Determinants of Regional Minimum Wages in the Philippines

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In the Philippines, the National Wages and Productivity Commission (NWPC) formulates policies and guidelines that Tripartite Wage and Productivity Boards use in determining minimum wages in their respective regions. Reviews of the implementation of the minimum wage determination have been done in past studies to determine which of the factors listed by NWPC for consideration by the wage boards are actually used to determine minimum wage. Results indicated that the significant determinant of minimum wage is consumer price index.

Two stage least squares estimation of a Fixed Effects Model for Panel Data for the period 1990-2012 showed that significant determinants of regional minimum wage for non-agriculture are: Consumer Price Index, Gross Regional Domestic Product, and April employment rate. The lower and upper estimates from the estimated equation of the Fixed Effects Model for Panel Data may provide intervals that the wage boards can use in making the final determination of minimum wage.

Keywords: tripartite wage and productivity boards, minimum wage, fixed effects models for panel data, shocks, two stage least squares, fixed effects model for panel data

1. Background

In the Philippines, the Wage Rationalization Act (R.A.6727) created regional Tripartite Wage and Productivity Boards to determine minimum wage in the regions and mandated the National Wages and Productivity Commission (NWPC)

to formulate policies and guidelines that the regional boards are to use in doing their minimum wage determination.

The standards and criteria for minimum wage determination as indicated in R.A. 6727 are factors relevant to maintaining the minimum standards of living necessary for the health, efficiency, and general well-being of employees within the framework of economic and social development program. These are: demand for living wages; wage adjustment vis-à-vis the consumer price index; cost of living and changes or increases therein; needs of workers and their families; need to induce industries to invest in the countryside; improvements in standard of living; prevailing wage levels; fair return of the capital invested and capacity to pay of employers; effects on employment generation and family income; equitable distribution of income and wealth along the imperatives of economic and social development.

In the early years of the implementation of R.A. 6727, Reyes (1998) reviewed the minimum wage structures in the different regions with the goal of making recommendations to simplify the wage structures. Her findings included the following: previous wage adjustments were mainly based on changes in the Consumer Price Index (CPI) mainly because it is the one available on a monthly basis. She suggested the use of other indicators: non-compliance rates, employment rate, gross regional domestic product by industry, number of establishments in the region by industry (from NSO surveys and administrative reports),prevailing wage rates (from Occupational Wages Survey and from company payrolls),productivity indicators.

The Global Wage Report of the International Labor Organization for 2008-2009 predicted difficult times ahead for workers due to slow or negative economic growth of countries combined with highly volatile prices. It points to collective bargaining and minimum wage fixing to ensure that wages are more responsive to workers' needs. It further emphasizes the need for countries to have coherent policy frameworks on minimum wage fixing. It enumerates the following good practices related to the design of a complementary and coherent set of minimum wages and collective bargaining:

- avoiding using minimum wages as a substitute for collective bargaining;
- keeping the minimum wage fixing system as simple and manageable as
- possible;
- trying to ensure that social benefits are, whenever possible, disconnected from the minimum wage level – since this practice often prevents governments from increasing minimum wages for fear of the adverse impact on social security budgets;
- accompanying minimum wages by credible enforcement mechanisms which involve labour inspectors as well as social partners; and
- extend the coverage to include vulnerable groups such as domestic workers, who are often excluded from the protection of minimum wage laws. This is

particularly important in order to maximize the impact of minimum wages on gender equality.

Bersales (2009) conducted an empirical study of the movements of regional non-agriculture minimum wages of three regions (the National Capital Region, Region 7 and Region 11) vis-à-vis factors that the Tripartite Regional Wage and Productivity Boards use in determining non-agriculture minimum wage. Bersales (2011) expanded the study to include all regions and concluded that the regional wage boards generally use CPI in their respective regions, Gross Regional Domestic Product, and Regional April Employment Rate in determining non-agriculture minimum wage.

This paper updates that covered period of Bersales (2011) and looks into the possibility that shocks would introduce abnormal wage setting behavior on the part of the wage boards.

We aim to develop econometric models in predicting regional wage boards' determination of non-agriculture minimum wage. We also aim to assess if the following shocks would likely introduce abnormal wage setting behavior on the part of the wage boards were not significant:

1997-1998 – Asian Financial Crisis
2002 – spillover effects from U.S. technology bubble burst
2008-2009 – spillover effects from Global Financial Crisis.

