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## **F o r e w o r d**

A year ago, when it was decided to publish the “International Journal of Economic Sciences and Applied Research”, we knew very well that this would not be an easy task, since it requires a considerable time investment and the multi-dimensional support of the scientific community. In the meantime, we had to overcome many technical difficulties, communicate with many colleagues from different institutes, fields and countries, in order to listen to their opinion concerning this effort, form the Editorial Board, including well-known worldwide scientists, make our intention known to the wide scientific community and obtain the necessary financial support.

Today, we are in the very pleasant position to present to the scientific community the inaugural issue of the journal. The articles included are all invited papers.

IJESAR aims at attracting scientists whose wider research interests lie in Economic Science. It intends to publish original articles, which will open new horizons in this field and to promote the dialogue and juxtaposition on a number of areas within the Economic Science field.

We hope that the scientific community will positively assess this effort and we will do our best to turn IJESAR into a very reputable scientific journal, which will significantly contribute towards the enrichment of the scientific thought.

Kavala, April 2008

Editor-in-Chief

Prof. Dr. Anastasios Karasavvoglou

## **Gender Discrimination and Institutional Frameworks: Evidence from Four European Union Countries**

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### **Abstract**

*This paper reviews important aspects of gender labour market inequalities in four European Union countries. It shows that individual countries differ in many aspects of gender discrimination. It seems that contributing factors to these differences are the national social and economic structures, the level of economic development, the legislative framework and the effectiveness of anti-discriminatory policies. It also shows that there are notable improvements in many gender gap indicators during the recent years and, at least part of the improvement should be attributed to the European commission's legislative and policy initiatives.*

**Keywords:** Gender differentials, Pay, Employment

**JEL classification:** J60

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## **1. Introduction: Gender discrimination in the European Union.**

The issue of gender discrimination in the labour market has gained increased importance in recent decades. This is partly the outcome of the European Union's (EU) continuous efforts to attract attention to the main factors which might contribute to gender discrimination, to promote policies towards decreasing gender labour market differentials and finally to introduce more efficient legislative measures against discrimination. Furthermore, one can observe similar attempts by the individual member states which support, endorse and supplement the anti-discrimination EU initiatives.

In general, there are two basic components of the issue of gender discrimination in the labour market: 1) pay discrimination and b) employment discrimination. Naturally, there are a number of other related indicators which are also helpful in establishing a more accurate picture of gender inequalities. These include unemployment rate gap, sex distribution in employment by sector, share of part-time employment, fixed term employment, average working hours and others. For a general theoretical discussion see Aigner and Cain (1977), Jacobsen (1994), Kaufman (2002), Mavromaras and Rudolph (1997). In this paper four countries with different institutional frameworks and stages of economic circumstances will be studied; Greece, Italy, Cyprus and Slovakia.

In recent years there have been concerted legislative and political efforts at the EU level to reduce labour market gender discrimination. Specifically, in December 2004, the Council adopted the Directive on the principle of equal treatment between women and men in the access to, and supply of, goods and services. This was based on Article 13 of the EC Treaty and applies to goods and services available to the public (Commission of the European Communities, 2005). Apart from this, there have been other measures which have effectively the same target. The Directive concerning victims of trafficking in human beings which was adopted in April 2004 is a good example (Commission of the European Communities, 2005). The Commission plans to unify five existing directives in a single text endorsing the principle of equal treatment between men and women in matters of employment (Commission of the European Communities, 2005). Furthermore, the EU's current Employment Guidelines (EU0308205F) state that: 'Member States will, through an integrated approach

combining gender mainstreaming and specific policy actions, encourage female labour market participation and achieve a substantial reduction in gender gaps in employment rates, unemployment rates, and pay by 2010’.

One should expect that the recent initiatives mentioned above together with the older directives and the national level measures might have some effect in reducing gender gaps. The EU-25 pay gap between women and men has decreased from 17% in 1998 to 15% in 2003. It has to be noted that the variation among states is still quite significant. For instance, Malta has the lowest pay gap at 4%, compared to Cyprus with the highest at 25%. In order to get a clearer idea of the pay gap in EU countries, one can look at the equivalent figures for other non-EU but OECD member countries. The best performer from the latest available figures ranging from 2002 to 2004, seems to be New Zealand with gender wage gap at 5.9%, while the worst is South Korea at 39.8%. The US stands at 21.6%, and Japan at 32% (OECD, 2004). Thus one can safely argue that in terms of gender pay gap the EU –25 average is significantly better than that of the US and Japan.

A fundamental dimension of the labour market differences is employment discrimination. In general, there was a positive development in the EU, in the sense that the gender gap in employment decreased by 0.5 percentage points to 15.8% between 2002 and 2003. In a wider time span, there was a general improvement in employment gender gap in the EU-25 from 19.6% in 1998 to 15.8% in 2003. It should be kept in mind that the EU target is to increase female employment from 55.1% to 57% in 2005 (Commission of the European Communities, 2005). As was the case in the pay gap, one can also observe significant variations among EU countries. The best performer is Sweden with an employment gap at 2% while the worst case is Malta with an almost 40% employment gap (Eurostat, 2005).

The share of part-time employees among women and men is another important indicator of gender differences in employment. The EU-25 average in 2004 for male part time employment was 6.6%, while that of females was 30.4%. The variation in this case ranges from 2% male and 4% female share in Slovakia to 20% male and 72% female share in Holland (Eurostat, 2005).



There is also a gap in unemployment rates between the sexes in the EU-25. In 2004 the unemployment rate for women was 10% and 8.3% for men. Again as before, there are wide variations in the EU countries. In Ireland the unemployment gap was -1% which means that men experienced higher unemployment rate than women, while the gap in Greece was 9% implying that women suffered higher unemployment rates than men (Eurostat, 2005).

Another aspect of gender discrimination in employment is occupational segregation. There are many indicators which capture this dimension of the gender gap. As an illustration, one can look at the percentage figures for top managerial positions according to gender. The EU-25 average for members of executive bodies in top 50 publicly quoted companies was 10% for women and 90% for men in 2004. The best performer here was Spain with 20% female managers while the worst figure was 1% for Poland (European Commission, Employment, Social affairs and Equal opportunities DG, 2005). A similar picture is revealed when one looks at the female percentage of University full professors (or equivalent). The EU-25 average for 2002 was 14% for women and 86% for men. The best performer here was Latvia with 20.5% of female professors, while the Malta figure was 1% (European Commission, Employment, Social affairs and Equal opportunities DG, 2003).

## **2. Gender Inequalities in Greece**

The gender pay gap in Greece has narrowed in recent years. In particular, the pay gap was 13% in 1998 and 11.5% in 2003 (Eurostat, 2005)). In terms of comparison with the rest of EU members, Greece is considered to be among the best performers with respect to gender pay. There have been a number of studies on the gender pay gap in Greece which reveal some interesting long term trends. Specifically, one of the first systematic studies, was presented as early as 1964, and was based upon sample data collected from Athens and Piraeus. This study has estimated that a 59.2% of the wage difference between men and women cannot be explained by factors such as the total time of education, the time of duty, the potential experience gained outside the firm, the magnitude and the growth rate of the firm. The authors therefore argued that the difference should thus be ascribed to labour market discrimination against women (Kanellopoulos,

1982). Psacharopoulos has arrived at similar results: he found that the difference between men and women was 30%. Only a 4% of this gap was justified by different characteristics between the genders (Psacharopoulos, 1983).

In a later study, Kanellopoulos calculates extended functions of the hourly wages between genders, which are based on data from a research on Family Budgets in 1974. According to his findings, 49.33% of the wage difference can be ascribed to gender discrimination (Kanellopoulos, 1986). Another study, in 1985, having as a basis research conducted in the area of Athens, reveals interesting trends concerning the composition and the distribution of gender income. This study classifies income into categories: income earned from salary, income earned from business activity, and income earned from retirement pension. The ratios of the female/male mean income was 0.71, 0.62, and 0.58 respectively (Karagiorgas, Kasimati and Pantazidi, 1998). The comparison of the ratios of the female/male mean income with the commensurate ratios of the six founder countries of the EEC shows that the gap in the wages in Greece was then substantially higher (Petraki-Kotti, 1985; Petrinioti, 1989).

One more recent study separates the gap in wages into differences in the productivity and gender discrimination. This study uses the results of previous papers as well as recent data. The analysis shows that the real wages for women in Greece have been raised over time, but that productivity differences do not explain the important observed residual gap in the wages (Patrinou and Lambropoulos, 1993).

Recent studies show that the gap in the wages has not improved significantly in the Greek labor market. More specifically, the aggregate pay gap between 1988 and 1994 has deteriorated by about 5 logarithmic units against women (Kanellopoulos and Mavromaras, 2002). According to these authors, the main cause for this negative development is the changes in the participation of women in the labor market. More analytically, the participation procedure in the labor market favours men since women are forced to accept lower wages in order to find a job. Table 3.1 shows the development of the mean wage ratio of women/men.

Table 3. 1			
Average female/male wage ratio (percentages), 1990-1998			
	1990	1993	1998
Industry*			
Manual workers (hourly wages)	75,8	77,3	78,2
Non-manual workers (monthly wages)	69,5	70,6	69,8
Commerce	81,7	80,6	88,0
Banks	78,4	75,6	76,8
Insurance	71,8	69,0	63,4
* Excluding construction			
Source: National Statistical Service (ΕΣΥΕ)			
Karamessini, 2002 p. 30			

During the decade of 1990's, it is evident that there is not a clear tendency for the improvement of the ratio of wages in the main employment sectors.

The issue of labour force participation of women is also another important indication of the presence of labour market discrimination. According to ILO, in 1981, the percentage of women managers or administrative officers was 13.2%. This percentage was one of the lowest among the European OECD members (ILO, 1982). On the contrary, the respective percentage for clerical jobs was 44.2% and the percentage of the professional category of blue collar workers and technicians was 14.2% (Petrinioti, 1989). Figure 2 shows the comparative indicators for occupational representation.

Table 3. 2		
Over/under-representation of women in occupations		
	1993	1997
Legislators and managers	65	60
Professionals	125	125
Technicians	114	116
Clerks	150	149
Service Workers	139	142
Skilled agricultural	119	118
Craft and related	49	40
Plant and machinery operators	26	31
Elementary occupations	130	138
Female share in the occupation*100/female share in total employment		
Original source: National Statistical Service of Greece		
Karamessini, 2002 Page 30		

Karamessini, M (2002) *Mainstreaming Gender Equality in the 2000 Greek National Action Plan for Employment: Final Evaluation Report* EGCE- EC Expert's Group on Gender and Employment

The above data show that the female representation in the labor market between 1993 and 1997 increased in the occupational categories of technicians, service workers, machinery operators and unskilled workers. It was almost stable in professional, clerical and skilled agricultural occupations. The female participation, though, decreased in higher managerial, executive and blue collar labour.

Generally, female participation in the labor market was stable in the decade of 70's with an increased tendency in the following decades. Female participation in the labor market, increased to 41% of the total labor force in 1983 and to 48% in 1997. Although there was an increase in the female participation in the labor force, Greece has one of the lower percentages of female participation among the countries of EU (Kanellopoulos and Mavromaras, 2002). These features are analytically presented in figures 3 and 4, and depict the phenomenon of occupational over-concentration in Greece, a fact that is universally common in most of the countries (Petrinioti, 1989).

