also use minimum age to limit the analysis. The minimum age recorded for child labor according to Statistics Indonesia is 10 years old. Based on the survey, there were 467 households with household members below 15 who started working. By applying the minimum age of 10 to the household data, there were 234 households that genuinely had household members aged 10–14 and started working.

The households with children aged 10–14 that started working come from both the affected households and the non-affected households, respectively 14 households, or 4.29% of the total affected households and 220 households, or 1.68% of the total non-affected households (Table 21). The proportion of households with two children that started working is slightly higher in the affected households than in the non-affected households, 0.92% compared to 0.27%.

Table 21. Households with Children Aged 10–14 Years Old That Started Working during June 2008–June 2009 by Affected and Non-affected Groups

The Number of Children Aged 10–14 Years Old in a Household That Started Working	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
1	11	3.37	183	1.40
2	3	0.92	35	0.27
3	0	0	2	0.02
Total	14	4.29	220	1.68

Source: Authors' calculation based on the GFC Impact Survey data.

Table 22 shows the combination between the 234 households and the household welfare based on the PCA. Once more, the majority of the households with at least one child that started working belong to the poorest quintile (68 out of 234 households, or 29.06%). The proportion of households with at least one child that started working decreases as their welfare increases.

Table 22. Households with Children Aged 10–14 Years Old That Started Working during June 2008–June 2009 by Household Welfare Quintile

The Number of Children Aged 10–14 Years Old That Started Working	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
1	56	28.87	45	23.20	30	15.46	22	11.34	3	1.55	194
2	12	31.58	10	26.32	5	13.16	3	7.89	0	0	38
3	0	0	0	0	1	50	1	50	0	0	2
Total	68	29.06	55	23.50	36	15.38	26	11.11	3	1.28	234

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

e) Having household members aged 15–18 work

Between June 2008 and June 2009, there were more household members aged 15–18 that started working than those aged below 15. Based on the 2009 CBMS Census, a total of 677 households had household members aged 15–18 that had started working. Twenty-five households (7.67%) were from the affected households, which means that as households faced a decline in income during the crises, they needed assistance from younger household members to generate income or help the parents in generating income (Table 23). The proportion of households with one child aged 15–18 years old that started working is quite high in the affected group, 6.13% compared to 3.96% in the non-affected group.

Table 23. Households with Children Aged 15–18 Years Old That Started Working during June 2008–June 2009 by Affected and Non-affected Groups

The Number of Children Aged 15–18 Years Old in a Household That Started Working	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
1	20	6.13	517	3.96
2	5	1.53	117	0.90
3	0	0	18	0.14
Total	25	7.67	652	4.99

Source: Authors' calculation based on the GFC Impact Survey data.

Table 24 shows that 181 of 677 households (26.74%) with children aged 15–18 years old that started working come from the poorest group. On average, households in the bottom three quintiles, middle to poor, suffered more difficulties due to the compound crises that forced their children aged 15–18 years old to work since their number is higher than what the two upper quintiles recorded.

Table 24. Households with Children Aged 15–18 Years Old That Started Working during June 2008–June 2009 by Household Welfare Quintile

The Number of Children Aged 15–18 Years Old That Started Working	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
1	138	25.70	118	21.97	95	17.69	44	8.19	11	2.05	537
2	39	31.97	34	27.87	17	13.93	12	9.84	1	0.82	122
3	4	22.22	5	27.78	4	22.22	2	11.11	0	0	18
Total	181	26.74	157	23.19	116	17.13	58	8.57	12	1.77	677

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

f) Discontinuing the schooling of household members aged 6–15

During the crisis period, June 2008–June 2009, there was an indication of households discontinuing their children's education. They did this to cope with the crises as their financial ability had decreased. There were 121 households with children aged 6–15 years old that dropped out of school (Table 25). Ten households (3.07%) were from the affected group, while the 111 households (0.85%) were from the non-affected group. The proportion of households with dropout children at the junior high school level was slightly higher in the affected group than in the non-affected group, 1.23% compared to 0.31%. There were 5 out of 69 households from the non-affected group that showed an indication of having more than one child that dropped out of school. These households had children that dropped out of primary and junior high schools.