2. Review of Related Literature

The purpose of the minimum wage, according to the Minimum Wage Fixing Convention of the International Labour Organization (ILO) is to give wage-earners the necessary social protection in terms of minimum permissible levels of wages. In addition, the minimum wage should not be lower than what is needed to provide the worker and his/her family their subsistence needs. Lemos (2009), in studying the effects of minimum wage on developing countries, and using Brazil as a typical example, concludes that minimum wage is an effective tool in the fight against poverty and inequality, and may be a more effective policy in reducing poverty than incorporating workers in the informal sector into the formal sector.

In the Philippines, the Wage Rationalization Act (R.A. 6727) has created Regional Tripartite Wage and Productivity Boards (RTWPBs) to determine the minimum wage in the different regions. Mangahas (2011) observes that disparities in cost of living and level of development among the different regions are addressed by this regional wage fixing. Hence, it is the most appropriate means of setting the minimum wage. R.A. 6727 should be strictly implemented, since, in Mangahas' own words, "workers and even employers claim that the reason why the current system on minimum wage fixing appeared to be ineffective is because the wage orders are not strictly implemented."

The Global Wage Report of the ILO stresses that minimum wages should not be used as a substitute for collective bargaining. This practice needs to be checked since Fashoyin (2003), in studying the role of social dialogue in wage determination in the Philippines, has argued that the manner of minimum wage determination may erode the consultative process. In particular, he opines that in non-organized or small enterprises, where the minimum wage has replaced collective bargaining, "the role of collective bargaining, or more appropriately, the consultative process, has been confined to less controversial issues of benefits and conditions of service."

The enactment of R.A. 6727 has placed emphasis on tripartism. Mangahas (2011) describes regional wage determination as "making use of social dialogue in every step of a lengthy procedure to ensure social dialogue is exhausted through consultations with stakeholders." Moreover, he observes that the relationship among the members of the wage board is congenial. They try to understand each others' positions, taking into consideration the greater interest of the region's development. Nonetheless, they may still disagree on things such as propriety of adjusting wage, the rate of increase and date of effectivity of wage adjustment. One source of heated debates during deliberations is the amount of wage adjustment.

As already mentioned, R.A. 6727 stipulates that the regional wage boards should consider the following factors in setting the minimum wage:

- the demand for living wages;
- wage adjustment vis-à-vis the CPI;
- the cost of living and changes or increases therein;
- the needs of workers and their families;
- the need to induce industries to invest in the countryside;
- improvements in standards of living;
- the prevailing wage levels;
- fair return of the capital invested and capacity to pay of employers;
- effects on employment generation and family income; and
- the equitable distribution of income and wealth along the imperatives of economic and social development.

Pember and Dupre (1997) have suggested another set of criteria for determining the level of minimum wage. These criteria largely overlap with the factors mentioned in R.A. 6727. The criteria they suggest are the following:

Criterion 1: The needs of workers and their families;
Criterion 2: The general level of wages in the country;
Criterion 3: The cost of living and changes therein;
Criterion 4: Social security benefits;
Criterion 5: The relative living standards of other social groups; and
Criterion 6: Economic factors, including the requirements of economic development, levels of productivity and the level of employment.

To measure these criteria, Pember and Dupre (1997) also recommend certain data sets, most of which are collected as part of official Philippine statistics. For criterion 1, they suggest household data on income and expenditure, current wages of unskilled workers, and income distributions of wage-earner households. For criterion 2, they suggest statistics on average wages classified by sex, branch of economic activity, occupational group and location. These data are best collected from establishment surveys and censuses.

For criterion 3, they mention changes in price levels normally measured by the CPI, but including only the price levels which affect the welfare and basic needs of low-income wage-earning households. For criterion 4, they recommend that statistics on average benefits paid to beneficiaries and the distribution of benefits paid. For criterion 5, the suggested data are on average income and income distributions of different social groups, average expenditure on different household goods and services and of different social groups, and other measures of living standards.

Lastly, for criterion 6, a number of economic indicators are suggested:

- Changes in GDP per capita
- Changes in the percentage contribution to GDP of the different sectors
- Changes in value of industrial production
- Changes in the value of foreign trade at constant prices
- Changes in the unemployment rate
- Changes in the percentage of persons employed in the different sectors

The following social measures are also suggested

- Changes in the proportion attending school;
- Changes in the literacy rate;
- Changes in the number of schools/hospitals per capita
- Changes in the accessibility of selected community facilities

Gallet (2004) also articulates the importance of GDP per capita in wage determination, taking note of the sensitivity of living wage rates to per capita income. The present study shows that GDP, CPI, and employment for the month of April are significant determinants of minimum wage determination. Lastly, Pember and Dupre (1997) suggest that statistics on labor productivity be collected. These include changes in value added per employee and output per employee.