		Greece	EU - 15	EU - 25
Share of employed in industry	Men	35.8	40.8	41.8
	Women	14.2	15.2	16.6
	Total	27.1	29.3	30.3
Share of employed in services	Men	62.6	57.0	55.7
	Women	85.1	83.7	82.1
	Total	71.7	69.1	67.7
Share of employed in high-tech or knowledge intensive sectors	Men	26.5	36.4	35.5
	Women	43.0	52.4	51.6
	Total	33.1	43.6	42.8
Share of employed in low-pay sectors	Men	33.5	28.8	28.9
	Women	25.1	22.2	22.4
	Total	30.1	25.8	25.9

Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 32

Table 3. 4				
Vertical employment segregation in the European Union by gender 2002				
		Greece	EU - 15	EU - 25
Share of employees in managerial occupations	Men	2.9	7.3	7.1
	Women	1.0	3.7	3.8
	Total	2.1	5.7	5.6
Share of employees in supervisory positions	Men	8.3	16.6	na
	Women	2.7	9.2	na
	Total	6.1	13.4	na
Share of employees in intermediate positions	Men	8.3	17.9	na
	Women	4.3	14.8	na
	Total	6.7	16.5	na
Share of employed in non-supervisory positions	Men	83.4	65.5	na
	Women	93.4	76.0	na
	Total	87.3	70.1	na
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 30				

There are also other features of the employment structure in Greece. The following table shows average working hours, full and part time employment and contract status by gender.

Table 3. 5 Working Time and Contract Status in the European Union by gender 2002 Greece				
		Greece	EU - 15	EU - 25
Average working hours	Men	41.5	39.4	na
	Women	38.4	32.2	na
	Total	40.2	36.1	na
Full-time equivalent employment rate	Men	72.0	71.2	na
	Women	41.3	46.8	na
	Total	56.3	58.9	na
Share of part-time employees	Men	2.3	6.6	6.5
	Women	8.1	33.5	29.8
	Total	4.5	18.2	16.6
Share of employees on fixed-term contracts	Men	9.8	12.1	12.0
	Women	13.4	14.3	13.7
	Total	11.3	13.1	12.8
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 28				

It can be seen that females in Greece work less hours than men and this is in accordance to the EU-15 data. The interesting characteristic of the Greek labour market is the low percentage of part-time work, which is one of the lowest of both the EU-15 and the EU-25. However, the percentage of female part-time employees in Greece is more than three times that of male employees. The share of employees on fixed term contracts does not exhibit a significant difference with the rest of EU countries. The recording of inequalities in the labor market is useful for the procedure of policy making against gender discrimination. In Greece, according to the Constitution of 1975 and the enforcement of EU

directives, wage discrimination and the unequal treatment of the workers are forbidden. Tzannatos' study is an attempt to evaluate the impact of legislation upon discrimination in the Greek labor market. Tzannatos calculates that in the period 1967-1980 the wages of the full-time employed women in the industry sector was on average 68% of the wages of men. In 1981 the ratio decreased to 67.2 % but in the period of 1982-83 it increased to 73.5%. A 76.1% of this increase was due to the application of measures against labour inequalities (Tzannatos, 1987).

Other researchers have reservations about the effect of the legislative intervention in Greece, mainly because of the complex interaction with socio-economic factors. More specifically, the improved terms and conditions of work as a result of legal requirements provide an incentive for the increase of female labour supply. This in turn pushes female wages downwards. The legislation concerning minimum wages acts as a break to the continuous fall of wages and leads to the stagnation of female employment. Furthermore, it sustains the excess female labour supply. In short, women who desire to work face higher labour market competition and have to accept lower wages. These lower wages are to some degree the result of employers' discrimination.

### **3. Gender Inequalities in Italy**

As in most other EU countries, there is a legal framework in Italy which prohibits gender discrimination in the labour market. More specifically, in Italy, gender pay equality is a principle enshrined by the Constitution (in Article 37) and by the Workers' Statute (Law 300/70), whose Article 16 forbids differentiated wage treatment between employees on gender, religious, political or trade union grounds. The legal framework and the EU directives seem to have a contribution in a downward trend in the gender pay gap. The pay gap was reduced from 7.5% in 1998 to 6% in 2003 (Eurostat, 2004). However, a situation of continuing pay inequality between women and men is highlighted by a series of reports. The most influential of them was the "Contrattazione, retribuzioni e costo del lavoro in Italia nel contesto europeo", 2002-3 ('Bargaining, wages and labour costs in Italy within the European context, 2002-3'), published by the National Council for Economic Affairs and Labour



(Consiglio nazionale dell'economia e del Lavoro, Cnel) and drawn up by the Centre for Economic, Social and Trade Union Studies (Centro di Studi economici, sociali e sindacali, Cesos).

The Cnel report analyses gender pay differentials in Italy between 1998 and 2002, and suggests that they could be explained by differing productivity of the labour force by gender. The analysis indicates that, even though the gender gap in annual earnings is following a downward trend, it is still high. In 1998, men earned per year on average a quarter more than women, falling to 23.5% more in 2000 and 20.6% more in 2002. These differences are mainly determined by the fewer hours worked by women compared to men, the wage gap is in fact significantly narrower if hourly wages are considered (4%-5%).

Furthermore, the report finds that the annual wage differential increases consistently with age, education and qualification level. Younger women workers earn only 5%-7% less than their colleagues, while the difference is substantially higher for those aged 40 (20%) and above (25%). According to the study, thanks to new equality-based recruitment policies, wage differentials among young workers are following a downward trend. The level of education does not affect gender wage differentials significantly among the lower to middle education levels (with women's annual pay 20% lower than men's) but it has a greater relevance among workers with a university-level education (with women's annual pay 30% lower than men's). The report ascribes this to the different courses of study chosen by women and men and the consequent career possibilities (with women tending more to take courses in the humanities and arts and men to take technical-scientific course).

Analysis of wage differentials by vocational qualifications and educational level indicates that the higher the qualification, the wider the pay gap. Between 1998 and 2002, women managers earned about 35% less than men with the same vocational qualifications, compared with gaps of 23%-25% for middle managers and 15%-20% for blue- and white-collar workers. Experience and the length of service play a fundamental role in the causes at the basis of the gender pay gap, states the report. Women's employment is characterised by longer periods of inactivity compared with male employment. Their periods of absence from the labour market are mainly due to maternity leaves, care of

children and dependants and a different retirement age. At the end of the working life, this absence means a lower seniority level with their current employer (an average of 19 years of seniority service for women against 21 for men in 2002). The study's analysis of wage differences by sector of economic activity finds that the main gender pay differential are in the private sector, and in particular in the credit sector (a gap of 30%) and in services to persons (25%). The gap is less wide in more regulated sectors such as transport (10%) (see, also EIRO).

Apart from gender pay inequalities, the data on employment structure is also useful for revealing important aspects of labour market discrimination in Italy. The following table provides data on sectoral employment gender segregation.

Table 4. 1 Horizontal (sectoral) employment segregation in the European Union by gender 2002 Italy				
		Italy	EU - 15	EU - 25
Share of employed in industry	Men	42.3	40.8	41.8
	Women	21.6	15.2	16.6
	Total	33.8	29.3	30.3
Share of employed in services	Men	54.6	57.0	55.7
	Women	76.2	83.7	82.1
	Total	63.5	69.1	67.7
Share of employed in high-tech or knowledge intensive sectors	Men	32.7	36.4	35.5
	Women	48.7	52.4	51.6
	Total	39.3	43.6	42.8
Share of employed in low-pay sectors	Men	26.4	28.8	28.9
	Women	18.9	22.2	22.4
	Total	23.3	25.8	25.9
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 32				

As can be noted from the table, the female participation in industry is lower than the male one, but the female share is significantly higher than the average EU-15 and EU-25 levels. In accordance with the trend in most other European countries, the female employment in services is higher than male employment, but lower than average female share in EU. The same observation holds for female employment in high-tech and knowledge sectors. Finally, Italy scores better in the category of women in low pay jobs. Less percentage of women is employed in low pay sectors than men and this percentage is lower than the EU-15 and EU-25 countries.

Table 4. 2				
Vertical employment segregation in the European Union by gender 2002: Italy				
		Italy	EU - 15	EU - 25
Share of employees in managerial occupations	Men	2.4	7.3	7.1
	Women	0.8	3.7	3.8
	Total	1.8	5.7	5.6
Share of employees in supervisory positions	Men	11.8	16.6	na
	Women	4.9	9.2	na
	Total	9.0	13.4	na
Share of employees in intermediate positions	Men	16.4	17.9	na
	Women	11.7	14.8	na
	Total	14.5	16.5	na
Share of employed in non-supervisory positions	Men	71.7	65.5	na
	Women	83.4	76.0	na
	Total	76.4	70.1	na
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 30				

The vertical employment segregation data also provides some useful insights. The first observation is the very low percentage of women employed in managerial occupations compared to men. This figure is also substantially lower than other EU member states. A similar situation is observed when it comes to females employed in supervisory positions. The situation improves to a certain extent when we look at employment in intermediate positions. The gap between men and women here is not as great and the same is true for comparative figures in EU-15 countries.

Table 4. 3				
Working Time and Contract Status in the European Union by gender 2002				
Italy				
		Italy	EU - 15	EU - 25
Average working hours	Men	39.4	39.4	na
	Women	34.0	32.2	na
	Total	37.2	36.1	na
Full-time equivalent employment rate	Men	68.4	71.2	na
	Women	39.2	46.8	na
	Total	53.6	58.9	na
Share of part-time employees	Men	3.7	6.6	6.5
	Women	16.7	33.5	29.8
	Total	8.6	18.2	16.6
Share of employees on fixed-term contracts	Men	8.3	12.1	12.0
	Women	12.1	14.3	13.7
	Total	9.9	13.1	12.8
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 28				

As was mentioned in the introduction, working hours, contract status and part-time employment are also important indicators of gender labour market discrimination. Women in Italy work 5.4 less hours a week than men, but still average female working time is higher than the EU-15 level. The full time equivalent employment rate is substantially lower than the male equivalent in Italy and the same holds true for the average EU-15 figure. The share of women part-time workers is much higher than males and almost half of the European level. Finally, more females are in fixed term contracts than males but this level is similar to the EU-15 and EU-25 levels.

#### **4. Gender Inequalities in Cyprus**

As in other European countries, there is a legal framework in Cyprus against discrimination in the labour market. More specifically, the prohibition of discrimination and the principle of equality constitute a fundamental legal principle first laid down in the Constitution of the Cyprus Republic in 1960. Article 28 of the Constitution provides that 'all persons are equal before the law, the administration and justice and are entitled to equal protection thereof and treatment thereby'. There was also an anti-discrimination law based on Article 8(1) of Law 177(I) 2002 which enforces equal pay for men and women for similar work or work of equal value.

In spite of the legal initiatives however, Cyprus was the worst performer in terms of gender pay gap in 2003. In particular, the pay gap was 25% a slight improvement of the 1998 figure which was 26.5% (Eurostat, 2004). However, the gender pay was even worse if we take the data from the National Statistical Service's Labour Statistics. According to this data, with regard to the gender wage gap, in 2001 men were paid on average 34.9% more than women, a situation identical to 2000, while women received lower pay on average than men in all main occupational categories. However, the gap was smaller in occupations that require greater skill, such as the managers and senior management, and greater in the categories of machine operators, and people working in the service sector and in sales (see also EIRO, 2004). The National Statistical Service attributes part of the wage gap to the differences in qualifications between the two genders, length of service, professional duties, the field of work and possible discrimination in certain occupations. A study

based on a 1991 Survey of Household Expenditure and Income for Cyprus found that the average weekly wages for women were about 60% of those of men. The study claims that 60% of the observed gender gap can be explained by differences in average characteristics but much of this explanation includes the results of industry and occupation choices, and opportunities in these populations (Cristofides and Pashardes, 2000).

The employment situation is also quite negative for females. In particular, women's share of overall employment (ie the proportion of employed women in the total number of employed people) is significantly lower than that of men. The gap between the numbers of employed men and women in Cyprus is greater than in most of the current EU Member States. According to Labour Force Survey data, in 2002 the overall employment rate (ie the number of employed people aged 15-64 as a percentage of the whole population aged 15-64) in Cyprus was 68.5% (up from 67.9% in 2001). The rate for men was 78.8% (down from 79.4% in 2001) and for women 59% (up from 57.1% in 2001). For the group aged 25-54, in 2002 the employment rate was 93.2% for men and 72% for women (and 82.2% in total).