Table 25. Households with Dropout Children Aged 6–15 Years Old during June 2008–June 2009 by Affected and Non-affected Groups

Education Level of Dropout Children	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
Primary school	6	1.84	69	0.53
Junior high school	4	1.23	41	0.31
Senior high school	0	0	1	0.01
Total	10	3.07	111	0.85

Source: Authors' calculation based on the GFC Impact Survey data.

The highest proportion of households with children that dropped out of primary school is in the first quintile, i.e., 28 out of 75 households (37.33%) (Table 26). There is one household in the second quintile with a child aged 6–15 years old that dropped out of senior high school. Considering the age range (6–15), it is possible that the child dropped out in the first year of senior high school. There is no household in the fifth quintile that discontinues their child's education, as their welfare level is the highest among all the quintiles.

Table 26. Households with Dropout Children Aged 6–15 Years during June 2008–June 2009 by Household Welfare Quintile

Education Level of Dropout Children	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
Primary school	28	37.33	15	20	8	10.67	4	5.33	0	0	75
Junior high school	14	31.11	9	20	4	8.89	6	13.33	0	0	45
Senior high school	0	0	1	100	0	0	0	0	0	0	1
Total	42	34.71	25	20.66	12	9.92	10	8.26	0	0	121

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

g) Transferring children from private school to government school

Another coping mechanism which we assumed that households would adopt when dealing with the crisis was transferring their children from private school to government school due to the fact that the school fees in government schools (primary and junior schools) are subsidized. There is no difference in the proportion of households with children withdrawn from private school and transferred to government school in the affected and non-affected household groups, both with the proportion of 0.31% (Table 27).

Table 27. Households with Children Aged 6–15 Years Old Transferred from Private to Government School during June 2008–June 2009 by Affected and Non-affected Groups

Was There a Child Aged 6–15 Years Old in the Household That Was Transferred from Private to Government School?	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
Yes	1	0.31	40	0.31
No	325	99.69	13,017	99.69
Total	326	100	13,057	100

Source: Authors' calculation based on the GFC Impact Survey data.

Adding to the analysis based on household quintile, it shows that the majority of the households that transferred their children from private to government schools come from the two upper quintiles (Table 28). This instrument is a weak indicator since there are other possible reasons for the withdrawal of children from the private school, for example, the failure of the children in achieving good grades in the school, which could not be explored through the survey's instruments.

Table 28. Households with Children Aged 6–15 Years Old Transferred from Private to Government School during June 2008–June 2009 by Household Welfare Quintile

Quintile	Households with Children Aged 6–15 Years Old That Were Transferred from Private to Government School	
	n	%
1	5	12.20
2	7	17.07
3	6	14.63
4	10	24.39
5	10	24.39
<i>Missing Values</i>	3	7.32
Total	41	100

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

V. POLICY RESPONSE TO THE GFC IMPACT

As a response to the economic downturn that occurred in the fourth quarter of 2008 due to the GFC's impact, the GoI proposed to the parliament for the approval of the Fiscal Stimulus Package (FSP). The FSP aimed to (i) maintain the people's purchasing power, (ii) maintain the stability of the business climate, and (iii) create job opportunities and absorb laid-off laborers.

To fulfill the first objective, the GoI provided incentives such as reducing individual income tax, increasing the minimum limit of non-taxable income, and giving various subsidies. For the second objective, the GoI gave the business sector tax incentives as well as various subsidies.

The third objective was accomplished through allocating the FSP fund for labor-intensive projects in infrastructure and the extension of the National Program for Community Empowerment (PNPM).

The GoI allocated Rp73.3 trillion for the FSP fund, which is about 1.4% of the 2009 GDP. The FSP fund was allocated to all provinces across Indonesia, but only several districts/cities in each province received the fund. The usage of this fund was determined by the GoI whether it was supposed to be used for building new infrastructure or restoring the existing infrastructure.