Mangahas (2011) observes that employers' and workers' representatives in the wage boards demand that reference data such as the CPI, economic situationer and poverty threshold be available in all their activities, and be accurate and up-to-date. They actively participate in activities such as meetings, productivity enhancement program, consultations and public hearings.

3. Coverage of the study

This paper covers all regions of the Philippines using the following available data for 1980-2012:

- Non-agriculture Minimum Wage
- Consumer Price Index
- Employment rate
- Gross Regional Domestic Product.

These factors were determined using the results of Bersales (2011).

4. Methodology

The following Fixed Effects Model for Panel Data was used in coming up with a prediction equation:

$MW_{it} = \mu_i + \pi_1 CPI_{it} + \pi_2 APR\_EMP_{it-1} + \pi_3 GRDP_{it} + \varepsilon_{it}$ (Model 1)
$\varepsilon_{it} = \rho\varepsilon_{it-1} + \nu_{it}$
ν_{it} is white noise

where
MW_{it} is non-agriculture minimum wage in region i for year t
CPI_{it} is consumer price index in region i for year t
$GRDP_{it}$ is gross regional domestic product in region i for year t
APR_EMP_{it} is employment rate in April of the year $(t - 1)$ in region i.

Estimation was done using two-stage least squares to deal with simultaneity bias due to correlations of errors of MW with the errors of the CPI, APR_EMP, and GRDP.

The following indicator variables representing shocks were added separately in Model (1) to determine if they are also significant predictors of how the wage boards determined MW:

ASIAN= 1 for 1997-1998 (Asian Financial Crisis) and 0 for other years
US_TECH = 1 for 2002 (spillover effects from U.S. technology bubble burst) and 0 for other years
GLOBAL_FIN = 1 for 2008-2009 (spillover effects from Global Financial Crisis) and 0 for other years.

5. Results and Discussion

5.1 Significant determinants of minimum wage

Using a fixed effects model for panel of regions using annual data from 1980 to 2009, it was found that, across all regions, the significant determinants of minimum wage are CPI, GRDP, and April employment rate.

The following estimated equation shows minimum wage (MW) as a function of CPI, GRDP, and April employment rate(APRIL_EMP) :

Predicted MW for Region *i* = -129.512 + 1.585*CPI + 0.049*GRDP + 1.955*APR_EMP of past year + Regional Effect of Region *i* + 0.762 (Difference between past year's MW and past year's predicted MW)

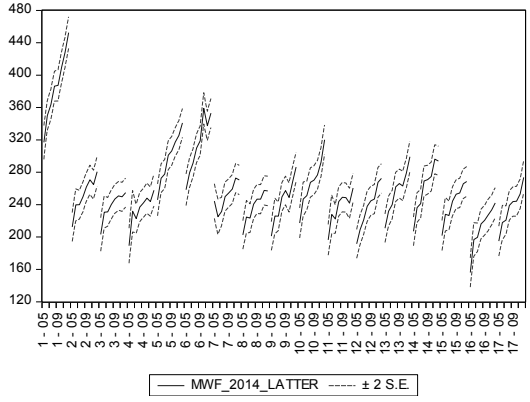
Regional Effect represents regional differences in levels of minimum wage. The values are shown in Table 1 below.

Table 1. Regional Differences in Levels of Minimum Wage

Region	Regional Effect	Region	Regional Effect
NCR	35.968	8	-6.888
4A	29.103	4B	-8.326
3	28.223	6	-8.426
7	19.038	2	-9.332
CAR	9.392	CARAGA	-11.721
1	6.038	12	-16.803
11	3.598	9	-16.808
10	-3.658	ARMM	-38.774
5	-5.689		

The results indicate that NCR has the highest level of non-agriculture minimum wage and ARMM has the lowest.

This equation predicts minimum wage with 2.65% Mean Absolute Percentage Error(MAPE); i.e., the predicted minimum wage is off by 2.65% of the actual minimum wage determined by the regional wage boards for the years 2005-2012. This is better performance than the MAPE of 3.56% if prediction performance is evaluated from 1993 to 2012.