Overall, in recent years the composition of employment has displayed a small but steady shift in women's favour. According to data from the National Statistical Service of Cyprus, over 1995-2001 the presence of women in the labour market showed a steady increase. The percentage of women (of all ages) in employment rose to 41.3% in 2001 from 39.1% in 1995, while the corresponding rate for men was 60.9% in 1995 and 59.7% in 2001. However, despite the progress in women's participation in the labour market, women have a higher unemployment rate. The overall unemployment rate was 3.4% in 2000, falling to 2.9% in 2001. Unemployment rates for men fell from 2.7% were aged 30-50, and 27% were aged under 29 (EIRO, 2004).

In addition to the above, the sectoral employment segregation in 2002 is presented in the following table.

*Gender Discrimination and Institutional Frameworks:  
Evidence from four European Union Countries*

Table 5. 1				
Horizontal (sectoral) employment segregation in the European Union by gender 2002				
Cyprus				
		Cyprus	EU - 15	EU - 25
Share of employed in industry	Men	34.2	40.8	41.8
	Women	12.9	15.2	16.6
	Total	24.0	29.3	30.3
Share of employed in services	Men	63.7	57.0	55.7
	Women	86.1	83.7	82.1
	Total	74.5	69.1	67.7
Share of employed in high-tech or knowledge intensive sectors	Men	23.0	36.4	35.5
	Women	38.0	52.4	51.6
	Total	30.2	43.6	42.8
Share of employed in low-pay sectors	Men	42.3	28.8	28.9
	Women	31.3	22.2	22.4
	Total	37.0	25.8	25.9
Adapted from: Commission of the European Union, 2003, <i>Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications</i> ; Commission Staff Working Paper, SEC (2003) 937, page 32				

As can be seen from the table, the female share of employment in industry is below both the EU-15 and the EU-25 levels. This is not the case in the service sector though in which women enjoy an above average share. The female employment share is quite low in high-tech and knowledge sectors and the same holds true for the female share of low pay occupations.

Table 5. 2				
Vertical employment segregation in the European Union by gender 2002: Cyprus				
		Cyprus	EU - 15	EU - 25
Share of employees in managerial occupations	Men	3.8	7.3	7.1
	Women	0.9	3.7	3.8
	Total	2.4	5.7	5.6
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 30				

The female share of managerial occupations in Cyprus is much lower than the European average. In particular, the female managerial share is more than four times lower than that of male managers. The serious under-representation of women is also obvious if comparisons with the EU-15 and the EU-25 figures are made. One can get an even clearer picture of female employment structure from the table 5:3.

As the table indicates, women work 1.4 hours a week less than men, but still 6.4 hours more than the average for women in the EU-15. The female full-time equivalent is higher in Cyprus than the EU-15 level. Furthermore, the female share of part-time employment is almost three times higher that of men but the figure is substantially lower than the comparative EU-15 and EU-25 levels. Finally, the female share of fixed term employment is almost at the same level with the corresponding figures in the rest of the EU countries.



Table 5. 3 Working Time and Contract Status in the European Union by gender 2002 Cyprus				
		Cyprus	EU - 15	EU - 25
Average working hours	Men	40.0	39.4	na
	Women	38.6	32.2	na
	Total	39.3	36.1	na
Full-time equivalent employment rate	Men	79.5	71.2	na
	Women	56.3	46.8	na
	Total	67.4	58.9	na
Share of part-time employees	Men	4.0	6.6	6.5
	Women	11.3	33.5	29.8
	Total	7.2	18.2	16.6
Share of employees on fixed-term contracts	Men	5.8	12.1	12.0
	Women	12.7	14.3	13.7
	Total	9.1	13.1	12.8
Adapted from: Commission of the European Union, 2003, <i>Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications</i> ; Commission Staff Working Paper, SEC (2003) 937, page 28				

## 5. Gender Inequalities in Slovakia

According to Eurostat data, the pay gap between men and women in Slovakia was approximately 23% in 1998. The gap remained constant for the year 2003 (Eurostat, 2004). Given this, the pay gap for this period was quite large with only Estonia and Cyprus exhibiting worse figures. However, if one takes a longer time period and use data sets based on national surveys, the trend in gender pay gap seems to have worsened. More specifically, the Slovak Statistical Office constructed a wage survey for the years 1997 to 2002. The survey methodology

was based on Eurostat recommendations and relates directly to the relevant EU Council Regulation on statistics on the level and structure of labour costs. At the same time, the sample survey carried out the task laid down in Government Resolution No. 43 (of 14 January 1997) on the implementation of a 'concept on labour costs' developed by the Ministry of Labour, Social Affairs and the Family (EIRO,2004). The summary results of the survey are given in the following table:

1996	1997	1998	1999	2000	2001	2002
74.5	78.5	77.0	75.0	75.0	74.1	71.7

*Source: Slovak Statistical Office.*

The decomposition of the survey data has revealed some other interesting aspects of the pay structure and its gender dimension. More specifically, the occupational group with the highest average monthly wage was legislators, senior officials and managers (men SKK 39,257 and women SKK 24,400). The lowest average wage for men - SKK 8,386 - was paid by associations of owners of housing and associated land. The lowest average wage for women - SKK 7,429 - was received by those in 'elementary' occupations. Focusing on particular categories, the lowest figures for women's wages as a proportion of men's were as follows:

- by level of education - 57.9% among employees with a bachelor's degree;
- by occupational group - 62.1% among legislators, senior officials and managers;
- by sector - 63.1% in the wholesale and retail trade and in financial intermediation;
- by age - 65.5% among employees 60 years of age or above;
- by form of ownership - 66.2% in foreign-owned companies.

In contrast, women's wages were closest to men's in the following categories:  
by level of education - 81.6% among employees with a higher vocational education;  
by occupational group - 86.5% among skilled agricultural and fishery workers;  
by sector - 87.6% in mining;  
by age - 88.8% among employees aged 20 years or below; and  
by form of ownership - 111.3% among employees of local government enterprises and services.

(Source: EIRO, 2004)

In 2002, the average monthly wage in Slovakia was SKK 14,597. Table 2 presents the gender wage gap in terms of gross average monthly wage ranges:

<b>Wage range</b>	<b>Men</b>	<b>Women</b>
Up to SKK 10,000	24.2%	45.2%
SKK 10,001-15,000	36.3%	36.3%
SKK15,001-30,000	32.6%	16.7%
SKK 30,001-60,000	5.7%	1.6%
More than SKK 60,000	1.2%	0.3%

*Source: Slovak Statistical Office.*

The data show that the wage gap is significant in all ranges except the second (SKK 10,001-15,000), which includes the average wage. Women are disproportionately represented in the two lowest ranges (nearly half of all women employees are in the lowest range), at 81.5% in comparison with only 60.5% of men (see also Jurajda, 2003).

The issue of occupational segregation in Slovakia also reveals labour market gender inequalities. The following table indicates the share of female managerial positions.

Table 6. 3				
Vertical employment segregation in the European Union by gender 2002: Slovakia				
		Slovakia	EU - 15	EU - 25
Share of employees in managerial occupations	Men	4.5	7.3	7.1
	Women	2.6	3.7	3.8
	Total	3.6	5.7	5.6

Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 30

As can be seen from the above table, the share of female managers is quite a lot lower than male ones. However, Slovakia seems to be in a better position in comparison with the average share female managers in EU-15 and in even better position in comparison with EU-25. The following table shows horizontal employment segregation in Slovakia.

Table 6. 4				
Horizontal ( <b>occupational</b> ) employment segregation in the European Union by gender 2002				
Slovakia				
		Slovakia	EU - 15	EU - 25
Share of employed in high skilled manual or non-manual occupations	Men	25.1	34.2	33.3
	Women	41.5	36.4	37.1
	Total	32.9	35.2	35.1
Share of employed in low skilled non-manual occupations	Men	7.8	8.1	8.2
	Women	19.8	22.1	21.4
	Total	13.5	14.5	14.2
Share of employed in low skilled manual occupations	Men	32.5	23.3	23.9
	Women	19.9	15.4	15.8
	Total	26.5	19.8	20.2
Share of employed in low-paying occupations	Men	18.3	19.2	19
	Women	31.8	34.4	33.7
	Total	24.8	26.1	25.7
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 33				

One can make a number of interesting observations from the above table. First, the share of female high skilled occupations in Slovakia is well above for both the EU-15 and the EU-25 levels. Second, the female share of low skilled non-manual occupations is quite large compared with the male share. In spite of this however, Slovakia is better performer in this respect to European averages. This is not the case though, when it comes to low skilled manual occupations. Finally, the female share in low paying jobs is substantially higher than the male share, but still this level is better than the comparative EU-15 and EU-25 figures.

The sectoral approach to employment segregation also shows some interesting characteristics. The female share of industrial employment is substantially higher than the European averages. The female employment in the

service sector is higher than male employment but not as high as in other EU countries. It seems that female service employment lags behind the trends in other EU member states. The same observation holds for female employment in knowledge and high tech jobs: it is higher than male employment but below the European average. The female share of low-pay employment is lower than the male equivalent and generally close to other EU countries.

Table 6. 5				
Horizontal ( <b>sectoral</b> ) employment segregation in the European Union by gender 2002				
Slovakia				
		Slovakia	EU - 15	EU - 25
Share of employed in industry	Men	48.8	40.8	41.8
	Women	26.9	15.2	16.6
	Total	38.4	29.3	30.3
Share of employed in services	Men	42.4	57.0	55.7
	Women	68.7	83.7	82.1
	Total	54.9	69.1	67.7
Share of employed in high-tech or knowledge intensive sectors	Men	24.9	36.4	35.5
	Women	42.7	52.4	51.6
	Total	33.4	43.6	42.8
Share of employed in low-pay sectors	Men	31.2	28.8	28.9
	Women	24.5	22.2	22.4
	Total	28.0	25.8	25.9
Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 32				

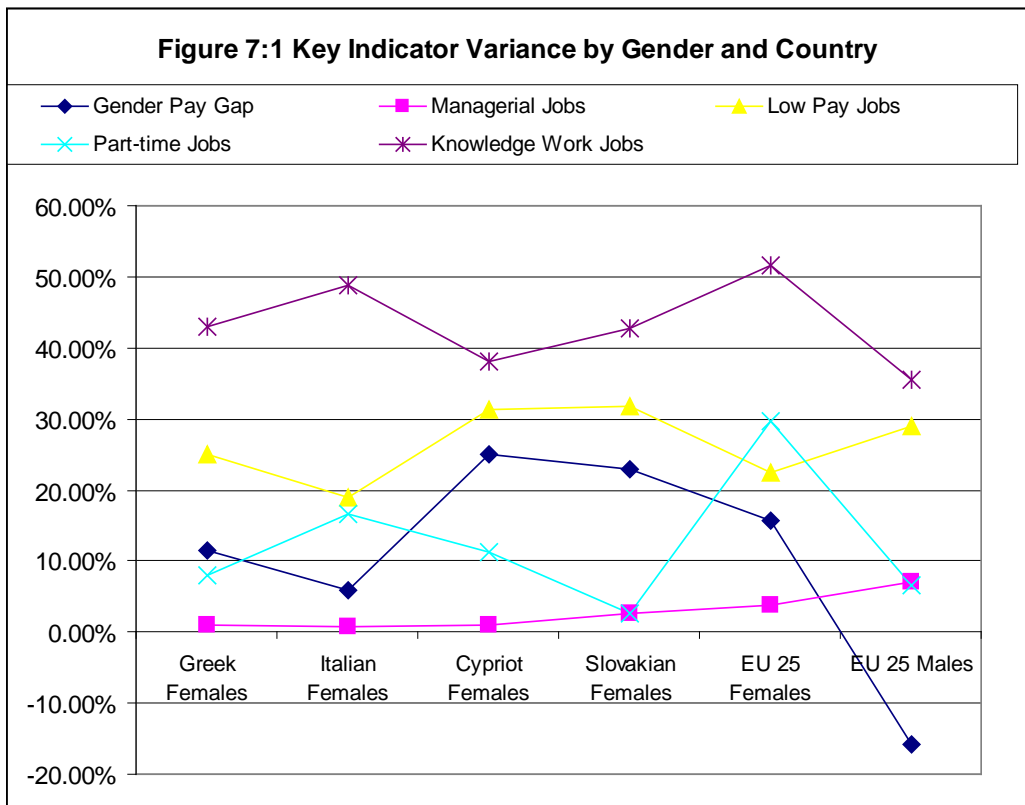
Contract status and working time are also important indicators of gender labour market discrimination. The above table shows that there is no substantial difference between men and women as far as the average weekly working hours are concerned. However, females in Slovakia work 5.3 hours a week more than females in EU-15. Females in full time equivalent employment are also worse off than males in Slovakia. The share of female part-time employees is substantially lower than that of women in EU-15 and EU-25 countries. The same observation holds in the category of female workers with fix-term contracts.

