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Once the bubble bursts: An overview on the comparison of the Asian economic crisis and the global financial crisis

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The Asian economic crisis and the global financial crisis had similar roots, which, in both cases, caused widespread instability. Given that recessions associated with financial crises are longer in duration and impose a higher cost on society, solutions to overcoming these two recessions are particularly important from a practical and academic standpoint. This study shows through factor analysis that there is one latent underlying factor that connects the variables associated with these recessions: gross domestic product (GDP) growth, unemployment, inflation and government borrowing (or lending). This study recommends how fiscal policy can be used to stimulate these variables simultaneously in order to help economies tackle recessions and their after-effects. While conservative economists are opposed to government action in tackling recessions, the solutions provided in this study veer on the side of the Keynesians in overcoming the underlying factor which has arguably the greatest impact of these recessions - unemployment.

Key words: Recession, unemployment, Asian economic crisis, global financial crisis.

INTRODUCTION

The Asian crisis of 1997 to 1998, and the recent global financial crisis have their similarities and their differences. Both stemmed from weaknesses in the financial system. While the Asian crisis was related mostly to real estate, stock price and currency inflations, the recent crisis was related to high-risk mortgages: institutions lending to those with poor credit. In both cases, the bubble of overheated economies burst. The challenges of the Asian crisis were not easy to overcome, and the effects of the global crisis still fester on. This study seeks to recommend solutions for the recent global crisis and, where appropriate, apply lessons learned from the Asian crisis that took place almost two decades ago. The

methodology used is the maximum likelihood estimation method. The study begins by discussing recessions that result from financial crises, how they are caused and the policy options to overcome them.

LITERATURE REVIEW

Mankiw (2011) defines a recession as two quarters of declining growth and is characterized by a fall in real gross domestic product (GDP) (lower national income and lower national output), rising unemployment, rising government borrowing (due to lower income tax and

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corporation tax revenues, and higher government spending on unemployment benefits) and a drop in inflation through reduced demand and wage inflation.

Terrones et al. (2009) annotate that a recession is associated with a financial crisis if the recession starts around the same time of the crisis. They are longer and impose a heavier cost than other recessions. Recovery is weak and recovery time to peak activity level prior to the recession is just as long as the recession itself. Countercyclical policies have worked well in ending recessions and strengthening recoveries. Fiscal policy, in particular, is most suited to tackling the effects of recessions associated with financial crises except for economies that have high levels of public debt. The role of fiscal policy is to counter recessions via government taxation and government spending in order to help:

1. Stabilize swings of a business cycle, and
2. Maintain employment levels while keeping inflation or deflation under control.

Reus (2009) and Gruevski et al. (2013) discuss two schools of thought in tackling a recession with fiscal policy: the Keynesians and the classicists. From an economic theory perspective, a recession is the result of insufficient total demand for goods and services. It takes place when saving (or a demand leakage) exceeds investment (a demand injection). When there is not enough demand to buy all the goods and services that the economy is capable of producing at the full employment level, firms will reduce output. This results in reduced number of supply orders and eventually job losses and perhaps even shutting down of production facilities.

Keynesians recommend either tax cuts or increased government spending to stimulate total demand, and therefore total output and employment. Both policies will result in an increase in spending by either the government or the recipients of the tax cuts which in turn, will raise the GDP level more than the original increase in government spending or reduction in taxes. Conservative economists hold the view that an increase in government spending will come at the expense of private spending since it will be financed by either higher taxes or increased government borrowing.

Tax increases will reduce individuals' spending by reducing their after-tax incomes. If government spending is financed through borrowing, the increased government demand for loans will drive up interest rates which will negatively impact private investment.

Therefore, government intervention is incapable of and unnecessary for pulling the economy out of a recession. On the other hand, the surplus of loanable funds will result in interest rates falling. Since the return on saving is lower, people will save less and borrow more and invest more due to the lower cost of borrowing until the injection of investment and the leakage of saving are equal.