Forecast: MWF_2014_LATTER	
Actual: MW	
Forecast sample: 2005 2013	
Adjusted sample: 2005 2012	
Included observations: 136	
Root Mean Squared Error	8.811934
Mean Absolute Error	6.566067
Mean Abs. Percent Error	2.646523
Theil Inequality Coefficient	0.016746
Bias Proportion	0.002767
Variance Proportion	0.016410
Covariance Proportion	0.980823

Table 2 presents the predicted MW and 95% confidence interval of MW by regions:

Table 2. Predicted Minimum Wage and Confidence Interval for Minimum Wage by Region

Region	Year	Minimum Wage (MW)	Estimated Minimum Wage	LOWER Estimate for Minimum Wage (95% confidence)	UPPER Estimate for Minimum Wage (95% confidence)	Error of Estimate (Actual MW-Predicted MW)	Absolute Percentage Error
NCR	2008	382	386	368	404	-4	1.1%
	2009	382	387	368	406	-5	1.4%
	2010	404	410	391	429	-6	1.4%
	2011	426	428	410	446	-2	0.5%
	2012	456	453	433	472	3	0.7%
CAR	2008	260	250	231	268	10	4.0%
	2009	260	262	244	279	-2	0.7%
	2010	260	271	253	288	-11	4.1%
	2011	272	265	247	282	7	2.7%
	2012	280	281	263	299	-1	0.2%
Region 1	2008	240	240	223	258	0	0.1%
	2009	240	247	230	264	-7	2.9%
	2010	240	251	233	268	-11	4.5%
	2011	248	250	232	267	-2	0.7%
	2012	253	255	237	272	-2	0.7%
Region 2	2008	235	237	219	255	-2	0.9%
	2009	235	242	225	260	-7	3.0%
	2010	235	248	230	266	-13	5.5%
	2011	245	244	226	262	1	0.5%
	2012	255	258	239	277	-3	1.1%
Region 3	2008	302	301	284	318	1	0.3%
	2009	302	306	289	324	-4	1.4%
	2010	316	317	300	335	-1	0.5%
	2011	330	326	308	343	4	1.4%
	2012	330	341	324	358	-11	3.3%
Region 4A	2008	320	310	293	327	10	3.1%
	2009	320	319	301	337	1	0.4%
	2010	320	359	340	378	-39	12.2%
	2011	337	337	320	355	0	0.1%
	2012	350	353	336	371	-4	1.0%

Region	Year	Minimum Wage (MW)	Estimated Minimum Wage	LOWER Estimate for Minimum Wage (95% confidence)	UPPER Estimate for Minimum Wage (95% confidence)	Error of Estimate (Actual MW-Predicted MW)	Absolute Percentage Error
Region 4B	2008	252	250	232	268	2	0.8%
	2009	252	254	237	272	-2	0.9%
	2010	264	259	242	277	5	1.8%
	2011	264	273	255	291	-9	3.4%
	2012	264	270	253	288	-6	2.4%
Region 5	2008	239	241	223	258	-2	0.7%
	2009	239	247	229	264	-8	3.3%
	2010	247	247	229	264	0	0.1%
	2011	247	258	240	275	-11	4.3%
	2012	252	257	239	275	-5	1.9%
Region 6	2008	250	249	232	267	1	0.2%
	2009	250	257	240	275	-7	3.0%
	2010	265	249	231	267	16	6.1%
	2011	277	269	251	287	8	3.0%
	2012	277	286	269	304	-9	3.4%
Region 7	2008	267	267	250	285	0	0.2%
	2009	267	270	253	288	-3	1.2%
	2010	285	277	259	294	8	3.0%
	2011	305	292	275	310	13	4.1%
	2012	327	320	302	338	7	2.1%
Region 8	2008	238	244	226	261	-6	2.5%
	2009	238	249	231	267	-11	4.7%
	2010	238	249	231	266	-11	4.5%
	2011	253	242	224	260	11	4.4%
	2012	260	261	243	278	-1	0.2%
Region 9	2008	240	238	220	257	2	0.8%
	2009	240	245	227	262	-5	1.9%
	2010	255	247	229	265	8	3.1%
	2011	267	268	249	286	-1	0.2%
	2012	267	272	255	290	-5	2.0%