Table 6. 6				
Working Time and Contract Status in the E U by gender 2002; Slovakia				
		Slovakia	EU - 15	EU - 25
Average working hours	Men	41.9	39.4	na
	Women	40.9	32.2	na
	Total	41.4	36.1	na
Full-time equivalent employment rate	Men	61.7	71.2	na
	Women	50.0	46.8	na
	Total	55.8	58.9	na
Share of part-time employees	Men	1.2	6.6	6.5
	Women	2.7	33.5	29.8
	Total	1.9	18.2	16.6
Share of employees on fixed-term contracts	Men	5.1	12.1	12.0
	Women	4.4	14.3	13.7
	Total	4.8	13.1	12.8

Adapted from: Commission of the European Union, 2003, Gender Pay Gaps in European Labour Markets – Measurement, Analysis and Policy Implications; Commission Staff Working Paper, SEC (2003) 937, page 28

## 6. Concluding Remarks and Discussion

One can make some interesting observations from the above data and discussion concerning the four countries under review. A general point is that in all four countries there are clear gender based inequalities in the labour market although the extent of these inequalities varies significantly. We saw that in all the countries concerned, there is a legal framework which prohibits gender discrimination and this legal framework has been reinforced by the relevant EU directives. In spite of this however, there are still important gender gaps, as Figure 7:1 indicates.





Pay inequality is a crucial dimension of the gender gap. According to the Eurostat data, there has been an improvement in the overall gender pay gap in the countries concerned. In particular, the 2003 figures show an improvement compared to 1998 in all four countries. Italy has the lowest pay gap and the second lowest pay gap among EU-25. Greece is a relatively good performer as only four countries have lower pay gaps in EU-25. Slovakia and Cyprus have considerable pay gaps and are at the other end of the scale. The discussion also showed the variations of the gender pay gap according to age and occupation.

The structure of female employment is another important aspect of labour market discrimination. The discussion indicated significant differences in this respect in the four countries concerned. The female share of industrial employment is above the EU-25 average in Italy and Slovakia, while the figure for Greece and Cyprus was below average. The reverse holds for female employment in services where Greece and Cyprus are above average and Italy and Slovakia below the European average. Furthermore, the share of female employment in high-tech and knowledge sectors in all the four countries is lower than the EU-25 average with only Italy close to the average figure. All the countries except Italy are above average in the female share of employment in low-pay sectors. Another important observation is the very low percentage of female managers in all the four countries. In particular, only Slovakia is close to the EU-25 average, while Italy, Cyprus and Greece are the worst performers in that order. Interestingly enough, Italy is above the EU-25 figure when it comes to female full-professors or equivalent, while Greece, Slovakia and Cyprus are below average in that order.

Other female employment characteristics such as average working hours, full time employment and fixed contract jobs are also important indicators. More specifically, all the countries concerned are above average in terms of average weekly working hours of women. Women in Slovakia work the most hours per week while women in Cyprus, Greece and Italy follow in that order. Moreover, all the four countries are below the EU-25 average in terms of female share of fixed term contracts. The female share of full time jobs is below the European average in Italy and Greece and above average in Cyprus and Slovakia.

The other important characteristic is the absolute gender gap in unemployment rates. According to Eurostat (2005), all the four countries exhibit positive gaps and this implies that women experience higher unemployment rates than men. In particular, Slovakia had a positive unemployment gap of 2%, Cyprus a 2.3%, Italy 4.5% and Greece 8.5% (the reference year for Slovakia and Cyprus is 2004 and for Greece and Italy the year 2003). All four countries have a higher figure than the EU-25 average which was +1.7% for 2004.

According to theoretical studies, female pay, female occupational segregation and female unemployment are related to female educational attainment and to the average age of women at birth of first child (see for instance Mincer and Polachek, 1974; Becker, 1991 and Waldfogel, 1998). In terms of educational attainment as measured by completion of at least upper secondary school of women aged between 20 and 24, Slovakia has a percentage of 92%, Greece of 88% and Cyprus of 86%. The figure for Italy is at 74% and it is the only of the four countries under the EU-25 average which is at 79% (Eurostat, 2005). The data on first child birth for the year 2002, is Greece 27.5, Italy 28.5, Cyprus 26.5 and Slovakia 25 (Eurostat, Demography statistics).

It is evident from the above discussion and data that the four countries under review exhibit important aspects of gender labour market inequalities. It is also clear that individual countries differ in many aspects of gender discrimination ranging from top and above EU average performers to worst and below EU average. It seems that contributing factors to these differences are the national social and economic structures, the level of economic development, the legislative framework and the effectiveness of anti-discriminatory policies. It has to be mentioned though that there are certain improvements in many gender gap indicators in these countries and part of the improvements might be the result of the EU legislative and policy initiatives.

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## **The Board of Directors and its Role in the Corporate Governance System - Considerations about the Control Model - A Research Note**

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### **Abstract**

*The paper examines the corporate governance mechanism of the control model (or insider control system) by looking at both the motivation for management to deviate from following their principal's wishes and whether the supervising body, the board of directors would correct them. Some opportunistic actions deriving out of the principle-agent relation between owners and management are preventable; others are not and can only be minimized by a strong participation of the owner in the affairs of the company.*

**Keywords:** Supervisory Board Effectiveness, Control Model, Incentives

**JEL classification:** G32, G34, M12

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## **1. Introduction**

It is a feature of most large capital companies, that ownership of capital and the authority to act on behalf of that capital is separated and especially where the majority of shares are publicly quoted, questions about effective monitoring of the management are particularly relevant (Alchian and Demsetz, 1972; Jensen and Meckling, 1976; Fama and Jensen, 1983). Not only should capital be used according to the wishes of the owners, but also opportunistic behaviour by the management should be curbed. The main problem that governance addresses is that of agency arrangements and the problems that arise when owners delegate to managers within organisations. With their privileged access to information the manager may act on their own behalf and neglect the needs of the owners (e.g. Ang et al., 2000).

Competition of among corporate governance systems has led to the dominance of two systems: the market (or outsider control) model and control (or insider control) model. The market model consists of one board using the market to judge the performance of management. This system mostly in use in Anglo-Saxon countries differs from the control system in use in continental Europe. Here, the management is monitored by a board of directors, who acts as an additional agent for the owners. The board is basically concerned with all aspects of management and finances. What should enable the board to fulfil its task is its knowledge about the business and its superior access to information, granted by the law. The control system is still the alternative in absence of a strong financial market, but can a board have the same information as the market? Following various scandals in German enterprises<sup>4</sup>, the question is asked whether the board is really acting as an agent for the investors or if it follows some other agent<sup>5</sup>.

This article focuses on the control system and examines whether the board of directors, together with the auditor as an additional agent is in a position to ensure effective monitoring of the management. It is the aim of this article to analyse the weaknesses of the collective monitoring institutions and to critically ask if regulation could help to improve the situation.

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<sup>4</sup> See Peemöller and Hofmann (p.2005: 80-122) with an overview.

<sup>5</sup> For Criticism of the board of directors see Fischbach (p.2003: 1) and Schwalbach (p.2004: 186).

## **2. Methodological Critique of Previous Contributions**

The body of research on the relationship between ownership and control under corporate governance research has grown rapidly in the last years (Spira p. 2002: 9). Clarke (p.1998: 57) stated that increasing research interests and activities were taking place not only in the United States where the subject is well established as a significant focus of business research but also in Europe, especially in Germany (Gerum p. 2006: 25).

Most of the research is based on agency theory which understands management as an agent of the shareholders. Both the underlying assumptions and the theoretical approach has been criticized (e.g. Donaldson, 1990; Muth and Donaldson, 1998; O`Sullivan, 2000) due to the limited view agency theory offers of organizations and the implied assumptions regarding opportunistic behaviour which could be controlled by incentives and control systems. Alternative approaches are offered by the stewardship theory (Donaldson and Davis, p.1991: 49) and stakeholder theory (Clarke, p.1998: 57). Stewardship theory adopts a very standardized understanding of actors which has already been criticised in the context of agency theory (see Böcking et al. p.2004: 427). Institutional approaches in organizational theory or resource theory offers further insights (Gerum, p.2006: 10), but generally it can be stated that research on corporate government lacks a comprehensive theory (Clarke, p.1998: 57; Leighton and Thain, p.1997: 29). Most agency theory based contributions focus on either the monitoring aspects such as the Anglo American type of audit committee<sup>6</sup> or the board of directors and try to analyse their effectivity and efficiency.

In Germany and Austria many contributions to this topic have applied a jurisdictional methodology, asking how the law could strengthen the position of the board of directors, attributing all failures to a weak position of the board (e.g. Strenger and Rott, 2004; Theisen, 2004). This approach has led to a surfeit of regulation, mostly triggered by current events which put pressure on the government to act<sup>7</sup> in order to build up trust to ensure ongoing investment within

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<sup>6</sup> with an overview Spira (p2002: 15 -28).

<sup>7</sup> It can be seen on the numerous reforms of the board of directors in Austria (e.g. Insolvenzrechts-änderungsgesetz 1997; Gesellschaftsrechtsänderungsgesetz 2005) or Germany

its borders and to attract capital inflow from abroad. As these regulations are very often influenced by political considerations, many of them are failing to meet the requirements of a globalized economy or to integrate scientific theory and findings (Carver, p.2007: 1032). Where regulation is seen to be weak, it is remedied with even more regulation. These normative contributions fail to take into account the incentives of members of the board and do not understand the board as a collection of single individuals with their own preferences and agendas and their own views of the means to achieve them.

Recent empirical data has focused on the information needs of the board of directors (Ruhwedel and Epstein, 2003) and the audit committee as a governance mechanism of the supervisory board (e.g. Coenenberg et al., 1997; Fischbach, 2001; Köhler, 2004; Steller, 2007; Warncke, 2005) to enhance their ability to control the management, although the findings of such research are inconsistent. Other studies focus on the German particularities<sup>8</sup> or the information politics of enterprises in respect of good corporate governance (Theisen and Raßhofer, 2007). Also, these studies fail to prove the success of government regulation regarding both efficiency and reporting by management and the board of directors.

### **3. Theory and Methodology**

Using principal-agent theory, the starting point of our considerations is the connection between principal and agent. This rests on the assumption of opportunistic use of information deficiencies by the agents (Jensen and Meckling, p.1976: 308). In our case, as the board of directors acts as an agent for investors, conflicts can occur where the interests of principal and agent differ. Under the solutions proposed by principal agent theory, incentives and control mechanisms have to be in place to assure compliance of the agent. Non-compliance by the agent can derive from various reasons and is not limited to intentional wrongdoing. It can also arise from the inability of the principle to speak with one voice or to have consistent opinions over time.

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(e.g. Gesetz zur Kontrolle und Transparenz 1998, Transparenz und Publizitätsgesetz 2002). For an overview see Nietsch (2005).

<sup>8</sup> see Gerum (p.2006: 48) with further evidence .



So far, there is no scientific evidence of the superiority of any of the systems in use (Shleifer and Vishny, p.1997: 774),<sup>9</sup> but there is an increasing dissatisfaction among investors with the activities of their board-members (e.g. Fischbach, p.2003: 1; Theisen, p.2004: 480; Ruhwedel and Epstein, p.2003: 166).<sup>10</sup> Which actions do these board members consider most appropriate and which activities are beneficial to them? In addition if they freely choose their actions, do they really harm the interests of the shareholders? To give answers to these questions, this contribution adopts a deductive, praxeological approach. This requires the understanding of board-members as self-determined actors with their own goals, who are free to choose their strategies to achieve them<sup>11</sup>.