In summary, a recession caused due to insufficient demand will result in the economy correcting itself to full employment without any need for government intervention.

METHODOLOGY

A factor analysis was used to determine the patterns of relationships among the aforementioned factors: real GDP, unemployment, government borrowing and inflation. The data studied contains information for 105 countries or $105 * 4 = 420$ pieces of information for 2009, a year after the global recession began. Factor analysis was used to delineate the patterns of variation among these measures. A one factor model was estimated by maximum likelihood. This model fit well, $\chi^2(2)=1.78$, $p=.41$, Tucker-Lewis reliability=1.0 (Table 1).

The output below shows the percentage of variance shared with the single common factor. These four variables have a canonical correlation of 0.656 with the factor. GDP growth accounts for 23.6% of the variation, unemployment for 57.6% of the variation, inflation for only 1.7% of the variation and government lending-borrowing for 18.7% of the variation. The null hypothesis is that none of the measures are correlated. A subsequent goodness of fit test results in the null hypothesis being rejected on the basis that there is one latent underlying factor that connects these measures.

Based on this analysis, this study seeks to find this one factor or policy trigger that will impact these variables positively, that is, higher GDP growth, reduced unemployment, reduced inflation, and reduced government borrowing. While monetary policy has been limited in its effectiveness in battling these recessions, policy tools used by governments of affected countries suggests that fiscal policy is the appropriate instrument.

THE ASIAN AND GLOBAL CRISES - CAUSES

The causes of the crises can be classified into reckless investments, currency devaluations and loose lending.

Speculative investments

In most countries around the world, government guarantees on bank deposits are standard practice but not without strings attached. These include meeting capital requirements (by the banks themselves), making prudent investments etc. Kawai (1998) and Sinnakkannu and Nassir (2008) attribute the cause of the Asian crisis to the banks taking on too much risk. Too many people seemed to have been granted privileges, without responsibility, thereby imposing risk to the banks. Bank loans, for example, were used to finance highly speculative real estate ventures and rather overambitious corporate expansions. The 'bubble' continued to grow with an increase in foreign investments into these countries by investors who knew nothing about these countries except that they were thriving. This created a boom in real estate and in the stock markets which made the balance sheets of banks look rosier than they were. Soon, the inevitable took place.

Krugman (1998) and Liang and Willett (2008) recount

Table 1. Maximum likelihood factor analysis of the correlation matrix.

Unrotated factor loadings and communalities		
Variable	Factor1	Communality
GDP Growth	0.485	0.236
Unemployment	-0.759	0.576
Inflation	0.129	0.017
Lending/ Borrowing	0.432	0.187
Variance	1.0153	1.0153
% Var	0.254	0.254
Factor score coefficients		
Variable factor1		
GDP Growth	0.218	-
Unemployment	-0.615	-
Inflation	0.045	-
Lending/ Borrowing	0.182	-

that when investors began to question when the bubble would burst it did and this triggered the crisis as speculative bubbles are vulnerable to self-fulfilling pessimism. Asia was caught in a downward spiral as asset prices plunged when wary investors began pulling their money out of the financial systems. The pace of this only increased when doubts were raised whether governments would really stand behind the deposits and loans that remained. The rapid departure of foreign investors led to currency devaluations with banks and companies finding themselves with assets in devalued local currencies but with liabilities in dollars.

Currency devaluations

Also responsible for the Asian crisis were exchange rate policies. Lee (1998) and Chang et al. (1999) attribute this to poor policy decision-making by the responsible governments who maintained fixed exchange rates (or changed them at very predictable rates) and gave no indication that these policies would change in the future. This resulted in short-term capital inflows because investors perceived little likelihood of a loss from exchange rate movements. The real exchange rate (measured as a ratio of tradable goods to non-tradable goods) began to gradually appreciate because the prices of tradable goods and services were generally stable while the prices of non-tradable goods and services (especially construction and property) rose with the investment boom. Studies showed various degrees of over-evaluation with some studies estimated this to be as much as 20% in Thailand, Indonesia, Malaysia, and the Philippines, and about 10% in Korea.