Region	Year	Minimum Wage (MW)	Estimated Minimum Wage	LOWER Estimate for Minimum Wage (95% confidence)	UPPER Estimate for Minimum Wage (95% confidence)	Error of Estimate (Actual MW-Predicted MW)	Absolute Percentage Error
Region I0	2008	256	262	244	280	-6	2.4%
	2009	256	266	248	284	-10	3.9%
	2010	269	263	245	281	6	2.2%
	2011	286	279	261	296	7	2.5%
	2012	286	299	281	318	-13	4.6%
Region I1	2008	265	269	251	287	-4	1.6%
	2009	265	271	254	288	-6	2.3%
	2010	286	275	257	292	11	3.9%
	2011	286	296	279	314	-10	3.6%
	2012	301	294	276	312	7	2.4%
Region I2	2008	245	244	227	262	1	0.3%
	2009	245	253	235	270	-8	3.2%
	2010	255	254	237	272	1	0.2%
	2011	260	266	248	284	-6	2.2%
	2012	270	269	251	287	1	0.5%
ARMM	2008	210	216	198	234	-6	2.9%
	2009	210	221	203	239	-11	5.1%
	2010	222	227	208	246	-5	2.2%
	2011	232	233	215	251	-1	0.6%
	2012	232	242	224	261	-10	4.4%
CARAGA	2008	233	239	221	257	-6	2.6%
	2009	233	244	226	262	-11	4.7%
	2010	243	244	226	262	-1	0.5%
	2011	258	253	235	271	5	1.9%
	2012	258	274	254	293	-16	6.1%

Annex 1 provides the output of estimating Model (1) in Eviews.

5.2 Shocks

Separately including the indicator variables in the fixed effects model for panel data resulted in non-significance of the indicator variable parameters. This means that there is indication that the wage boards do not directly consider shocks in determining minimum wage. Annex 2 provides the outputs of estimating the modified models in Eviews.

Quarterly data were used in the study of impacts of minimum wage on unemployment, underemployment, and inflation. VAR analysis showed that an Increase in Minimum Wage generally leads the increase of Food CPI, Non-food CPI, Unemployment Rate, Underemployment Rate.

The following shocks which would likely introduce abnormal wage setting behavior on the part of the wage boards were not significant:

1997-1998 - Asian Financial Crisis

2002 - spillover effects from U.S. technology bubble burst

2008-2009 - spillover effects from Global Financial Crisis.

6. Conclusions and Recommendations

The findings on the relationships of the indicators with minimum wage were generally different for the different regions. However, common to all three are the significance of the correlations of minimum wage with each of the following indicators: CPI, GRDP, and April employment rate. Thus, the formula based on CPI, GRDP and April employment rate may be used as a baseline value for minimum wage. It does not include the other criteria listed in R.A. 6727 due to unavailable data or non-significant result in econometric modeling. Thus, the baseline value may be adjusted by the wage boards to take into account these other criteria. The lower and upper estimates from the formula may be intervals that the wage boards can use in making final determination of minimum wage.

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Annex 1

Output of EVIEWS for Fixed Effects Panel Data Modeling in modeling minimum wage(MW) as a function of CPI , GRDP, and April employment rate(APRIL_EMP):

Dependent Variable: MW
Method: Panel Two-Stage Least Squares
Date: 10/30/13 Time: 00:00
Sample (adjusted): 1993 2012
Periods included: 20
Cross-sections included: 17
Total panel (unbalanced) observations: 313
White cross-section standard errors & covariance (d.f. corrected)
Convergence achieved after 5 iterations
Instrument specification: C CPI_06(-1) APR_EMP(-2) GRDP_CURRENT(-1) /1000
Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-129.5122	105.6759	-1.225560	0.2214
CPI_06	1.585134	0.160958	9.848121	0.0000
GRDP_CURRENT/1000	0.047630	0.004599	10.35621	0.0000
APR_EMP(-1)	1.954859	1.109751	1.761530	0.0792
AR(1)	0.761507	0.061346	12.41328	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.982413	Mean dependent var		204.0178
Adjusted R-squared	0.981208	S.D. dependent var		63.72549
S.E. of regression	8.735638	Sum squared resid		22282.92
F-statistic	1005.649	Durbin-Watson stat		2.030148
Prob(F-statistic)	0.000000	Second-Stage SSR		18131.24
Instrument rank	21			
Inverted AR Roots	.76			

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MW = -129.512241947 + 1.58513409715*CPI_06 + 0.0476303847704*GRDP_CURRENT/1000 + 1.95485883776*APR_EMP(-1) + [CX=F] + [AR(1)=0.761507054903]