This article is not demanding more regulation but rather asks, if these pervasive regulations make any sense and therefore should give further insights in the weaknesses of the control-system.

#### **4. The Governance of a Capital Company in the Control Model**

The organization and the function of a capital company are shaped by a variety of interest and actors. One characteristic is the separation of administration and monitoring by the two institutions, management and board of directors. The management, which is appointed by the board of directors, runs and represents the company. The board of directors is entrusted with the supervision of the management. Its members are elected at the annual general meeting of investors. Its main tasks (legal functions) are as follows<sup>12</sup>:

- Election, appointment, dismissal and re-election of management
- Formal and material supervision of the management
- Acceptance of the financial statement, including proposals on the allocation of the unappropriated profits
- Submission of proposals for new candidates for the board of directors

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<sup>9</sup> In this context Kaplan (p.1997:92) shows in his study that there is now correlation between a certain system and business performance.

<sup>10</sup> For Conflicts of interest within the board of directors and problems of participation at the example of VW see Hopt (p.2006: 3).

<sup>11</sup> As suggested by Mises (1998).

<sup>12</sup> For a wider representation of the board tasks see Hopt and Leyens (2004).

The supervision of management focuses on financial reporting by the management to investors. Additionally, a number of business transactions are subject to agreement of the board. Basically these are all transactions with material effects on the financial position and assets. The board also proposes the choice of auditor, although the final decision lies with the owners. In doing this the board also has to assure that the auditor is independent from the management.

Following DCGK<sup>13</sup> No. 5.3.1, the board should create committees to raise efficiency and effectiveness. One of these, the audit committee, is quasi obligatory for listed companies in the prime segment (AKIEÜ, p.2006: 1628). Its task is the preliminary audit of the financial reports and the appointment of the auditor for the board.

In view of the above, the authors would argue that the owner as the principal has three agents, the first of which is the management, which operates the company corresponding to the wishes of the owners, having the full authority to utilise the capital, theoretically leaving the owner in a much weaker position. To strengthen the position of the owner, two institutions are acting as an agent on his behalf, namely the board of directors and the independent auditor. Whereas the duties of the independent auditors are limited to guarantee the truthfulness and completeness of the reported information, the board of directors has a much more complex role to play.

#### **4.1 The Management**

The separation of ownership and control is due to the complexity of business models and a quickly changing environment, under which it was not practical for a single owner to operate.

Historically, this step was seen with suspicion by the owners, but they quickly adapted to their role to support the management on strategic decision-making and started to enjoy the fruits of their investments. As Lorenz von Stein summarized in 1868 (v. Stein, p.1868/69: 35), great amounts of capital were applied and given to educated managers. Their superior technical knowledge soon reached a level superior to that of the owner (v. Stein, p.1868/69: 35). The signal of the quality of the management's action was standardised information

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<sup>13</sup> Deutscher Corporate Governance Kodex (German code of corporate governance)

regarding the employment of their capital and any payout (if the business was profitable). The reports the investors received were either periodical such as the annual financial statement or quarterly statements or they would consist of ad-hoc information. To assure readability and decision usefulness, these reports followed a standardised format. Parts of this information were subject to audits by the independent auditor to assure truthfulness and completeness. In recent times, trust in auditors has suffered severely due to collaborative action from management and auditors. The failure of this principal agent will not be discussed here.

There are several reasons why management might not comply with the wishes of the principal.

- The agent might be uninformed about the wishes of the owners
- The owner might be indifferent, but makes up his mind afterwards
- The agent acts opportunistically (Donaldson and Davis, p.1991: 50) and optimizes its own benefits (Jensen and Meckling, p.1976: 308)
- The agent acts with criminal intent

In most publicly owned companies, any majority investor will become involved with the governance of the enterprise. This majority allows the investor to influence the decision on who should be appointed to the board, rather than the management. The position of minority shareholders is more tenuous. Minority shareholders enjoy special rights in proportion to their stake in the company. It has to be questioned if these special rights really do pay off. If the majority owner is a strategic investor, he will be encouraged to maximize the earnings of the enterprise, which is also to the benefit for the minority investor. It is possible that the minority shareholder would vote for a short-run profit rather than long term. In this case the interests of the majority shareholder would count more as he has acquired a larger stake of the venture.

In modern publicly owned firms, many minority investors tend to buy shares for short-run earnings. The decision to invest derives partially from advice of third parties and the investors do not take any interest in the development of the company. These investors do not participate in the annual general meeting

(Schilling, p.2001: 149) but renounce the right. It is this lack of interest that prevents the management from following the wishes of these minority owners.

As they do not know what the investors want, management compensate for this lack of knowledge by the maximization of earnings. Merger and acquisition decisions are made despite thousands of employees getting dismissed. Thus, management receives incentives to maximize earnings in the short run, which also has the advantage of attracting new investors. Regarding earnings management, the management has a tendency to follow opportunistic cycles, as seen in political behaviour. These considerations, also called “big-bath strategies”, an attempt to write down the assets of a company at the beginning of their tenure to a minimum amount showing a very favourable development of profits during their term due to lower amortisation and depreciation charges. This behaviour is particularly significant if there are option plans in use to compensate the management for their activities.

Opportunistic behaviour is enabled by asymmetric information due to the inability of the principal to recognise the quality of the agent’s actions (Smith and Watts, p.1992: 275). Opportunistic behaviour of the managers can cause four generic problems for investors:

- Managers are not working hard to maximize value
- Managers know more about their quality and capabilities than the investors
- Situations in which investors and managers disagree
- Important managers could hold-up the investors by threatening to leave the company. (Kaplan and Strömberg, p.2004: 2177; Bassen et al. p.2006: 129)

The management could also act with criminal intent, by using money for other purposes than reported to the investor in order to receive private benefit from their actions. Due to the information asymmetry, they might be tempted to misuse the money entrusted to them.

After this compilation of possible failures to comply with the wishes of the investors, it should now be discussed what might happen to prevent the board of directors from detecting such actions and providing a remedy.

## **4.2 Board of Directors**

The board of directors is an institutionalised governance mechanism designed to supervise the management as an agent of the investors. It is a visible control mechanism with the responsibility for certain control activities (Böcking et al. p.2004: 424; Baums, p. 1995: 11). As already mentioned, it is the board of directors' task to supervise financial reporting. There are also certain business activities which are subject to acceptance by the board. The material and structural organization of the board is not regulated by any legislation, with the exception of its functions and appointment of its members. This enables the board to execute its tasks without the approval of the shareholders and management. Thereby the separation of ownership and control is assured, at least theoretically (Theisen, p.2003: 290).

To ensure the execution of its task, the board has to invest material time resources. It does not need to conduct any audits itself, but has to analyse the findings of other auditing bodies such as the internal auditors or the independent auditors.

As audits are trust goods, there is no reward for increasing auditing activities. For his activities, the board member receives an agreed payment. As the quality of audit and control-activities are impossible to judge a priori, the board member receives an incentive to minimise his effort. Instead of investing more time in an existing engagement, the member of the board might accept another additional engagement in another company.

From the point of view of the board of directors, it is often argued that the engagement in a board of directors is seen as a part-time job (Lenfer, p.2005: 389; Potthoff, p.1995: 163). As the members of the board are often chosen to represent certain interest groups, the will to supervise might be limited (Theisen, p.2004: 488).

The inability of the board to supervise the management might also be rooted in a lack of competence and understanding of the business model (Schwalbach, p.2004:188). As the competence and ability of one potential member is difficult to judge before they start working, mostly proxies like formal

education or years in service are used. Also SOX<sup>14</sup> tries to standardize this competence with regards to financial competence. If the owners are indifferent with regards to their board members, they tend to follow the suggestion of the management, which threatens the board's independence. A study revealed that just half of the proposals for new appointment to the board in the enterprises listed in the DAX-, MDAX- and TecDAX-segment came from the board itself (AKIEÜ, p.2006: 1627). Also the practice of contracting specialists for finding suitable candidate is declining (Deloitte Consulting, 2004). New members are chosen from other companies, which might result in an inappropriate knowledge of the business of the company. The lack of competence of parts of the board endangers performance as the board acts as a collective institution and the individual member has to argue his views against others.

A particularity of the Austrian and German system is its obligatory appointment of staff representatives into the board. This mixture of shareholder and stakeholder approach bears the danger of politically motivated action<sup>15</sup>.

Additionally, the law demands a minimum of four meetings of the board a year – sometimes via videoconference which is quite low considering the size of the board with sometimes up to twenty members<sup>16</sup>. The board members are allowed to have up to ten (§ 100 AktG) (in Austria eight (§ 86 Abs. 4 AktG)) engagements at a time, which makes more regular meetings very difficult. Although the number of meetings is a weak proxy for the quality, it implies that continual supervision is unlikely to take place.

Like the management, also the board can adopt opportunistic behaviour or build a coalition with the management. In the short term, the investors have no ability to assess the behaviour, which might even promote criminal behaviour by certain members or the board as a whole.

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<sup>14</sup> Sarbannes-Oxley Act

<sup>15</sup> As seen at Volkswagen, the representative of the staff is also prone to intentional wrongdoing.

<sup>16</sup> According to the legal requirements for a supervisory board above a certain company size. (§ 95 AktG)

## **5. Analysis**

A member of the board will invest sufficient time to satisfy the investors and thereby to ensure his re-election. This imposes a natural limit to the engagements the person can accept.

As multiple engagements and the ensuing limitations to the time directors can devote, are not visible to investors, they will mostly be revealed after a problem has arisen. Therefore, some voluntarily restriction would be beneficial<sup>17</sup>. Probably the strongest incentive for conscientious engagement by a board member is the possible damage to personal reputation, which would occur in the event of a situation in which he was seen to have failed to exercise necessary control. It would be desirable to establish a “watch list” of poorly performing members, which could be hosted by an investor association. Badly represented shareholders could propose certain individuals for this list; the association could then start to investigate.

Demands for greater personal liability of board members would not be feasible, as action would be hard to prosecute. However, further appointments or the re-election of such a person would be affected. It would be even more difficult to mandate a certain level of qualifications. The investors would probably not be able to make a judgement of the individual’s ability. From the management’s point of view, an inadequately qualified person would be beneficial, as little monitoring would be expected (Theisen, p.2004: 484). Attempts to demand certain work experience before allowing a person to run for board membership is nothing more than an attempt of standardization and not a guarantee of performance. Also, the threat of a loss of reputation would not work as the person themselves is not capable of performing better. Attempts to deter people by imposing fines for badly qualified potential members would not be purposeful, as these people are mostly not aware of their lack of qualification. Again if this were to be implemented, the courts would have to take some proxies like formal education or years of experience into consideration.

Additional danger stems from the temptation of members of the board to undertake opportunistic behaviour. To overcome problems of competence, the

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<sup>17</sup> As proposed in DCGK No. 5.4.5. respectively ÖCGK No. C-57.

investors tend to vote for former members of management, as they have inside information and are used to the culture and structure of the enterprise. These former members of the management now suddenly have to control management decisions in which they themselves had been involved. Additionally, these senior managers tend to develop their own successors, thus there is an informal connection between management and the agent in charge of controlling management. This has now been addressed by a minimum time in between acting as manager and accepting appointment as board member.

The question of how much the members of the board should earn has been the subject of discussion both by the public and the media. There is little consensus on the appropriate amount, appropriate and the supervision available will only come at a cost (Schwalbach p.2004: 190). Additionally, any potential liability has to be reflected in the amount.