Baig and Goldfain (1999) and Radelet and Sachs (1999) stipulate that as is usually the case with pegged

exchange rate mechanisms, governments were running out of foreign exchange reserves in an effort to defend the value of their currencies that were increasingly judged by the markets to be unsustainable.

As a result of this, vulnerability to financial panic increased and the impact was quite evident. Pegged exchange rates in the crisis-hit countries posed a number of problems. First, they created over-confidence on the part of investors. They became complacent in acknowledging exchange risks because they believed that nominal exchange rates would be pegged long enough to allow them to exit Asian markets without any damage done. Second, they allowed and accepted growing overvaluation, in real terms. This resulted in exporters being squeezed and too much investment spending being drawn into the non-tradables sectors. Third, they set the stage for financial panic. This is because Asian governments committed publicly to use foreign exchange reserves to defend the currency even after the rate was regarded as overvalued. This forced governments to deplete their foreign reserves in an unsuccessful defense of the currency. They then had to go back on their commitment and abandon the currency defense once the foreign exchange reserves were depleted.

Loose lending

In the case of the recent global financial crisis, the causes were generally rooted in poor lending decisions. Crouchy et al. (2008) and Sabry and Okongwu (2008) suggest that in the U.S. and Europe when bad mortgages ended up as toxic assets, securitizers lowered the credit quality of the mortgages they rated. Credit agencies erroneously rated these as safe investments. Buyers, on

the other hand, failed to conduct their own due diligence relying only on these ratings. As a result, financial institutions amassed a large number of correlated risky assets which they backed up with insufficient capital. To make matters worse, they funded these exposures with short-term debt assuming such funds would always be available.

All this boiled over in September, 2008 when a series of failures, mergers, and restructurings caused financial panic and shock within the system. Thomas et al. (2011) discuss this further:

“These risks within highly leveraged, short-funded financial firms with concentrated exposure to a collapsing asset class led to a cascade of firm failures. The losses spread in two ways. Some firms had large counter-party credit risk exposures, and the sudden and disorderly failure of one firm risked triggering losses elsewhere. We call this the risk of contagion. In other cases, the problem was a common shock. A number of firms had made similar bad bets on housing, and thus, unconnected firms failed for the same reason and at roughly the same time.”

The health of financial firms came under scrutiny and confidence in them declined. This caused the real economy to contract and so began the recession. A study by Brown and Lundblad (2009) confirm these findings. Elliott (2011) and Pajarskasz and Jociene (2014) describe what followed:

When major financial institutions began to fail, they were assisted by their governments as was the case with Bear Stearns in the U.S. and Northern Rock in the U.K. The thought of a domino effect through the global financial system become an issue that governments began to take seriously. They began injecting vast sums of capital into their domestic banks to prevent them from collapsing as was the case with the American government purchasing billions of dollars' worth of Citigroup stock. These events dispelled the notion that all banks were 'too big to fail' and gave rise to the fear that every bank was deemed to be risky. Rescue efforts took a different course when Lehman Brothers went bankrupt and the government made a decision not to bail it out citing moral hazard. Even with a number of financial institutions being bailed out, it did not prevent the global economy from falling into a recession.

The result of the crises was a steep decline in the economic health of the affected countries. In the case of Asia, Valencia (1997), Wang (2000) and Pilbeam (2001) assess that the collapse of asset values depressed consumer demand. Low stock prices and high interest rates also were contributing factors. The impact was a substantial shrinking of the market capitalization of the region's stock markets, currency depreciation of the region's affected currencies, decline in GDP growth, a

plunge in stock market values and asset depreciation. Economies that fell victim to the recent global crisis experienced similar symptoms.