According to Hastuti et al. (2011), the FSP fund was not allocated based on affected area, as the data on the GFC's impact across regions was not available. Therefore, it was allocated based on deprived area, economic zone, political decision, etc. Although the project was aimed to absorb laid-off laborers, there were no practices of or regulations about using laid-off local laborers.

Kota Pekalongan received about Rp1.933 billion of FSP fund sourced from the national budget through the Deconcentration and Co-administration Fund allocation mechanism at the district/city level. However, there is no further information about the use of the FSP fund in Kota Pekalongan.

Based on the GFC Impact Survey, the observed time frame of the GFC's impact on households was from June 2008–June 2009, while the utilization of the FSP fund started from the beginning of August 2009 (Hastuti et al., 2011). Therefore, the survey was unable to capture the results of the GoI's mitigation strategy as a response to the GFC impact. Since the mitigation strategy was not targeted to recipients such as the batik home industry and the fishing industry, it is difficult to observe the outcome.

Still according to the GFC Impact Survey data, 2,161 households stated that they had been the recipients of several special aid programs in relation to the global financial crisis. The data also provides information about the source of the aid, i.e., the government, private and religious institutions, and mass organizations. The analysis will be focused on the aid programs implemented by the government, regardless of whether they come from the central government or Kota Pekalongan itself (Table 29).

Table 29 shows that 310 households had received capital loan and 598 households received capital goods from the government. However, the data does not say whether the capital loan and goods received by the households had come from the government in the specific form of PNPM or not.

Table 29. Households That Are Recipients of Government-Sponsored Special Aid Programs

Form of Aid	Medono	Tirto	Pasirsari	Krapyak Lor	Panjang Wetan	Total
Capital loan	32 14.10	109 27.59	19 8.72	22 6.49	128 13.03	310 14.35
Capital goods	30 13.22	80 20.25	62 28.44	33 9.73	393 40.02	598 27.67
Others	157 69.16	191 48.35	135 61.93	280 82.60	457 46.54	1,220 56.46
Do not know	8 3.52	15 3.80	2 0.92	4 1.18	4 0.41	33 1.53
Total	227 100	395 100	218 100	339 100	982 100	2,161 100

Source: Authors' calculation based on the GFC Impact Survey data.

Besides responding specifically to the GFC impact, the GoI also spent about Rp200,000 times 18.2 million poor households across Indonesia in the form of Unconditional Cash Transfer 2009 (BLT 2009) funds. The targeted households in 2009 were the same as those that received BLT 2008 funds since the database used was the same, the PPLS08.⁷ According to a local newspaper, Suara Pantura (2009), there were 22,983 households in Kota Pekalongan that received BLT 2009 funds. The distribution of the funds in the city was conducted on 20–27 April 2009.

The 2009 CBMS Census did not include a question that could determine which households received BLT 2009 funds. However, the GFC Impact Survey was able to capture the information about the households that received BLT funds during June 2008–June 2009. The 'Others' category of special aids in Table 29 reveals that 1,220 households were the recipients of BLT 2009, Rice for the Poor (Raskin), Health Insurance for the Poor (Jamkesmas), School Operational Assistance (BOS), and the House Renovation program.

Table 30. Households Receiving the Unconditional Cash Transfer during June 2008–June 2009 by Affected and Non-affected Groups

Kelurahan	Affected Households (N = 326)		Non-affected Households (N = 13,057)	
	n	%	n	%
Krapyak Lor	1	0.31	131	1.00
Medono	3	0.92	113	0.87
Panjang Wetan	21	6.44	261	2.00
Pasirsari	4	1.23	119	0.91
Tirto	7	2.15	146	1.12
Total	36	11.04	770	5.90

Source: Authors' calculation based on the GFC Impact Survey data.

⁷PPLS08 is a database of targeted households for the GoI's social protection programs. The data was collected by Statistics Indonesia through a survey called Pendataan Program Perlindungan Sosial 2008, or the 2008 Data Collection for Social Protection Programs.