The corporate governance codex suggests paying a fixed and a variable part of these earnings<sup>18</sup>. The variable elements should reflect the participation and performance of the member in the subcommittees (AKEIÜ, p.2006: 1629). This would necessitate a clearly defined set of requirements in respect of personal performance and achievements which would be very difficult to specify. To make any judgement on individual performance, it would be necessary to develop an objective measurement system, which will be hard to find (Theisen, p.2004: 483). Empirical research shows that these requirements are mostly not available (Oechsler, p.2003: 311) and that the selection process of supervisory boards is not transparent and appears not to be very professional (Schilling p.2001: 149). If earnings reflect the time required to fulfil the task, it would be reasonable to assume that at times, the payment would be inappropriate. Therefore, it is suggested that to pay higher salaries for board members in German companies would be to place higher incentives to encourage stronger engagement (Theisen, p.2004: 483). This also implies that the qualification of the members would meet the requirements and therefore a proper

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<sup>18</sup> As demanded by the German Corporate Governance Codex No. 5.4.7 DCGK



incentive is needed to achieve this objective. As empirical work has revealed the lack of written requirements, these demands have to be challenged<sup>19</sup>.

Potential for conflict arising from the independence of the board from management is a consideration arising from the variable component of the member's financial compensation. Especially, if these variable components are related to earnings or other elements which can be influenced by financial politics and for which the management receives benefits, too. Stock options for members of board are therefore very dangerous.

Additionally, in Austria and Germany board membership is seen as an additional occupation, which is very attractive for individuals from various parts of society like politicians, managers of other enterprises, bankers, etc. Therefore, the composition of the boards mostly reflects the interests of certain groups and does not follow competitive conditions.

As board members lack the power to influence business transactions (at least theoretically), it would only be possible for them to carry out fraudulent activities in conjunction with the management. Here, criminal actions are defined as an agreement to carry out illegal activities in order to receive personal benefit in return. One example of this would be a deliberately misleading communication to investors. Such actions would involve the agreement of a substantial circle of members of management and board. The coordinative actions would be over-boarding, so it is very unlikely that they would all agree on the distribution of the profit. Additionally, at least on the medium term, the independent auditor would either have to be misled or involved. Despite detection by the independent auditors, considerable loss might have occurred for the investors. Such activities are subject to prosecution by the courts.

To meet expectations, the board has to raise its proficiency (e.g. audit personnel) despite higher costs. Thus, the question of the willingness to pay has to be answered by the shareholders. Thus, the board of directors as a coordinating and centralized supervisory board seems to be the best solution. Especially where there exists a transparent election of the board members based on their qualifications, a transparent reporting on board activities and its

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<sup>19</sup> Following SpencerStuart (p.2004:21) not more than 22 % of companies listed in the DAX-, MDAX und TecDAX segment have written requirements for their board members.

committees. Taking this information into consideration, the investor could assess the effectiveness of the board. However, the investor will always have to accept a residual risk, inherent to every investment decision and reflected in a risk premium.

## **6. Conclusions**

Our considerations tried to show that the only possible solution to fight the principal agency problem is transparent reporting on the work of the board of directors. This includes the job specification, the appointment of its members or the engagement of the members in other boards. This transparency requires the active participation of the investor, as it would be useless otherwise. Some of the problems are solved by voluntary restrictions on the members of the boards, as seen in many Corporate Government initiatives all over Europe. Thus, it is possible to find a solution in accordance with the particular features of a company. This generates a constant debate about the conduct of the board. The threat of losing reputation must be kept alive through scrutiny by the investors. What exists at present is an expectation gap between the wishes of the investors and the real ability of the board of directors. This gap cannot be closed by the state, which is acting politically and following different ideologies. A state whose only intention is to fight the information asymmetry between a principal and an agent without pursuing any other political interests is rarely in existence. The state should therefore focus on the protection of private property rights.

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## **Financial Literacy of Youth. A Sensitivity Analysis of the Determinants**

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### **Abstract**

*This paper reports on the potential use of Neural Network as a sensitivity modeling tool for the determinants of financial literacy. The financial literacy modeling in this research has been attempted to measure the literacy of youth in the Australian society with respect to their financial knowledge of Credit Cards, Loans and Superannuation (Pensions scheme in Australia that allows for choice of funds and investment decisions by the member). Based on the financial literacy related parameters, Neural Networks results showed good promise and capability for efficient financial literacy determinants, and represent a potentially robust and fault tolerant approach. The findings indicate that the determinants of credit card are significantly dependent on a student's year of study, credit card status and daily routine, which has a strong relevance to respondents' knowledge of credit cards. (n=1070; 9.0070 and 10.5898 respectively). This study did not have the intention to explore the skills of youth in order to measure the level of financial literacy but the objective was to test the basic financial knowledge of key products that is common to youth in Australian society. In so doing, the researchers were keen to identify the determinants of financial knowledge.*

**Keywords:** Financial Literacy and/ or Knowledge, Youth Finance, Credit Cards, Superannuation

**JEL classification:** I22 and G18

## **1. Introduction**

Financial literacy has been an issue in many countries including developed and westernized societies. The cost of low financial literacy rates is substantial for the society and has been clearly identified by researchers (Joo & Garman: 1998, Cuter & Delvin: 2000). This paper reviews the definitions and reports on financial literacy among the different studies as well as reviewing the various researches on this important topic. The motivation for this study is due in part to the extensive research done in Australia by commercial banks with an interest on the Australian society's knowledge of financial issues. The importance of financial literacy was addressed by the Australian federal government through the Consumer and Financial Literacy Taskforce (2004) and thus, committed substantial resources to the development of a literacy foundation.

The perimeters and definition of financial literacy in this study attempts to understand the literacy of youth in our Australian society with respect to financial decisions on Credit cards, Loans and Superannuation.

The above topics are limited in order to contextualize the issues in relation to the youth between the ages of 16 and 24. The first part of the paper reviews the definitions of financial literacy. This is followed by a review of literature on the issues of financial literacy. Following the literature review, the methodology of the study is explained. Discussion of the findings and future research is in the fourth section of this paper.

## **2. Defining Financial Literacy**

Financial literacy is defined as the 'ability of an individual to make informed judgments and to take effective decisions regarding the use and management of money' (ASIC: 2003, Noctor, Stoney and Stradling: 1992). A more comprehensive definition appeared in the Journal of Financial Service Professionals which stated that 'personal financial literacy is the ability to read, analyse, manage and communicate about the personal financial conditions that affect material well being' (Anthes: 2004). From the many definitions of financial literacy, a few important paradigms have been considered in this study, namely the individual, level of financial knowledge and informed judgments. In terms of the individual, one has to consider that not everybody requires or need



the same level of financial knowledge. With respect to the level of knowledge and informed judgments, it is important to be aware that developed societies such as Australia, the UK and the USA tend to have financial products that are complex in their make up with diverse scenarios applicable to different financial needs. This environment facilitates a plethora of financial products that can create uninformed decision making among consumers due to simply the complexity of technical jargon and competition among financial institutions.

### **3. Literature review**

The financial literacy construct is very broad in that it does not specify the areas to which it is to be quantified. For example, it may be inappropriate to conclude that an individual is financial illiterate if they lack the knowledge of credit card interest rates or minimum balance payment; for that person may simply not believe in being in a debt situation or lifestyle. There are some sections of the society that do not concur to a debt lifestyle and may not be aware of credit card issues or loan interest rates such as compound interest or effective interest rates (EIR). Therefore, the definition of financial literacy does not identify the level or depth of an individual's literacy; therefore, it can be construed as being the least delineated construct. As stated by Mason and Wilson (2000), that there is an inadequate conceptualizing of financial awareness, this is due to the synonymous use of the term to mean financial awareness. Studies have shown that financial literacy does not mean that a person would be able to make the right financial decision, as that person may not be familiar with the financial awareness of the financial construct or particular instrument (Marriott and Mellett: 1996). Similar to the tests of Marriott and Mellett, there are a number of such tests and learning programs administered or established by financial institutions, governments and citizens websites. One such test revealed significant differences in the statistical analysis when structured modeling were applied to the data as compared to treating the evaluations as independent and disregarding the inherent correlation structures can result in erroneous conclusions (Fry et al.: 2006). In this study, the authors are applying similar modeling structure i.e. neural networks.

It has been shown that stress is a resultant feature of financial illiteracy. Research studies suggest that financial stress is common among low-income families

(Worthington: 2006), however there is no evidence to suggest that these low-income families are financially illiterate. Financial stress could be related to many social issues such as unemployment, large families and poor economic conditions. However, the authors would argue against the classification of financial literacy purely based on a questionnaire, test or in depth surveys conducted on individuals. The study conducted by Chen and Volpe (1998) can be criticized on the grounds that it was an accounting test with complex financial terminology. Stereotyping non-business major students as having a lower level financial illiteracy can be seen as being harsh especially when these students may not be financially knowledgeable in all aspects of financial matters.

The complex nature of a variety of accounts that are offered as differentiated products by financial institutions can be ‘mind boggling’. In the current financial world there is a web of financial terminologies such as Annualized Interest Rate (APR), compound rates of interests and hybrid rates. There is also a plethora of products that involve fine prints and legal clauses that even a professional would struggle to comprehend. The youth of today is faced with financial intricacies such as interest rates, complex nature of repayments options and investment options when they apply for loans or credit and even when they want to save for the future.

In Australian society as is the case in most western democracies, from the age of 15, a typical teenager learns to drive, starts part time work and receives superannuation (pension) from the employer of the minimum statutory requirement of 9%. At 18, the youth buys a car, gets a credit card (normally offered through promotion by banks with special rates to university students) and works longer hours and or studies full time or part time. This scenario is typical as the youth is involved in complex and highly responsible and possibly demanding situations and has to make financial decisions on income and expenses, budgets and future investments.

In a major review of the Banking Code in Britain by Atkinson and Kempson (2004), it was disclosed that there were 6 million youth; most of them are single and living at home. Approximately, half of them are in full time employment and the rest are in full time education. The following is a summary from the review of the literature pertaining to youth between the ages of 16-24:

- Banking relationships normally start when they move into work
- Common financial products are current account, an overdraft facility, a credit card and a savings account
- Half of youth surveyed had an overdraft facility
- 83% had a current account, 50% had overdraft facilities and 34% had credit cards.

As is the case in the UK, Australian youth debts levels are also a major concern, in a major study by the ANZ in 2003 found that low levels of financial literacy was associated with low levels of employment, single and ages between 18-24 (ANZ:2005).

In the USA, undergraduate students carried an average of three credit cards and had an average credit card debt of \$2,327 in 2002. This was a 15% increase since 2000 (Nellie Mae: 2002 cited by Tucker, J.A. (2003).

Financial literacy can be considered to be low among youth as most of the research had shown that it was due to the level of complexities and variety in the financial world. On the other studies in the UK have shown that numeric skills are also low among youth (Atkinson & Kempson: 2004). Numerical skills are important in assisting the understanding of financial skills. There is support in many countries such as Australia and the UK to have financial skills taught at middle school levels across the curriculum (ASIC: 2003, Atkinson & Kempson: 2004). This could be achieved in the mathematics syllabus when students are taught financial terminologies such various types of interest rates. Such studies should be compulsory for all students regardless of their streams of studies or careers.

In this research, students at a major institution from all faculties were randomly chosen to participate in the research. The questions were not typically based on testing financial skills but knowledge of key financial aspects relevant to youth. The instrument endeavors to capture the level of knowledge held by the respondents. It is envisaged that the study would reveal the respondents in depth knowledge with respect to credit cards, superannuation and loans based on descriptive and characteristic variables of the respondents. Through neural network techniques, the researchers were confident that this study would reveal

the relationships between the 17 input variables that included the basic knowledge and characteristics of the respondents.

#### **4. Research methodology**

This paper examines the potential use of neural networks to analyse the data (n=1010) on financial understanding of youth at a major Australian university. This technique captures the relationship between education, financial independence, work status, financial stress, age, gender and marital status and financial variables such as Loans, Credit cards and Superannuation.

Neural networks may give accurate predictions of future events or recommend decisions that turn out to be reasonable, but they cannot explain how they arrived at the results or why they should be trusted. Many users find this disconcerting, especially since other decision support tools have at least some explanatory capability. Causal decision models, such as mathematical programming models and simulations can provide information describing the consequences of a change in a proposed parameter, and certain intelligent systems can call on their internal symbolic structures to explain the chain of reasoning that led to a particular conclusion.