Friedland (2009) and Adelson (2013) detail how interest rates were cut and stimulus packages were offered to the private sector in order to stimulate the economy. The purpose of these was fiscal expansion, to address employment and reform banks. According to one report, as the crisis deepened, the issue was no longer just the solvency of banks but also the solvency of governments. Budget deficits had ballooned during this time due to lower tax receipts and higher non-discretionary welfare spending. Fiscal packages announced as a result of the recession hit governments equally hard. Austerity became the new watchword. Consequently, debt ratings began to tumble. The rating agency, S&P, reduced America's debt rating from top-notch triple A. Several countries in Europe were expected to follow suit. Governments were eager to prevent economic collapse and institute policies to spur economic recovery. The next section discusses these efforts in depth preceded by a commentary on the suitability of fiscal policy as stated at the outset of the paper.

THE ASIAN AND GLOBAL CRISES - RECOVERY

The objective of overcoming an international economic crisis is two-fold: restoring growth and in the case of the Asian crisis, stabilizing exchange rate expectations by keeping inflation under control. There are two policy instruments to achieve this: fiscal and monetary policy. Moreno et al. (1998) provide the following advice on finding a suitable mix:

“The problem may then be seen as one of assigning monetary and fiscal policies to the two objectives in the most effective way. While more research is needed to explore this new version of the 'assignment problem'—effective pairing of instruments with policy objectives during a financial crisis—a good short-run rule of thumb is to assign the more flexible instrument to the more volatile market. From this perspective, it is immediately apparent that monetary policy should be assigned to stabilizing exchange rate expectations by curbing inflation, and fiscal policy, to supporting growth and the financial sector. If monetary policy were instead assigned to support growth and the financial sector, it will most likely destabilize exchange rate expectations (as it would be expansionary) and raise inflation.”

There are two decisions to be made in this regard: a policy mix that is suitable to the economic situation and the degree of use of these policy instruments. For example, would higher taxes or deficit financing best support bailouts of the financial sector. This would depend, in part, on the objective of the policy, that is,

economic growth or inflation control. Many factors have to be taken into consideration: how severe the economic contraction is and how urgent the need is to stabilize exchange rate expectations. This would, most likely, differ by country. Other important considerations are: can these policies be sustained, are they sufficient or are they excessively expansionary.

Wagner (2010) supports this rationale and adds that bank regulators have the responsibility to prevent crises but if this fails, what they do to correct them is just as important. This can be done by strengthening supervisory mechanisms and making financial institutions pay for their actions. Corrective action could be closing a bank down right after it becomes insolvent as any delay would give the bank an opportunity to 'bet the bank' in an effort to recover. This is what happened in Asia. Instead of the traditional practice of bailing out the whole bank, regulators can impose costs of failure on bank managers. When Barings Bank failed, the Bank of England made the protection of depositors a priority over the cost of the owners losing their capital. Also, bank supervisors should be held responsible if their negligence results in fiscal liability to the system. In the U.S., the law requires an explanation from the banking authorities if a bank failure results in having to draw from the deposit insurance fund. This sets up the discussion on policy responses to the economic crisis in Asia and the recent global one.

Fiscal action

Governments took the lead in taking action to stimulate recovery from the Asian economic crisis. Clifford and Engardio (1999) and Goldstein (1998) outline how governments in crisis-hit countries sprung into action by spending billions to buy up non-performing assets and to pump liquidity into the system. For example, in Thailand banks raised \$15 billion in new capital, mostly from the government. In Korea, government bank bailouts were around the amount of \$50 billion. Government policy shifted towards making the economy less dependent on only a few industries by investing in and promoting others. Before the Asian crisis, only a few key sectors were responsible for driving the economies of countries in this region. For example, in South Korea and Malaysia, export manufacturing constituted more than 40% of gross national product. In Hong Kong and Bangkok, property developers and banks accounted for the bulk of traded companies.