There are 806 households who admitted that they had received BLT 2009 funds (Table 30). These households comprise 36 households of the total affected households, or 11.04%, and 770 households of the total non-affected households, or 5.90%. The majority of the affected households that received BLT 2009 funds lived in Kelurahan Panjang Wetan.

A cross tabulation between households receiving BLT 2009 funds and the household welfare from the PCA method results in a description of the recipients (Table 31). The poorest group has the highest number of households which received BLT 2009 funds, 229 households out of the total 806 households (28.41%). The fact that households in the highest quintile received BLT 2009 funds indicates an inclusion error of the social protection program or incorrectness in the PCA process.

Table 31. Households Receiving the Unconditional Cash Transfer during June 2008–June 2009 by Household Welfare Quintile

Kelurahan	Quintile										Total
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
Krapyak Lor	36	27.27	33	25.00	11	8.33	1	0.76	0	0	132
Medono	35	30.17	25	21.55	12	10.34	0	0	1	0.86	116
Panjang Wetan	71	25.18	46	16.31	39	13.83	28	9.93	0	0	282
Pasirsari	33	26.83	14	11.38	17	13.82	9	7.32	1	0.81	123
Tirto	54	35.29	25	16.34	17	11.11	3	1.96	0	0	153
Total	229	28.41	143	17.74	96	11.91	41	5.09	2	0.25	806

Source: Authors' calculation based on the data from the 2009 CBMS Census and the GFC Impact Survey.

VI. CONCLUSION

Through this study, we sought to ascertain the indication of the GFC's impact in Kota Pekalongan at the macro- and microeconomic levels. The two main economic sectors in Kota Pekalongan were affected by the GFC's impact. The textile/batik industries were affected through their weakened export demands and the increasing price of the imported cotton. The fishing industry was also affected by the weakened export demands. During the period of the GFC, other crises took place in the local setting such as the closing of a garment factory due to mismanagement and family conflict, the intense rivalry with another competitor in the batik industry, and the closing of the local fishers' trading place. However, there was no indication of the GFC's impact in the return of Kota Pekalongan's overseas workers who mostly work as domestic workers. These shocks had accumulated and were difficult to be set apart at the micro level, which resulted in compound crises experienced by the households.

This study represents the first attempt to use the merged data of the 2009 CBMS Census and the GFC Impact Survey in five *kelurahan* in Kota Pekalongan. It gives more information needed for identifying the affected groups of households, particularly when the PCA method has been applied to the data.

The 326 affected households were identified through incidences of household members switching jobs, particularly to a worse job, and the decline in income during June 2008–June 2009. Based on household characteristics, the affected households are households with a head of household that never attended or did not finish primary school, works in the industrial sector, comes from the poorest group (the first quintile), lives in a house with dirt floor, and has received several social protection programs from the government. Based on the quintile, it appears that the poorest group, or the lowest quintile, has the highest number of affected households.

In regard to the crises, the households utilized several coping strategies, such as changing their food consumption pattern, changing their healthcare payment method, pawning or selling their assets, and driving their children to enter the labor force and thus to drop out of school. Once again, the majority of the households employing these strategies come from the poorest group.

The GoI needs to have a good database of targeted households, as the social protection programs have proven to have eased the poor households in times of crisis. These households used the Health Insurance for the Poor and BLT 2009 programs as their safety nets when they do not have any other financial assistance. An early response system requires a good database that can support immediate actions from the government in handling any crisis. Infrastructure projects from the FSP fund are less likely to reach the targeted households since there is no regulation that prioritizes the poor. The government's awareness on vulnerable economic sectors, on which many households rely, is also important, besides the importance of performing a preventive action in the form of giving incentives to industries in times of crisis. The local governments should initiate the provision of databases of vulnerable economic sectors and targeted households at their own cost, such as Kota Pekalongan's household data collected through the CBMS project conducted in the city.

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