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**Capital's Response to Globalization: A Comparative
Analysis of the Adjustment Patterns of Mark-Ups in
Post-Liberalization Developing Countries**

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COUNTRIES***

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CAPITAL'S RESPONSE TO GLOBALIZATION:

A COMPARATIVE ANALYSIS OF THE ADJUSTMENT PATTERNS OF MARK-UPS IN POST-LIBERALIZATION DEVELOPING COUNTRIES

In this paper, we investigate the capital's response to the new world economic order termed as "globalization". It is asserted in many popular writings that increased pressures of global competition would squeeze the profit margins and reduce capital returns. We test for this proposition using manufacturing data for a selected group of developing countries under post-liberalization. We utilize time series econometrics to study the behavior of markups (gross profit margins) against wage costs, trade openness, and investment share in the GDP as a proxy for capacity utilization. Contrary to expectations, we find no significant conclusive evidence on the sign of "openness" on profit margins in many countries of our sample. Our results also reveal that although mark-ups are negatively related with real wage costs in most of the Latin American countries in our sample, they have a positive and statistically significant relation to real wage costs in Turkish manufacturing. Finally, investment shares and mark-ups reveal a negative relationship for Argentina and Turkey and a positive one for Colombia.

Key words: mark-ups, profit margins, globalization, distribution, manufacturing

I. Introduction:

In this paper, we investigate the capital's response to new conditions set forth by pressures of globalization in selected developing countries. Globalization, in its narrowest economic sense, entails a process of integration of the domestic commodity and financial markets with the world market at large. Allegedly, the increased pressures of international competition would squeeze the profit margins and reduce the rate of return available for capital. For a well-functioning competitive market economy, the Heckscher-Ohlin model predicts, for instance, that profits are negatively correlated with the degree of openness of the economy if the sector is capital-intensive (see, e.g., Roberts and Taylor, 1996). In fact, a well-known proposition of both the classical and neoclassical economics is that profits ultimately vanish in a "well-functioning" market economy.

That these *a priori* theoretical presumptions fail to hold for a large sample of countries in the aftermath of their liberalization attempts is well-documented. Since the extensive inception of the neoliberal programs of structural adjustment and external liberalization in the late-1970s, the share of labour in national income is observed to have serious setbacks. It fell, for instance, from 48% to 38% in Chile, from 41 % to 25% in Argentina, and from 38% to 27% in Mexico (Veltmeyer, 1999). During this era capital launched a direct assault on wage labour against its wage remunerations, working conditions and benefits, as well as its capacity to organize and negotiate contracts (Petras and Veltmeyer, 2001).

What this evidence suggests is that capital could have the means and power to adapt to the new conditions of intensified competition so as to be able to secure its rate of return and to protect –and even to expand— its share in gross output. As Meszaros puts it, “the crucial condition for the existence and functioning of capital is that it should be able to exercise *command over labour*... Without it, capital would cease to be capital and disappear from the historical stage” (Meszaros, 1995: 609, *italics* original).

Under these circumstances, “flexibility” in production patterns conduced a viable opportunity for the capitalist to enjoy profits and/or to survive in the market by tidying the composition of its production and distribution patterns. In a classical sense, the main tool for the capitalist for adaptation to the changing market environment is labour saving techniques, which work through regressing the labour’s share in output either by reducing the number of employees in a period of increased productivity gains and vice versa or repressing the labour costs via adjusting wages in a band of subsistence wage level and value-added per worker.

Thus, our underlying hypothesis in this paper is based on the classical notion that resolution of the distributional conflict is prior to accumulation and production, rather than the orthodox (neoclassical) presumption that the distributional patterns are passive outcomes of the underlying technology and the contemplation that profit is a payment/return to a scarce productive factor, capital. Hence, rather than interpreting the realized factor shares as neutral outcomes of the free interplay of competitive market forces with technology, we regard profit as a socially determined entity that is created, extracted, and distributed by the authoritative/administrative actions, given the socioeconomic and structural parameters. For capital such adjustment processes are completed via *surplus extraction* and *surplus creation*, where the former term indicates the capitalist’s ability to sustain its own share over wages and other costs, and the latter term indicates a process of rearrangement of surplus through administrative actions of organized capital and the state (Yeldan, 1995).

It is the purpose of this paper to investigate empirically the patterns of adjustment of capital returns against forces of global competition. Using manufacturing sector data for a group of post-liberalization developing countries, we utilize time series econometric methods to deduce hypotheses on the patterns of external liberalization, wage costs, and profitability. The period under analysis comprises the liberal policy implantations, which brought in phases the demolition of international trade and financial barriers to the countries to be discussed. In this period, the distributional patterns between wage-labour and capital have been reshaped due to those structural changes and as a sector carrying these patterns of transformation, manufacturing industry is an eligible focal point for analysis. As an empirical measure of capital’s rate of return, we utilize the mark-up rates (gross profit margins over costs), defined as the ratio of total profits to total costs of wages and intermediate inputs. In the absence of reliable capital stock estimates, this variable provides a good proxy for the *rate*

of profit. Our sample consists of the following countries: Argentina, Chile, Colombia, Mexico, and Turkey.

The plan of the paper is as follows: in the next section we provide a broad overview of the history of macro adjustments for the countries in our sample. We introduce our econometric methodology in section 3, and analyze our empirical findings in section 4. Section 5 summarizes and concludes.