Rosenberger (1997) and Kim (2002) indicate that Asian consumers figured little in the old growth equation. As a result of the crisis, long-neglected service sectors such as the media, health care and retailing began to draw attention from local policymakers. With the intention of stimulating high-tech start-ups, governments started investing heavily in science parks, business-training institutes, and small-business incubators. In order to

tackle red tape and provide a spurt to job creation, governments began deregulating industries including banking, telecom, and real estate development. Given the need for foreign investment – Korea needed \$26 billion to upgrade its telecom infrastructure – governments opened up foreign markets even more. Instead of focusing on export-oriented expansion like before, investment was made keeping local demand in mind while adhering to strict financial targets.

The recent global financial crisis witnessed similar government action. Blinder and Zandi (2010), Mishkin (2011) and Nguyen and Enomoto (2009) explain how the U.S. federal government provided fiscal stimulus in the form of the American Recovery and Reinvestment Act (ARRA) and the Troubled Asset Relief Program (TARP). The ARRA consisted of temporary spending and tax cut measures including the mailing of tax rebate checks, cash for clunkers, tax credits for homebuyers, and payroll tax credits for employers to hire unemployed workers. The biggest component of TARP was the Capital Purchase Program (CPP) where \$250 billion was used to purchase preferred stock in financial institutions. Nine of the largest financial firms were made to accept these equity injections. The program was intended to support these institutions in carrying out normal business activity and to restore lending in order to normalize credit conditions. TARP funds were also used to ease the foreclosure situation and bail out the American auto industry from its financial woes. Additionally, the federal government provided tax rebates to lower- and middle-income families.

Gokhale (2009) points out that the difference between debt purchases and injecting equity capital into financial companies is profound. Debt purchases would have limited the government's direct involvement with private asset ownership through the point of debt maturity simply because the debt's value would eventually be resolved. In contrast, equity infusions into private financial firms will appear as a capital outlay by taxpayers. The advantage of an equity infusion is that it can be implemented relatively quickly and it enables taxpayers to share in the upside of troubled firms' operations after credit flows resume normalcy—more so than through purchases of bad debt from financial firms.

Besides the U.S., the EU and its member countries introduced reform efforts in the wake of the global crisis. Jackson (2009) and Ferreiro et al. (2015) elaborate on these. Fiscal policy strategies included expansionary fiscal policies implemented during the first years of the crisis and fiscal consolidation policies implemented since 2010. As part of the European Economic Recovery Plan, members were expected to contribute a small percentage of their GDP to boost consumer demand.

The EU's economic recovery strategy involved investing in R&D innovation and education, promoting green technology, overcoming energy security constraints, achieving environmental goals and enhancing the welfare

of citizens through flexicurity (job flexibility and security). Additionally, tighter surveillance of economic and fiscal policies of member countries was made a priority and new tools were developed to tackle macroeconomic imbalances. Some European governments secured loans from the EU and the outside. The conditions for these loans were economic reforms and budget improvements of the borrowing countries. EU countries also increased economic cooperation to address large public deficits and public debt among their member countries (Danish EU Presidency 2010).

Bank-related action

Government action was supported by initiatives from the banking sector. Attempts to counter the recessions on the banking side were made at different levels. As a result of the recent global financial crisis, the Basel committee revised standards for banks' capital reserves and liquidity requirements. These higher standards were meant to safeguard banks from faltering during future financial crises. As part of this, proposed changes include increased capital requirements and new rules ensuring sufficient liquidity to make banks less vulnerable to short and long-term economic fluctuations (OECD Economic Surveys, 2015).