Several attempts have been made to provide the same functionality in neural nets. Measures of the relative importance or relative strength of inputs to the net have been developed. If the connection strengths associated with a particular input and output are large relative to the other weights, these measures report a high degree of importance or strength.

Neural networks have been criticized for their lack of explanatory capability. Unlike traditional statistical methods, it is difficult to interpret the significance of the input variables and understand the role played by the elements in the hidden layer. Various researchers have attempted to identify the contribution of various components of the network. For example, Barlett (1994) used entropy to compute the Information Theoretic Interdependency Analysis (ITIA) to measure the association between the input and output of the net. In order to assess the contribution of the input variables, Yoon *et al.* (1993, 1994) and Garson (1991) have developed measures based on the input-hidden layer and hidden-output layer connection strengths when the net stabilizes in training.

The networks used for Financial Literacy Modeling consist of a 17 unit input layer variables, more than 30 unit for two hidden layers and a six unit output layer trained using back-propagation. If we attempt to process elements in the hidden layers, it will be challenging. Removal of features method is the suggested method for this study. This means the 17 input candidates will be removed from training and classification. A variation in the contributions for a particular feature over different networks may also indicate that the given feature is not important in the classification. It is also possible that only the features with large contribution are useful.

The survey instrument was administered as a paper version initially to university students in the business and non business courses from Monash University. While financial academics can write any amount of multi-choice questions to test financial knowledge and skills, researchers have to keep the questionnaire as brief as possible in order to capture the general themes that can identify the minimum level of financial literacy. Therefore, the approach taken in this study is not to test specific financial questions but general and basic questions applicable to the general population of youth.

Under the credit card section the questions asked were not to test the specific knowledge but the range between the correct answer and the wrong answer. Other questions in this category looked at whether the respondent is aware of interest being charged for cash withdrawals, the interest free period days and the minimum monthly payment rates.

Superannuation is similar to pensions in the UK and USA. The marked differences in Australia is that every employer has a statutory obligation (currently 9%) to contribute into a super fund for his employees. This fund can be self managed or institution managed. In either way, individuals have full choice in deciding how and where their funds are to be invested and in a wide range of financial options. As such the Australian youth need to be fully informed of their rights and choices that would affect their retirement benefits. Under this section the questions are sought on the knowledge of respondents on the balance of their accounts, administration charges by fund managers, return of their funds and co contribution incentives.

On the section of loans and savings, the respondents had to answer questions in relation to knowledge of interest rates, difference in interest rates between personal loans and credit cards, ability to save , budget and knowledge of savings interest rates.

**Descriptive and frequencies of data analysis**

Applying SPSS, the following table details the descriptives of the analysis.

**Table 1 Descriptives of the population**

<b>Descriptives</b>	<b>%</b>		<b>Descriptives</b>	<b>%</b>
17-20	60		Living at home	70
21-23	30		Credit card	35
24-26	6		Mobile phone plan	65
above 26	4		Personal / Car loan	10
Male	44		Budget	53
Local	75		Fulltime work	5
1st year	40		Parttime work	28
2nd year	29		Casual	37
3rd year	16		Not working	31
4th year	8		Business course	54
5th year	7			

The biggest age group is from 17 to 20 years old. Males were 44% of the respondents. This study revealed that 70% of students in this study were living at home. 35% of the students had a credit card and only 10% had a personal or car loan. As for work status, a large group worked on a casual basis (37%) and a large proportion of students did not work at all. The analysis does seem to show a positive picture of the student profile of this university. The profile of the university as being an established and a well renowned educational institution attracts high achieving students. As this study is concentrating on the age groups between 16-24, data from age groups between 25 onwards were ignored. The age group that was ignored accounted for less than 10% of the data set.

**Removal of Features:**

Three training runs were carried out (Table 2), Credit Cards, Loan modeling. 17 inputs were selected and will be removed one by one to testing the different results before and after removal. The percentage of contribution will be calculated by the rule below:

$$Contribution\ of\ Input_i = \frac{\max(results) - result_i}{\sum_{i=1}^{i=17} \max(results) - result_i}$$

Where max (results) is the results with all the inputs and it did display better results than any other result combination after removal.

**Table 2: 17 inputs (coded) from questionnaires.**

- |                       |                               |                          |
|-----------------------|-------------------------------|--------------------------|
| (1) Age (AG)          | (7) Employment Length (EL)    | (13) Budget Status (BS)  |
| (2) Gender (GN)       | (8) Living Status (LS)        | (14) CSP (CS)            |
| (3) Student Type (ST) | (9) Marital Status (MS)       | (15) Work & Study (WOS)  |
| (4) Study Year (SY)   | (10) Credit Card Status (CCS) | (16) Hours for Work (HW) |
| (5) Course (CO)       | (11) Phone Plan Status (PPS)  | (17) Daily Routine (DR)  |
| (6) Work Status (WS)  | (12) Loan Status (LO)         |                          |

**Survey questionnaire**

The survey was based on the following inputs;

(1) Age of respondent ranges between 16 to 24, (2) male or female, (3) student type is based on international or local, (4) study year ranging from 1-5 years, (5) course is based on business or non business only, (6) work status is full time or part time work, (7) length of employment 1- 2, 2-3, 3-4 and 5 years or more, (8) living status is at home or others, (9) marital status is based on married, single or de facto, (10) credit card status is based on ownership, (11) phone plan status is based on phone plan or otherwise, (12) loan status is based on possession, (13) budget status is determined by action, (14) CSP is the possession of government subsidized student fees debt or otherwise, (15) work & study is based on the effects of working on studying or otherwise, (16) hours of work is based on less than 10, 11-20 and more than 20 hours, (17) daily routine is based on the effects of financial stress on daily routine of students or otherwise.

John et al (1994) gave the following definition for the relevance of features in a classification and a method for feature selection using induction algorithms (Table 3).

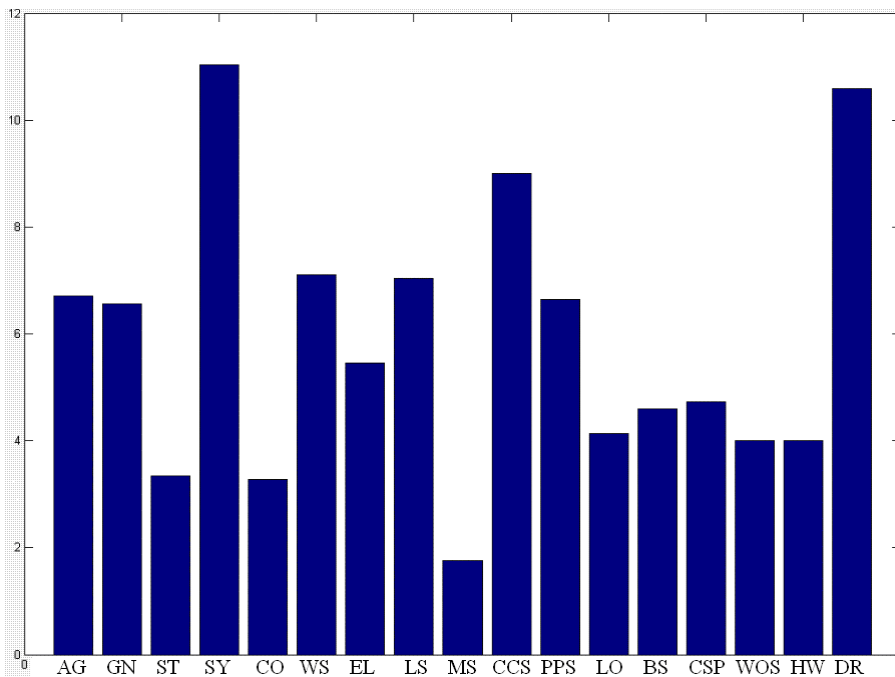
**Table 3: Definition for the relevance of features**

Strongly relevant feature	The feature is necessary and can not be removed without decreasing the number of correct classification.
Weakly relevant feature	The feature sometimes contributed to the classification.
Irrelevant feature	The feature will never contribute to the classification.

## 5. Findings and discussions

The results by removing each input, is the average for 60 independent runs. The results of credit cards are shown as a bar chart in figure 1 and table 4 (total contribution is 100):

**Figure 1 Run results from credit cards**





**Table 4: Contribution percentage for credit card**

AG	GN	ST	SY	CO	WS	EL	LS	MS
<b>6.7044</b>	<b>6.5687</b>	<b>3.3503</b>	<b>11.0420</b>	<b>3.2787</b>	<b>7.1038</b>	<b>5.4494</b>	<b>7.0322</b>	<b>1.76</b>
CCS	PPS	LO	BS	CSP	WOS	HW	DR	
<b>9.0070</b>	<b>6.6403</b>	<b>4.1379</b>	<b>4.5939</b>	<b>4.7296</b>	<b>4.0060</b>	<b>4.006</b>	<b>10.5898</b>	

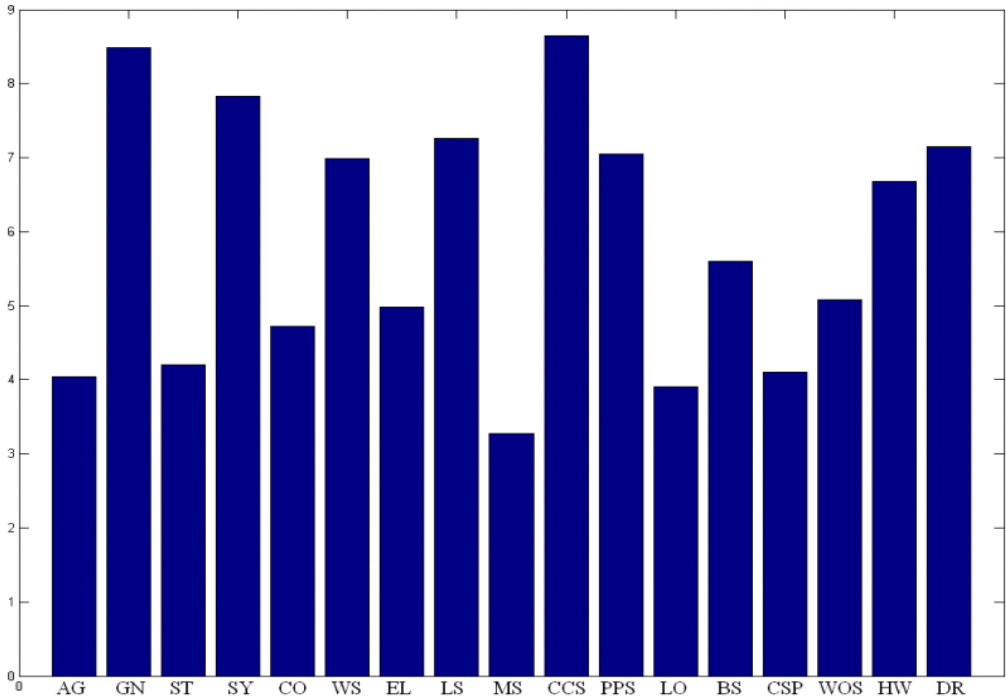
From table 4 and figure 1, year of study, credit card status and daily routine has strong relevance to respondents' knowledge of credit cards. Work status and living status has a small relevance to the knowledge of respondents. The findings indicate that a student's level of knowledge of credit card is determined whether they have a credit card and the effects of financial stress on their daily routine. This finding complements a quantitative and qualitative research study of youth in New South Wales (NSW) (OFT: 2003) which found that debt problems ranked above unemployment and youth suicide. In addition the NSW study found that a quarter of youth experienced debt that caused them some grief. Credit cards have traditionally been costly as interest rates on them are typically high and as stated in the NSW report, credit is too readily available (OFT: 2003).

With respect to loans, respondents' knowledge was strongly influenced by credit card status and gender. Living status, phone plan status, work status, daily routine, hours of work and year of study have relevance to the knowledge of respondents (table 5 and figure 2). Interesting findings reveal that gender has a bearing in this research and other studies (OFT: 2003, Fry et al, .2006). Studies conducted by the welfare agency in Australia (WRC: 2002) found that educational studies are affected by the level of welfare payments for youth who are unable to manage their finances.