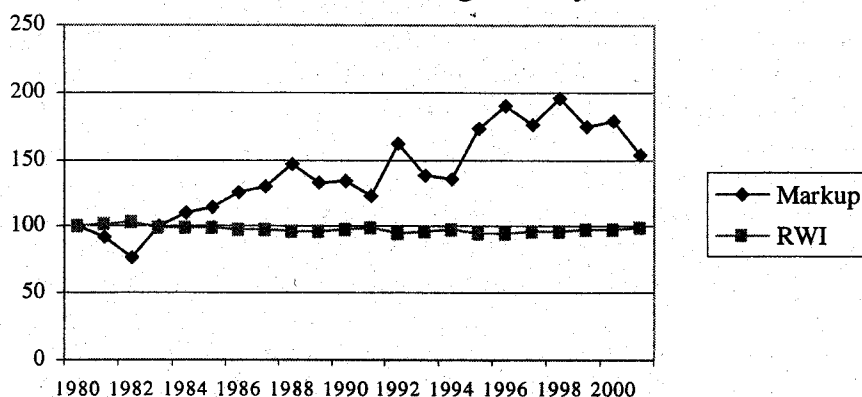
II. A Retrospective Digression on the History of Macro Adjustments in the Countries Analyzed

Mexico:

Following decades of policies based on import substitution that resulted in two decades of sustained growth averaging more than 6 percent per year, Mexican economy faced with the debt crisis of 1982, which had prolonged impact on the main economic and social indicators such as growth rate falling to 0.1 percent and inflation averaging 90 percent. The new government that came to power in 1983 was forced to adopt a tight fiscal program. The collapse of the world oil prices and the rise of the interest payments on domestic debt with high inflation made the fiscal tightening policy ineffective and deepened the crisis of 1982. With the adoption of a heterodox stabilization program in 1987, domestic and external public debt started to erode gaining speed with large privatization revenues, which led to the recovery of Mexican economy. While price stability and economic stability were being maintained, Mexico went on a path of integration with the world markets. It was a common idea at that period that Mexico as a successful reformer and emerging market, was appearing as a Latin American economic miracle. This optimism rose with the approval of North American Trade Agreement (NAFTA) in 1993 and the wide-ranging economic reforms like anti-poverty program that were put forward by Mexican government (Ros and Lustig, 1999).

In the advent of NAFTA's approval, the Mexican economy was heading towards a financial crisis and entering its worst recession since the Great Depression of 1929. In line with the crisis, political instability with the presidential elections and opposing groups were in effect causing a chaotic environment. The devaluation of peso worsened the debt position of the economy that brought an international rescue package to the economy in 1995.

**Figure-1 Real Wages and Markups
in Mexican Manufacturing Industry**



Inspection of the real wage and markup trends through Figure-1 gives upward movement of markups and cumulating characteristic of real wages around a constant value over time for the Mexican manufacturing industry. The determinants of such a trend can be exposed through econometric inspection, but with a bird-eye-view, it can be said that in an era of 'apertura' (or liberal transformation), markups did not deteriorate with the expected competitive environment. The crisis periods after 1990 caused downward movements of markups and the adjustment and stabilization periods retrieved these movements. Moderate growth rates with boom periods following deep contractions causing unemployment rates to rise exhibit instability of the economy in 1990s as seen in Table-1.

**Table-1 Unemployment, GDP and Per Capita Income Growth
for Mexico 1990-2001**

Year	Unemployment rate (1)	GDP growth at constant 1993 prices(2)	Per capita GDP growth
1990	2.75	4.8%	
1991	2.63	4.1%	1.84%
1992	2.83	3.5%	1.18%
1993	3.42	1.9%	-0.38%
1994	3.70	4.2%	2.09%
1995	6.22	-6.5%	-8.36%
1996	5.50	4.9%	2.43%
1997	3.73	6.3%	5.03%
1998	3.16	4.8%	3.15%
1999	2.50	3.4%	2.02%
2000	2.21	6.2%	5.45%
2001	2.46	-0.3%	-2.07%

Sources: (1) Population censuses, Instituto Nacional de Estadística, Geografía e Informática and World Development Indicators, World Bank
(2) World Development Indicators, World Bank
(e) Estimated

Colombia:

After a period of tight import-substitutionist period, Colombia shifted relatively towards an outward looking stance in 1967. Average annual growth rate of GDP was 6.4 percent in 1970-75 and 6 percent in 1975-80 (Reynolds, 1985) and the volume of exports expanded at a rate of 6.1 percent a year with imports having 8.4 percent of growth per year (Garcia and Garcia, 1991). The shift in trade policy reached its climax in 1980 and a rearrangement of trade policy that reversed the previous openness aiming was made in 1981 with the inclining appreciation of the local currency, which severely hurt the growth of exports. This was a turning point for Colombian economy since a new period of inward economic policies came out with gradual construction of trade barriers. Outward orientation years of the Colombian economy before 1980 led the economy into a balance-of-payments crisis while providing high growth rates. In contrast, the protectionist period after 1980 witnessed considerably slower growth rates, yet with a more stabilized macroeconomic environment (Roberts, 1996).

1990s brought a new wave of liberalization with a rapid process of structural reforms to Colombia. An addition to standard structural reform packages for the countries in the region was the attempt to increase social sector spending to eradicate the sizable inequality accumulated in the country. This combination of active social policy and liberalization has raised difficulties as rising fiscal strains and besides this, it brought more instability than before, decelerated the growth rate and weakened the tradable sectors. These troublesome features with international shocks and uncertain environment resulted in the strongest recession of the past 30 years in 1998-99.