Some member EU countries made recapitalizing banks and providing government debt guarantees an important part of their recovery agenda. The EU also sought to establish a common framework for dealing with distressed banks by having banks finance resolution schemes themselves. Financial regulation was strengthened such as the rules for trading in the securities markets. Daily supervision of financial institutions was addressed with the decision to create a new regulatory body slated to be established in the future. Proposals for financial institution recovery included the sale of assets, the establishment of a 'bridge bank' for the purpose of splitting up assets, writing down debt to creditors and internal asset transfers. Also considered was the creation of a leverage ratio to prevent bank's capital reserves from getting too limited relative to the volume of lending. National regulators would have the authority to impose additional capital requirements to restrict lending during periods of high growth without affecting bank efficiency. Other issues on the agenda involved corporate governance and the handling of risks by financial counterparties (Danish EU Presidency 2011).

In the U.S., Robinson and Nantz (2009) and Jociene et al. (2015) note that the effort to restore normalcy to the American economy was conducted on a number of fronts. Following the introduction of the Federal Reserve's zero-interest rate policy where it cut interest rates drastically, initiatives to counter the recession included cutting mortgage rates, expanding Federal Housing Administration (FHA) lending while increasing loan limits, and easing

homebuyer difficulties and foreclosures. The Fed's attempt to spur liquidity conditions in the economy took the form of guaranteeing interbank loans, purchasing commercial paper and guaranteeing housing-related obligations of financial companies. The Federal Deposit Insurance Corporation (FDIC) also played an important role by increasing deposit insurance limits and guaranteeing bank debt.

Todd (1998) and Clifford and Corben (1999) elicit how the affected countries took drastic steps towards financial reform in order to rebuild confidence after the Asian economic crisis. Thailand, for example, introduced legal changes, including a bankruptcy law and liberalized its foreign investment rules. Cleaning up bank's balance sheets was just the first step in the process to bring Asian banks up to global standards. There was also the need to build a cadre of professional bankers and loan officers who lent based on risk analysis and borrowers' cash flows rather than on personal connections and how much property a borrower can put up as collateral.

Also noteworthy was the fact that the central banks, in these countries, set up a bulwark between banks and the other businesses of the same owners. "A structure for better corporate governance is not just about individual corporations," stated Bank of Thailand Governor Chatu Mongkol Sonakul, at the time, "It is about the system and the network that links them together (Clifford and Engardio 1999)."

In spite of these efforts, financial recovery was made difficult by the loss of confidence of foreign investors who stayed away – a major impediment for the big industrial conglomerates, which were the engines of economic growth in these countries, to lead a full recovery. In analyzing these responses, one can't help but conclude that more could have been done to spur the recovery process. This is discussed in the next section.

DISCUSSION AND CONCLUSION

As a result of the recent financial crisis, monitoring became the new buzzword. The EU proposed to identify and proactively correct macroeconomic imbalances such as property bubbles, growing current account deficits or surpluses and declines in competitiveness through strict monitoring mechanisms. If countries breach 'alert thresholds', studies will be conducted to ascertain if it poses a danger to the country and what action can be taken to address this. There was also the establishment of the European semester, in 2010, to discuss economic and budgetary priorities at the same time every year (European Commission 2012).

Due to the volume of cross-border banking activities in a number of EU countries, problems in one country can trigger a crisis on the financial system elsewhere. Jackson (2009) notes that a proposal to supervise different segments of the financial system on a country-by-country

basis is being considered (Jackson, 2009). This could be a model of application not only for Asia but also for the U.S.

Clifford and Engardio (1999) and Ee and Xiong (2008) observe that in the recent global financial crisis, the private sector did not endeavor to undo its financial difficulties, both in the U.S. and Europe. This was different in Asia during its crisis. Besides receiving government support, the private sector took on the responsibility of bailing itself out of its own mess by shedding assets. For example, Siam Cement Public Co., devised a three-year program to raise \$1.5 billion by disposing of a fifth of its assets. This enabled it to not only pay some of its foreign debt but also to invest in core businesses such as petrochemicals. In spite of these efforts, there was very little, if any, initiative to tackle high unemployment rates which are discussed next.