Region	Regional Effect	Region	Regional Effect
NCR	35.968	8	-6.888
4A	29.103	4B	-8.326
3	28.223	6	-8.426
7	19.038	2	-9.332
CAR	9.392	CARAGA	-11.721
1	6.038	12	-16.803
11	3.598	9	-16.808
10	-3.658	ARMM	-38.774
5	-5.689		

Annex 2

Output of EVIEWS with Indicator Variables representing shocks ASIAN, US_TECH, GLOBAL_FIN

Dependent Variable: MW
Method: Panel Two-Stage Least Squares
Date: 10/30/13 Time: 00:00
Sample (adjusted): 1993 2009
Periods included: 17
Cross-sections included: 17
Total panel (unbalanced) observations: 262
White cross-section standard errors & covariance (d.f. corrected)
Convergence not achieved after 500 iterations
Instrument specification: C CPI_06(-1) APR_EMP(-2) GRDP_CURRENT(-1) /1000
Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-325.4502	430.2833	-0.756363	0.4502
CPI_06	1.522084	0.377000	4.037360	0.0001
GRDP_CURRENT/1000	0.048182	0.008835	5.453593	0.0000
APR_EMP(-1)	4.232351	5.023596	0.842494	0.4004
ASIAN	-28.09873	42.35953	-0.663339	0.5077
AR(1)	0.566119	0.267037	2.120000	0.0350

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.944610	Mean dependent var	189.0957
Adjusted R-squared	0.939764	S.D. dependent var	55.18444
S.E. of regression	13.54396	Sum squared resid	44025.35
F-statistic	584.3364	Durbin-Watson stat	1.831716
Prob(F-statistic)	0.000000	Second-Stage SSR	15247.22
Instrument rank	22		
Inverted AR Roots	.57		

Dependent Variable: MW
Method: Panel Two-Stage Least Squares
Date: 10/30/13 Time: 00:00
Sample (adjusted): 1993 2009
Periods included: 17
Cross-sections included: 17
Total panel (unbalanced) observations: 262
White cross-section standard errors & covariance (d.f. corrected)
Convergence achieved after 7 iterations
Instrument specification: C CPI_06(-1) APR_EMP(-2) GRDP_CURRENT(-1) /1000
Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-253.8873	357.3966	-0.710380	0.4782
CPI_06	1.701701	0.224046	7.595335	0.0000
GRDP_CURRENT/1000	0.046565	0.007959	5.850795	0.0000
APR_EMP(-1)	3.233500	4.012332	0.805890	0.4211
US_TECH	-4.004566	10.92428	-0.366575	0.7143
AR(1)	0.664735	0.138306	4.806280	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.966402	Mean dependent var		189.0957
Adjusted R-squared	0.963462	S.D. dependent var		55.18444
S.E. of regression	10.54848	Sum squared resid		26704.88
F-statistic	631.8709	Durbin-Watson stat		2.029855
Prob(F-statistic)	0.000000	Second-Stage SSR		14120.58
Instrument rank	22			
Inverted AR Roots	.66			

Dependent Variable: MW
Method: Panel Two-Stage Least Squares
Date: 10/30/13 Time: 00:00
Sample (adjusted): 1993 2012
Periods included: 20
Cross-sections included: 17
Total panel (unbalanced) observations: 313
White cross-section standard errors & covariance (d.f. corrected)
Convergence not achieved after 500 iterations
Instrument specification: C CPI_06(-1) APR_EMP(-2) GRDP_CURRENT(-1) /1000
Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-702.8908	2673.730	-0.262888	0.7928
CPI_06	1.200811	2.057913	0.583509	0.5600
GRDP_CURRENT/1000	0.038954	0.043655	0.892321	0.3730
APR_EMP(-1)	8.655128	31.51370	0.274646	0.7838
GLOBAL_FIN	36.63374	136.1210	0.269126	0.7880
AR(1)	0.527032	0.898018	0.586883	0.5577
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.874592	Mean dependent var		204.0178
Adjusted R-squared	0.865542	S.D. dependent var		63.72549
S.E. of regression	23.36718	Sum squared resid		158893.3
F-statistic	914.8429	Durbin-Watson stat		1.879602
Prob(F-statistic)	0.000000	Second-Stage SSR		18905.11
Instrument rank	22			
Inverted AR Roots	.53			