Coming to the evolution of markups and real wages, Figure-2 discloses a negative correlation between the two variables. Markups follow a resistant upward trend raising a question of whether Colombian manufacturing industry is highly concentrated or not. Another feature of this trend can be explained through labour saving techniques, where Figure-3 portrays the drastic movement of unemployment rates over time.

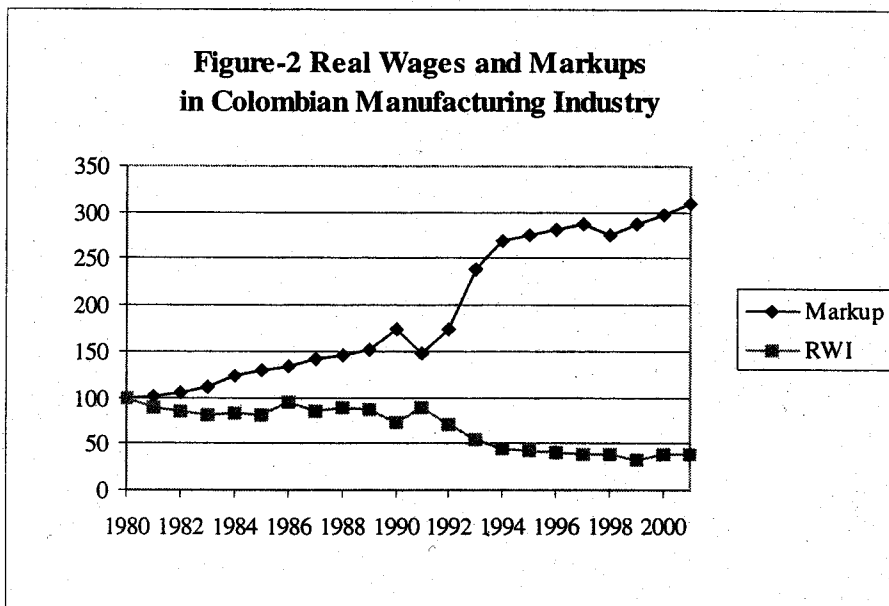
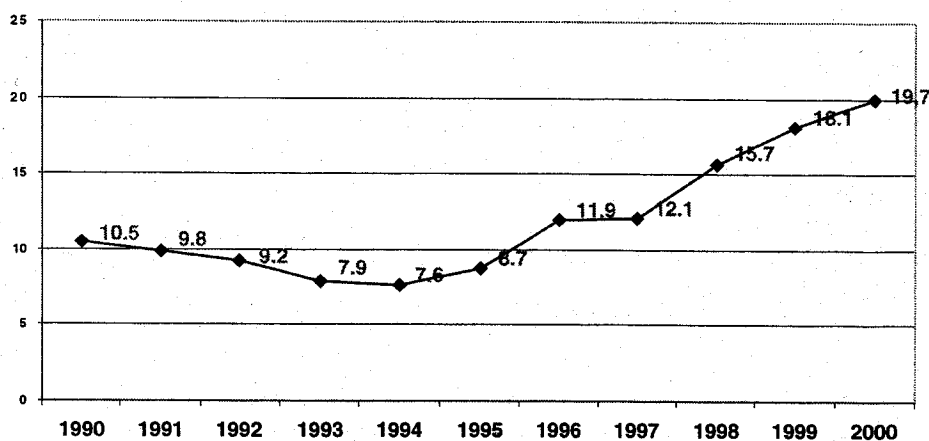


Figure-3 Unemployment Rates in Colombia



Source: DANE, Encuesta Nacional de Hogares, Marzo del 2000.

Chile:

As was the worldwide convention during the 1960s, Chile pursued an inward-oriented development strategy. 1970 elections resulted in the triumph of socialist Allende government and this intensified inward-oriented development policies. The new government began to confiscate private production units, appropriated large farms under Agrarian Land Reform, increased public sector wages, shifted the exchange rate regime to fixed exchange rate and put a generalized system of price controls (Agenor and Montiel, 1999). These policies led to large increases in government spending and money base since public spending was also financed with central bank credits. Chilean economy was under a massive radical change and the social and economic indicators were drifting apart: Real GDP grew by 9 percent, unemployment fell below 4 percent and real wage grew by 17 percent in 1971 with increasing public debt and inflation. The year 1973 was a roundabout for Chilean economy; the military coup brought the junta regime of Pinochet, which caused the economy to make a u-turn. This meant a structural adjustment process comprising fast transformation of the economy into neoliberal framework. Privatization of the previously confiscated economic units, opening the economy to world markets, fiscal austerity and price stabilization were included in the adjustment program. The average tariff rate declined from 105 percent in 1974 to about 12 percent in 1979 (World Bank, 1989).