In tackling financial crises, the government must have an 'employment' stipulation in their private sector rescue packages. Instead of having the rescued private sector entities return taxpayer funds once they regain their financial footing, the government must mandate that once these rescued entities begin making profits, a percentage of these profits should be allocated for hiring purposes. In the recent financial crisis, the government's stimulus package was confined to businesses that were big enough to impact the survival of the economy. Perhaps, the second wave of stimulus money could have been made available to a lower-tier of businesses with the 'employment' stipulation in place. Due to the lack of such a response, countries have seen very sluggish growth in employment and high unemployment rates have been fairly stagnant. Finally, the government must mandate that executive pay exceeding a market average per position be allocated towards the retention of workers.

There has been a somewhat anti-Keynesian response, around the world, to fighting this past recession. Much of the focus has been on reducing public budget deficits or not running deficits. This has been done by cutting spending such as social welfare payouts and restricting unemployment insurance benefits. On the other hand, Keynesian theory calls for increased public spending to counter economic downturns. So if deficits are controlled by cutting spending, how are governments to stimulate the economy through increased investment and job growth? Efforts by central banks on achieving these outcomes through monetary policy have had very little impact. Cassidy (2012) construes this as follows, "Having adopted the policies of Keynes in response to a calamitous recession, the United States has grown more than twice as fast during the past three years as Britain, which adopted the economics of Hoover (and Paul Ryan). Meanwhile, the gaping hole in the two countries' budgets has declined at roughly the same rate, and next year the U.S. will be in better fiscal shape than its old ally."

The policy tools of the day are to tax the rich, reform

corporate taxes and stimulate the economy through spending but these will take years to have an impact of the economy. For example, President Obama signed a transportation-heavy spending budget in 2012 to repair and build roads, bridges and mass transit. Chancellor Merkel's budget in Germany had a similar focus. It will take too long to roll these programs out while the need of the hour is to get the citizenry employed right away. Taxing the rich when the bulk of society belongs to the middle-class, can only create a ripple effect in generating government revenue for hiring spending or preventing layoffs in the government.

The focus must turn to the private sector. There have been reports that businesses are sitting on a pile of cash and have been reluctant to spend it. Corporate tax reform will not get them to hire and government must explore alternative solutions. If hiring is not *the* priority for these businesses, corporate profits over a certain limit must be subject to a tax penalty. If the government can impose a financial penalty on those who don't purchase personal health insurance, why can't they impose one on firms that have the capacity but don't hire? If this was a provision in the stimulus package offered to businesses, it would have started to show results through a lower unemployment rate. The only way to boost consumer confidence is by getting businesses to invest.

On the monetary side, inflation generally remained low throughout the recession and hence central banks have not had to raise interest rates to control it. Low interest rates have, perhaps, served as a bumper against the economy falling into another recession. Action on the fiscal side has been wanting. At the outset, this paper stated the postulations of both the classicists and the Keynesians. During this past recession, wages and prices have proved to be sticky and have had difficulty falling into equilibrium through the forces of supply and demand. This has led to a stubborn unemployment rate and necessitated government action through counter-cyclical policy. The factor analysis model discussed at the start of the paper proved that there is one underlying factor that connects these variables: GDP, unemployment, government borrowing/lending and inflation.

A single short-term policy measure like a significant tax penalty on businesses that don't hire would impact most of these variables. The most likely outcome would be real GDP growth (higher national income and higher national output), lower unemployment (as explained above), lower government borrowing (higher income tax and business tax revenues, and lower government spending on unemployment benefits) and rising inflation (more spending money causing the economy to grow and inflation to increase) which can be controlled by the central bank through higher interest rates. When executing this, the mistakes of yesteryears should be avoided. Somers (2012) cites an example from the 1930s when the U.S. government imposed controls on wages and prices that prevented businesses from adjusting to

lower demand which stalled economic recovery.

Conflict of interests

The author had not declared any conflict of interests.

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