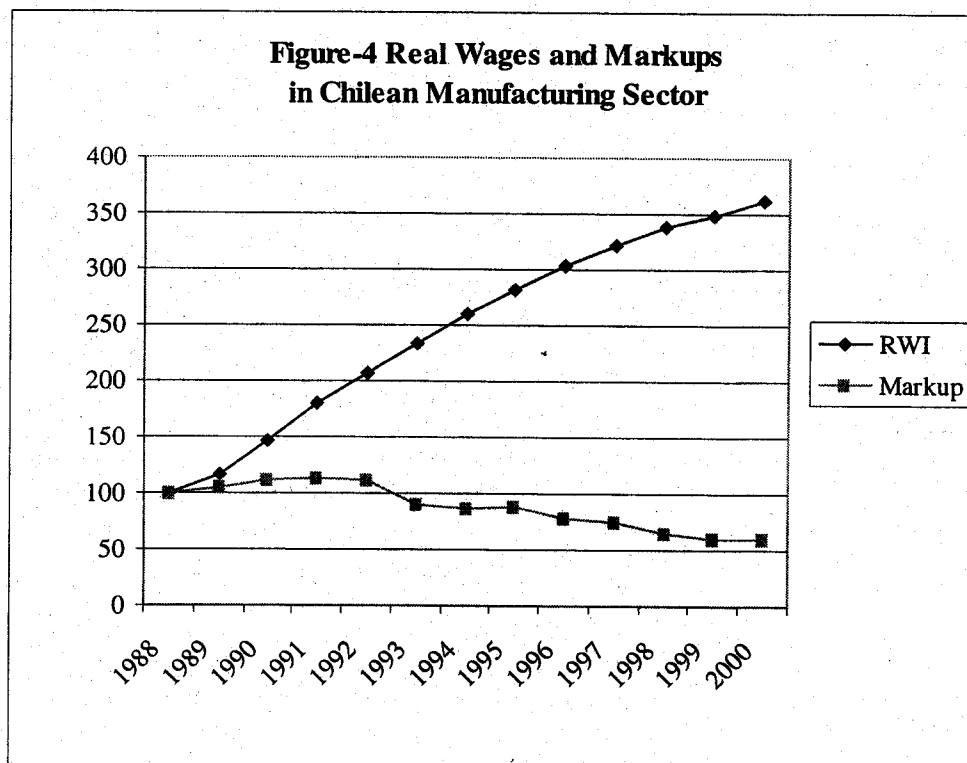
After an initial period of recessionary shock, industry began to recover in 1976 with the labour-saving features of the recovery policies and the employment losses remained permanent during the stabilization period of 1976-81. Balance of trade in industrial products worsened considerably in response to trade liberalization and appreciation of the national currency. Emergence of powerful conglomerates was another feature for the period, which changed the economy towards a more concentrated market structure (Tybout, 1996).

For the period considered, exchange rate appreciation was a serious problem, which finally became a trouble for the economy in 1982. Current account deficit, profit squeeze of the firms and contraction of large external capital inflows forced the government to devalue the national currency. A major recession followed devaluation and unemployment reached roughly 30 percent in 1983. A requirement of *surplus creation* was apparent and government

took control of major private banks, initiated a recapitalization program, industrial loans were consolidated and re-programmed the long-term debts, and lowered corporate income taxes. Industry was in need of protection also and trade barriers were reconstructed in this period. After the industry gave sound signals, these measures were recessed gradually.

90s brought liberal measures and this increased vulnerability of the economy. Current account deficit rising to implausible levels and short-term capital inflows recessing in the crisis periods with disloyalty were the determinants of vulnerability. In 1998, current account deficit reached a sum of 4.144 million dollars, which represents 6.3% of production. This situation reached its deepest depths toward the end of the decade. It simply did not manifest itself earlier due to the unusual influx of capital, mainly in the form of foreign direct investment, which led to an increased balance in the capital account.

Although the economy was open to a brunt, state-oriented redistribution policies towards eliminating poverty and income gap raised real wages and this resulted in a drop in the total number of people living in poverty, from 47% in 1987 to slightly more that 20% at the present time, as a result of the widening of the job market during the 1990's and an increased overall income. Figure-4 represents real wage trend apparently besides the counter-movement of markup rates.



Sustained growth has been maintained in the last decade as seen in Table- but this did not retrieve the labour market conditions at the end of the period due to the accumulated malfunction of the economy, which hide itself throughout the decade resulting in a crisis.

Table-2 Main economic indicators of Chilean Economy

Year	GDP Growth Rate	Unemployment	Per Capita GDP Growth Rate
1990	0.04	5.7	0.019
1991	0.08	5.3	0.062
1992	0.12	4.4	0.10
1993	0.07	4.5	0.052
1994	0.06	5.9	0.040
1995	0.11	4.7	0.089
1996	0.07	5.4	0.057
1997	0.08	5.3	0.060
1998	0.04	7.2	0.025
1999	-0.01	9.9	-0.024
2000	0.05	..	0.040

Source: World Development Indicators, World Bank

Argentina:

The structural adjustments towards a more autarkic national economic structure were handled by the military-oriented hybrid regimes after the military coup in 1930. The nationalist and populist Peron regime also followed this mode of regulation after the Second World War. As the implementation of measures of inward-looking development strategy responded, manufacturing growth gained impetus. Following the Peron regime, non-civilian governments were on power until the emergence of the restoration of Peronist regime in 1973.

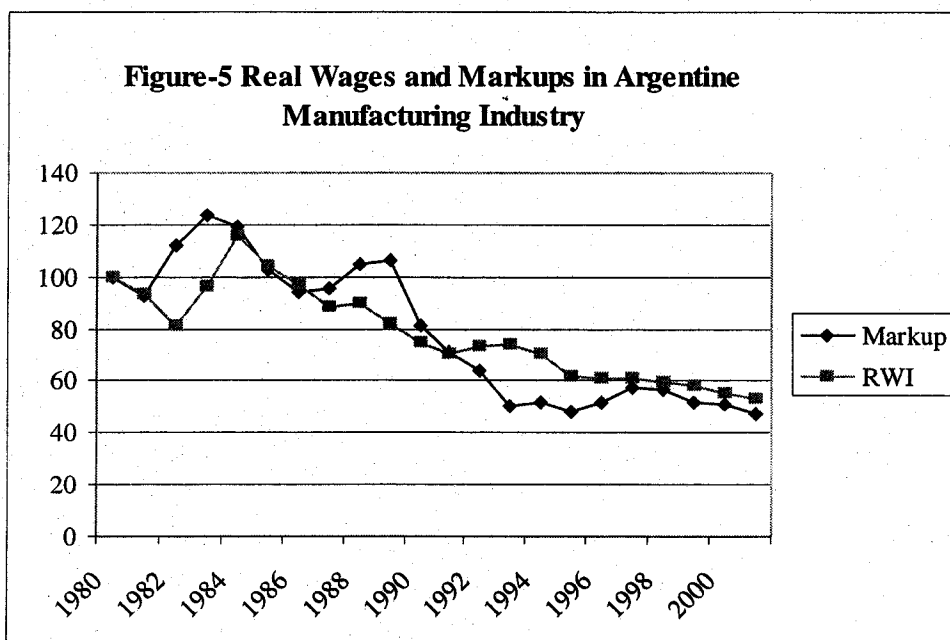
The junta regime coming on power after the Peronist government handled structural adjustment policies of openness aiming. The content of the adjustment package was in line with the world trend of economic change. The junta regime quickly passed the laws for trade liberalization.

In 1989, Argentina was on the edge of an economic crisis. High inflation rates led to erosion of wages and increasing internal debt. With a high degree of protection and large amount of government subsidies the local producers enjoyed formed the general idea of economic inefficiency, which resulted in implementation of further liberalization policies in 1991. The most important item in this package was the convertibility law that declared the fixing of national currency to dollar indicating the equivalence of one dollar and one peso. It did not outlaw the modification of exchange rate but clearly stated the backing of peso in the central bank reserves as dollars, and this caused compulsory storing of reserves backing 100 percent of the money supply in the market. By doing this the government hoped to convince the financial world of its commitment to economic reform and stability. The Law of State Reform opened the door of privatization for state-owned enterprises. Convenient with these measures, government reduced trade barriers further. Consequently, Argentine economy became trustworthy once again for the creditors and a take-off period of three years originating from flowing external credits started: GNP grew steadily, interest rates became more reasonable, consumption increased and inflation fell drastically.

Nevertheless, as there always exist trade-offs in the economic framework, unemployment grew to inadmissible levels as the result of privatizations and overvalued peso; fixing to

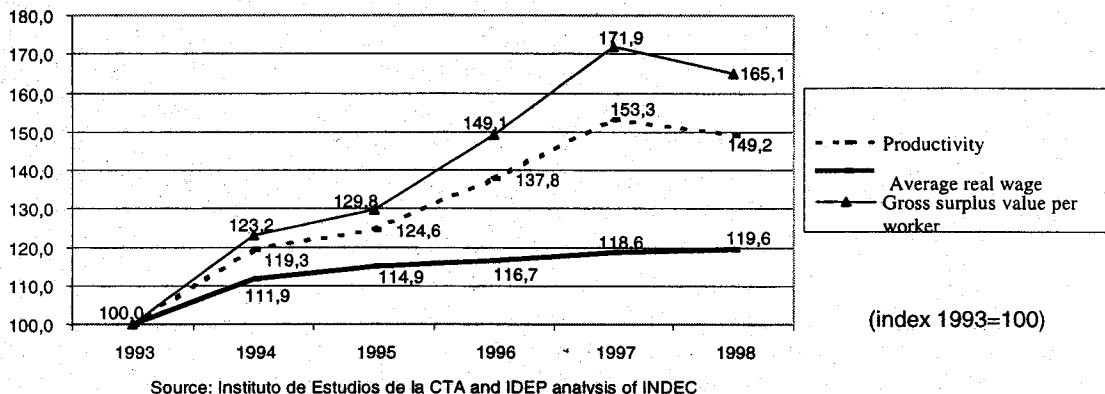
dollar caused the exporting sectors of the industry to engage in surplus extraction. Government also attempted to retrieve the situation via surplus extraction: Exporting sectors of the economy were subsidized instead of devaluation for gaining competitive power; in fact it would not be a rational action since credibility had to be sustained.

Three years of growth ended with the recession in 1995, which produced a 6.8 percent contraction and a new trend of growth began by 1996. Before coming to year 2000, which encompassed the major crisis that Argentine economy faced ever, the economy followed a cyclic pattern.



As a contrast, Argentine manufacturing industry markups do not behave as the other Latin American countries over time. As usual, average real wages in manufacturing sector seen on Figure-5 erode in the past 20 years. The pattern reveals that the episode of open economy severely hurt both capital and labour shares. Figure-6 monitors the economy through a representative set of firms that can be defined as oligopolistic or monopolistic firms and from this point of view labour share seems to decline although productivity increases; in fact, this is due to surplus extraction, which is a need for firms during hard times.

Figure-6 Productivity, average real wage, and gross surplus value per worker employed in the 500 largest firms in Argentina, 1993-98



Besides the trend in growth rates, labour market conditions deteriorate as shown in Table-3 and poverty throughout the society increases with the polarization of income distribution. Crisis years with their adjustment periods worsened labour market conditions and social equity.

Table-3 Main Economic and Social Indicators of Argentina

Years	GDP Growth rates	Unemployment rate ¹ %	Under-employment rate %	Share of population in poverty ² %	Share of population in extreme poverty ² %
1991	0.13	6.0	7.9	25.2	4.1
1992	0.12	7.0	8.1	18.6	3.3
1993	0.06	9.3	9.3	17.3	4.0
1994	0.06	12.2	10.4	17.6	3.4
1995	-0.03	16.6	12.6	23.5	6.0
1996	0.06	17.3	13.6	27.3	7.2
1997	0.08	13.7	13.1	26.2	6.1
1998	0.04	12.4	13.6	25.1	6.1
1999	-0.03	13.8	14.3	26.9	7.2

⁽¹⁾ Data are for urban areas covered by INDEC's Encuesta Permanente de Hogares and refer to October of each year.

⁽²⁾ Greater Buenos Aires.

Source: Instituto de la CTA and INDEC analysis of INDEC and FIDE data.

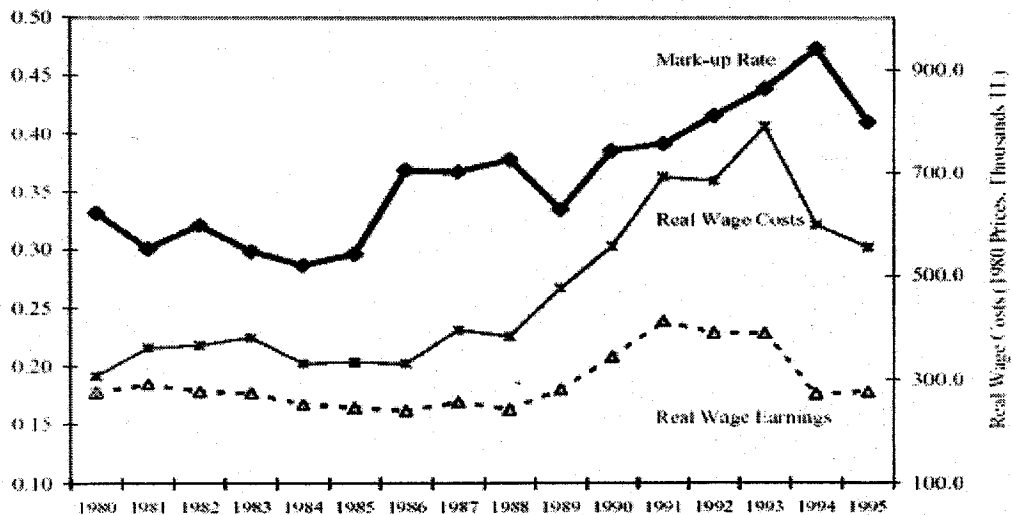
Turkey:

After the first military coup in 1960, the Turkish economy followed a planned, import-substitutionist, policy-based structure. With the formation of the State Planning Organization, five-year economic plans were implemented resulting in fairly good growth rates, which continued until the beginning of the 80s. At the beginning of this planned-economy period, the Turkish economy had already had interactions with the IMF (the 1958 foreign debt consolidation, for instance) and relations with the IMF became more and more intense as time passed and debt grew.

The economic crisis of 1973, political instability of the 70s, the 1971 semi-military coup changed the ongoing structure of the economy. The second military coup in 1980 was a benchmark for the Turkish social and economic life –indeed, the end of 70s was a benchmark for most of the countries throughout the world-. The 24th of January decisions, which were prepared for a summit between the IMF and the government in 1979, declared a new perspective –a liberal perspective- for the Turkish economy. The decisions brought reforms for openness aiming first at commodity trade liberalization in 1980 and finishing with financial liberalization in 1989. In this period, the Turkish economy faced chronic inflation that rose each year. Real wages also started to decline after 1980.

The main economic policy characteristic of the 1983-87 period was the suppression of wages in order to leave high mark-up rates for the capitalist elite who were expected to be more competitive in global markets. Reducing the domestic demand through wage extraction and creating exportable surplus were the dual effects of such a policy. The share of wage-labour in private manufacturing value added receded from 27.5% to 17.1%; and in public manufacturing from 25% to 13%. In this process, the average mark-up rate in private manufacturing increased from 31% to 38% as seen in Figure-7.

Figure-7 Real Wage Earnings, Wage Costs and Profit Margins in Turkish Private Manufacturing



Source: SIS manufacturing data, State Institute of Statistics.

During this period, exports rose by 19.7% per annum in dollar terms and the real gross domestic product, following the low-point of the 1978-80 depression, rose by 5.4% per annum. However, the performance of fixed investments did not follow this pattern. In the private sector, gross fixed investments initially contracted by 5.3% in 1981-82, and increased by 12.3% during 1983-87. Decomposition of this path reveals that only a small portion of this amount was directed to manufacturing. The rate of growth of private manufacturing investments has been on the order of only 2.1% per annum. This resulted in a significant anomaly as far as the official stance towards industrialization was concerned: in a period where outward orientation was supposedly directed to increased manufacturing exports through significant price incentives and subsidies, the share of manufacturing investments declined substantially.

The economic figures that appeared in 1988 were signals of exhaustion of such a set of policies and the need for a renewal in the set of policies became apparent. Diagnoses inferred through all economic indicators of 1988 were reflecting a stagflationary macro environment. The rate of growth of GDP was only 2.1%, and the inflation rate accelerated to 75%. Real wage earnings hit their lowest point, but then recovered quickly beginning in 1989, the starting point of the new populist phase. Real wages in manufacturing increased by 90% from 1988 to 1991. Thus, the classical accumulation episode based on wage suppression had come to a halt by 1989.

Table-4 Phases of Macroeconomic Adjustment via Economic Indicators

	Post-Crisis Adjustment 1981-82	Export-Led Growth 1983-87	Exhaustion 1988	Unregulated Financial Liberalization 1989-93	Financial Crisis 1994	Post-crisis Adjustment 1995-97
I. Production and Accumulation (Real Rate of Growth, %)						
GDP	4,2	6,5	2,1	4,8	-5,5	7,2
Agriculture	0,6	0,8	7,8	0,1	-0,7	1,3
Manufacturing	7,9	8,6	1,6	6,0	-7,6	9,8
Commerce	7,7	9,1	3,5	5,4	-7,6	8,7
Financial Services	2,5	2,6	4,4	0,5	-1,5	3,0
<i>Fixed investment:</i>						
Private	-5,3	12,3	12,6	11,5	-9,1	13,6
Public	0,2	10,3	-20,2	4,3	-34,8	9,0
Manufacturing	-5,1	2,1	-4,8	6,3	-4,7	6,7
<i>As % share of GNP:</i>						
Savings	17,7	19,5	27,2	21,9	23,0	20,7
Investment	18,3	20,9	26,1	23,7	24,4	24,8
Public S. Borrowing Req.	3,7	4,7	4,8	9,1	7,9	7,9
II. Prices and Interest Rates						
Inflation Rate (CPI)	33,2	39,5	75,4	66,4	106,3	83,2
Depreciation of TL/US\$	45,0	39,7	66,0	50,4	170,0	68,9
Real Interest rate On Government Bonds	--	--	-5,8	10,5	20,5	24,9
III. Internalization						
Man. Export Growth	19,7	12,5	14,0	5,1	18,0	6,3
<i>As % share of GNP:</i>						
Imports	14,0	15,9	15,8	14,6	17,8	22,7
Exports	8,5	10,8	12,8	9,1	13,8	13,8
Current Account	-2,7	-1,9	-1,7	-1,3	-2,0	-2,6
Foreign Debt	27,1	37,8	44,8	35,1	50,1	42,7

Sources: SPO Main Economic Indicators; Undersecretariat of Foreign Trade and Treasury Main Economic Indicators; SIS Manufacturing Industry Surveys.

For a brief overview, it can be said that 90s brought crises, which made the Turkish economy fragile. The first crisis was in 1994, and with the contagion of 1998 world financial crisis, the situation became more serious leading the economy to have closer relations with IMF. For some years, the growth rates dropped under zero and severe recessions were observed. There were several attempts –IMF programs- to decrease the inflation rate, which were unsuccessful. February 2001 brought a new crisis, resulting in a deep recession and political instability; after this crisis the economy began to recover again, which is a normal process for a post-crisis period because of the devalued currency, decreased government spending, rearranged debt payments, and reduced wages.

III. Econometric Modeling

The aim of this paper is to probe the resistance of markup rates to some of the variable that were listed previously for the manufacturing sectors of selected Latin American countries and Turkey as a contrast. Time series econometrics is used in order to delineate the sensitivity of markup rates on such a set of variables since the rudimentary data available do not allow for an expanded panel data analysis.

The main source for the data is *World Development Indicators*, which is a large data set for a large number of countries. In addition to this data set, manufacturing real wage and markup rate series originate from Milanovic. Specific for Turkey, the *SIS Manufacturing Industry Annual Series* data set is utilized. Regressions cover 22 years of annual data due to availability, and outliers reduce this number.

The specification for the sought relation is assumed to be linear and as follows:

$$MR_t = \alpha_t + \beta_1 O_t + \beta_2 U_t + \beta_3 \log(RW_t) + \varepsilon_t$$

The dependent variable, MR , indicates markup rate for the manufacturing sector of the respective country. To portray the capital and labour shares, markup rate is used as an instrument since it provides a good proxy on the profitability of capital, and for a better understanding of how the shares of labour and capital vary it is to be exposed. Assuming markup pricing is used as the pricing mechanism, the pricing rule for the capitalist will be a parameter multiplied by the total cost per output including labour cost per output. The “gross profit margin” or “markup rate” can be found if the parameter is refined from the total cost by subtracting 1. It is convenient to define profit as the value of the gain from output over the value of capital used in the production process. Arranging the two definitions results in the revelation of direct relation between profit rates and markup rates and capacity utilization, defined as the output-capital ratio in most of the structuralist writing (See, e.g., Taylor, 1983).

The specification is made up of an intercept term and three independent variables. O stands for openness, U stands for capacity utilization rate, and RW for real wages. We identify openness as the sum of imports and exports over gross domestic product. As a proxy for the capacity utilization variable, we use the share of investments in gross domestic product, except for Colombia where GDP growth rate is used. This usage forms reciprocity between the proxy variable (investment share) and the actual variable, U , such that negative coefficients reflect a positive relation between capacity utilization and share of capital increments in GDP. For Turkish and Argentine regressions, dummy variables are used to retrieve some of the series for crisis periods rather than resorting to filtering methods like Hodrick-Prescott filter or band-pass filter. We find that dummy variables absorbed much of the insignificance of these series in the regressions and improved the diagnostics substantially.

IV. Analysis of Econometric Results

Systematic attempt to document a wide range of regularities across developing countries with diverse experiences with structural change, which is an effort of forming a general

developing country structure, can only be assembled with a data of reasonable quality. Thus, we restrict our analysis to only five countries where we could have obtained such data within the period encompassing structural adjustments.

A bird-eye's observation of raw data with the help of markup figures for each country previously exhibited reveals an upward movement of average markup rates despite increased openness for each country. As an exception, Argentine manufacturing industry patterns does not show resistance. The main channel of immunity seems to be wage extraction portrayed as either maintenance or decline of real wages throughout the period. Coming to formal analysis, markup rates are regressed on openness, reciprocal of capacity utilization and logarithm of real wages. The results are tabulated in Table-5.

The negative coefficients of real wages, which were found to be significant at 1 percent level, reflects Marxian dynamics throughout the period, which narrates the negative correlation between labour remunerations and capital's share. Turkey displays a contrast carrying a positive real wage coefficient, which corresponds to "extended" *Sraffian* dynamics with persistence of markup rates against wage increases. Combined with this result, negative coefficients of capital formation as a share of GDP for Argentina, Chile and Turkey and positive coefficient of GDP growth rate in the regression for Colombia suggest that increasing capacity utilization has a positive relation with profits for these countries. A quick glance at the unemployment rates of each country, the proposition that this was maintained via labour- saving becomes apparent. Mexican manufacturing industry seems not to obey this proposition since it has opposite impact on profit margins.

Openness, on the other hand, has a statistically insignificance problem in general except for Mexico. Interestingly, openness has a positive but a small effect in magnitude on markup rates of Mexican manufacturing industry. The openness indicator for the remaining countries differs such that for Turkey, Argentina and Colombia it has negative sign while for Chile it has positive sign. Comparing relative magnitudes with respect to real wages, openness is less dominant in determining markup rates for Turkey while the opposite statement is valid for Colombia. Given the diversity of these results, our verdict is that the econometric evidence is inconclusive, at best, on the relationship of profit margins vis-à-vis the degree of openness.

The coefficients reveal that the response or speed of adjustment of markups in spite of the export penetration and import allowance, changes in the amplitude of real wages and yearly capital increments or decrements was fast enough throughout the period considered. Turkey's stance is on the opposite giving relatively slow response of markup rates against aforesaid variables.

Putting things together, the results of the employed econometric model characterizes the period aggrandized as a classical accumulation episode based on wage suppression. The sector under analysis seems to be immune to expected rise of competition as a result of opening to world markets for the bunch of countries discussed. Wage extraction appears as the main tool for capital to sustain the profit trend in the post-1980 period. Increased unemployment rates and negative sign of real wages in the regressions support this proposition. Consequently to say, the process of both trade and financial liberalization has, in general, been inadequate to commence the erosion of profits due to expected intensification of competition in the manufacturing sector.

V. Concluding Comments

In this paper, the axis of investigation was the response of capital to the changing economic environment set forth by globalization, which intensified in the post-1980 period. Regarding the trajectories of real wages in the manufacturing industries of Argentina, Chile, Colombia, Mexico and Turkey, it was attempted to formalize on these observations to deduce an econometric hypothesis on the patterns of trade liberalization, labour remunerations and profitability. For this purpose, empirical questions were put forward and were investigated using time series econometric analysis for the manufacturing sectors of aforementioned countries over the 1980-2001 period.

Observations on raw data portray a general decline in real wages and rise of markups in manufacturing sectors of the countries studied throughout the period. Besides the real wage erosion, the period is also characterized by the rising unemployment rates, which delineates deterioration of labour market conditions. Combining these observations with the results of regressions, it is found that labour as a factor of production was a channel for maintaining profitability under the post-1980 outward-looking policy implantations, which encompass structural adjustment reforms and openness to the world markets. Turkey formed a contrast in the sense that real wages, which has a positive relationship with profit margins, seem to act as demand stimulant if the domestic demand conditions in industrial commodity markets are taken into account.

Another result of the regressions was that capital formation as a share of GDP, which is a proxy to capacity utilization, showed negative impact on profit margins in Argentina and Turkey, while results for Mexico and Chile failed to pass the significance test. Colombia drew a different portrait with a positive relationship more in line with theory. It seems that investment as a way of growth was perceived as a burden in Turkey and Argentina while there were mechanisms to maintain profitability such as increasing productivity via labour-saving. Finally, openness was found to be statistically insignificant with profit margins.

Table-5 Relationship Between Markup Rates and Openness, Capacity Utilization, Real Wage

	Openness	Capacity Utilization	Real Wages	Adjusted R ²	F-Statistic	DW test
Argentina	-2.966011	-51.90024**	-2.548070*	0.715254	11.04763*	1.107916 ^{††}
Chile	4.180342	-29.53221	-2.870587*	0.944143	68.61164*	1.687081 [†]
Colombia	-12.58745**	18.11453*	-4.040694*	0.936353	103.9823*	1.587286 [†]
Mexico	2.624870*	13.44983	-9.420862*	0.961106	157.5008*	1.907023 [†]
Turkey	-0.176736	-4.266872*	0.295802*	0.784811	15.5883*	1.881987 [†]

Note: * is statistically significant at 1 percent, and ** at 5 percent; † passed for DW test, †† inconclusive for DW test.