**Table 5: Contribution percentage for loans**

AG	GN	ST	SY	CO	WS	EL	LS	MS
<b>4.0466</b>	<b>8.4878</b>	<b>4.2013</b>	<b>7.8263</b>	<b>4.7236</b>	<b>6.9906</b>	<b>4.9789</b>	<b>7.2575</b>	<b>3.2728</b>
CCS	PPS	LO	BS	CSP	WOS	HW	DR	
<b>8.6464</b>	<b>7.0525</b>	<b>3.8996</b>	<b>5.6018</b>	<b>4.1007</b>	<b>5.0834</b>	<b>6.6772</b>	<b>7.1531</b>	

**Figure 2 Run results from loans**

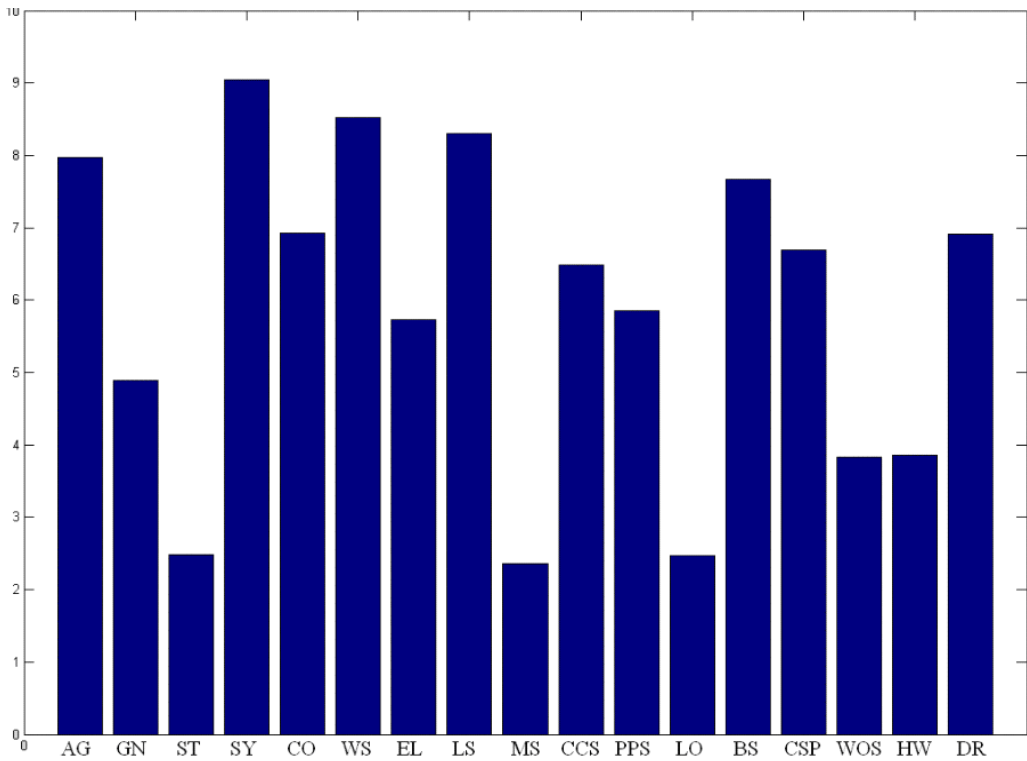


As for the run results of superannuation, work status, year of study, living status and budget status and age have strong relevance on respondents' knowledge of superannuation. Daily routine, CSP/ HECS debt, course type and credit card status has relevance to the knowledge of respondents in this category (table 6 and figure 3).

**Table 6: Contribution percentage for superannuation**

AG	GN	ST	SY	CO	WS	EL	LS	MS
<b>7.9775</b>	<b>4.8927</b>	<b>2.4761</b>	<b>9.0485</b>	<b>6.9202</b>	<b>8.5221</b>	<b>5.7348</b>	<b>8.2979</b>	<b>2.3615</b>
CCS	PPS	LO	BS	CSP	WOS	HW	DR	
<b>6.4900</b>	<b>5.8584</b>	<b>2.4624</b>	<b>7.6617</b>	<b>6.6960</b>	<b>3.8354</b>	<b>3.8537</b>	<b>6.9111</b>	

**Figure 3 Run results from superannuation**



With Australia's move to super choice, it is crucial that youth of today understand the cost and investment decisions they have to make so as to protect their retirement funds. These findings indicate the relevance of work status and age as being very important indicators for assessing knowledge of superannuation.

## **5. Conclusions and Future research**

We have used this sensitivity analysis method for determining the relative contribution of each input of a Neural Network on the output through our method differs from other neural net contribution measures in that it considers all input after the data preprocessing produce the best result. By removing the inputs one by one, we see that difference was made by the particular input. Obviously, each

training run will give you different results. That's the pitfall of the neural networks. More runs have to be done to overcome this problem.

Removing features with contribution close to zero and those with high variation in contribution still produced good results. It is yet to be determined at what point the contribution of a feature is close enough to zero and how much variation is required for a feature to be removed. It would not be as desirable to remove features that have a large contribution with variation as the fact remains it makes a large contribution. Of course, the number of input features that need to be removed will be determined by the data being used in the particular application.

This provides a possible explanation of the behavior of the neural network feature selection. Our work has three outputs; the problem of feature selection becomes more complicated. In the case where a network is to produce a number of classifications it may be that the optimal solution requires removal of different features for different classes. Thus, splitting up the classes over several networks, as is done in our case. It will be necessary to develop methods of selecting features for removal that are meaningful for networks that are more general.

This was the first attempt to understand financial literacy knowledge through the applications of neural networks. The results do indicate the logical application of this technique. As discussed, in the research undertaken with structured modeling (Fry et al.2006), neural networks could also provide a robust statistical analysis to the data. This application could reveal the complexities of understanding financial literacy or financial awareness. Further research with a larger population across the different society esp. the UK and other European countries will be undertaken further to test the reliability of the current study.

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## **A Review of the Rationales for Corporate Risk Management: Fashion or the Need?**

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### **Abstract**

*This paper presents the extensive literature survey based both on theoretical rationales for hedging as well as the empirical evidence that support the implications of the theory regarding the arguments for the corporate risk management relevance and its influence on the company's value. The survey of literature presented in this paper has revealed that there are two chief classes of rationales for corporate decision to hedge - maximisation of shareholder value or maximisation of managers' private utility. The paper concludes that, the total benefit of hedging is the combination of all these motives and, if the costs of using corporate risk management instruments are less than the benefits provided via the avenues mentioned in this paper, or any other benefit perceived by the market, then risk management is a shareholder-value enhancing activity.*

**Keywords:** Risk Management, Transitional Economies, Perception and Management of Risk, Empirical Surveys

**JEL classification:** G32, G30 and P31

## **1. Introduction**

Financial or corporate risks - the risks to a corporation stemming from price fluctuations - are pervasive, and directly or indirectly influence the value of a company. A combination of greater deregulation, international competition, interest rates and foreign exchange rate volatility, together with commodity price discontinuities starting in the late 1960s, heightened corporate concerns, which have resulted in the increased importance of financial risk management in the decades that followed (Allen and Santomero, 1998). It should be noted that, before derivatives markets were truly developed, the means for dealing with corporate risks were few, and thus financial risks were largely outside managerial control. Firms resorted to operational alternatives like establishing plants abroad to minimise exchange-rate risks, or to natural hedging by trying to match the currency structure of their assets and liabilities (Santomero, 1995). During the 1980s and 1990s, markets for derivative instruments have developed and grown at a breathtaking pace, and many corporations have become active participants in derivatives markets. Since then, the range and quality of both exchange-traded and OTC derivatives, together with the depth of the market for such instruments, have expanded intensively (Allen and Santomero, 1998). With the development of the derivatives market, active risk management has become an important part of modern corporate strategy, as can be seen from the fact that financial executives in companies all around the world have ranked risk management as one of their most important objectives (Bartram, 2000).

However, for a long time it was believed that corporate risk management is irrelevant to the value of the firm and the arguments in favour of the irrelevance were based on the Capital Asset Pricing Model (Sharpe, 1964; Lintner, 1965; Mossin, 1966) and the Modigliani-Miller theorem (Modigliani and Miller, 1958). One of the most important implications of CAPM is that diversified shareholders should care only about the systematic component of total risk. On the surface it would appear that this implies that managers of firms who are acting in the best interests of shareholders should be indifferent about hedging of risks that are unsystematic. Miller and Modigliani's proposition supports CAPM findings. The conditions underlying MM propositions also imply that decisions to hedge corporate exposures to interest rates, exchange rates and commodity prices are



completely irrelevant because stockholders already protect themselves against such risks by holding well-diversified portfolios.

However, it is apparent that managers are constantly engaged in hedging activities that are directed at the reduction of unsystematic risk. In the real world, financial managers and treasurers give a great deal of thought to matters of capital structure and securities design. Additionally, the corporate use of derivatives in hedging interest rate, currency, and commodity price risks is widespread and growing. As an explanation for this clash between theory and practice, imperfections in the capital market are used to argue for the relevance of corporate risk management function. Scholars have constructed two classes of explanations or determinants for management concern with hedging of non-systematic risk. The first class of explanations focuses on risk management as a mean to maximise shareholder value, and the second focuses on risk management as a mean to maximise managers' private utility. This paper presents and discusses the theories related to these arguments and their empirical implications.

## **2. Shareholder Maximisation Hypothesis**

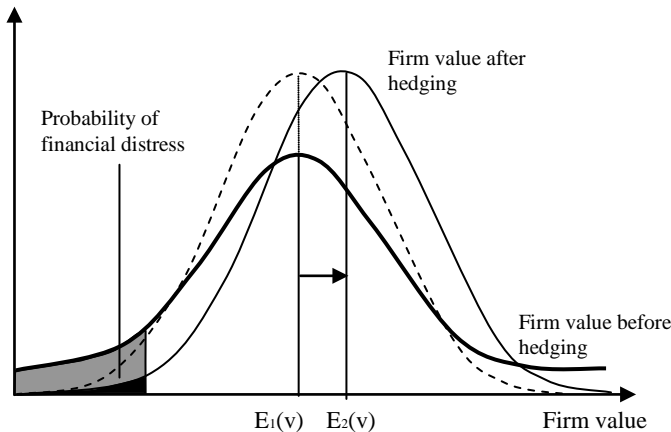
### **2.1 Cost of Financial Distress**

One of the possible explanations for managers' choices of risk management activities on behalf of their firms is based on the fact that non-systematic risk does affect the probability that a firm will go bankrupt or experience financial distress. If financial distress generates real costs for the firm as a whole, then shareholders will be interested in hedging this risk (Campbell and Kracaw, 1987). Additionally, the cost of financial distress is one of the reasons why firm performance and market value might be directly associated with volatility (Mayers and Smith, 1982; Stulz, 1984; Smith and Stulz, 1985; Shapiro and Titman, 1998; Haushalter 2000). In the MM world, financial distress is assumed to be costless. Hence, altering the probability of financial distress does not affect firm value. If financial distress is costly, firms have incentives to reduce its probability, and hedging is one method by which a firm can reduce the volatility of its earnings. Costs of financial distress include the legal and administrative costs of bankruptcy, as well as the agency, moral hazard, monitoring and

contracting costs which can erode firm value even if formal default is avoided (Myers, 1984). By reducing the variance of a firm's cash flows or accounting profits, hedging decreases the probability, and thus the expected costs, of financial distress.

The literature is filled with such stories. The classic paper by Warner (1977) was the first to present empirical evidence of the bankruptcy cost, but some other studies, such as Weiss (1990), have continued to reinforce its importance. Smith and Stulz (1985) used the same argument to justify a desire for reduced volatility. The authors were on the firm ground, as there is ample evidence that financial distress leads to substantially increased costs associated with bankruptcy proceedings, legal costs, and perhaps most importantly, the diversion of management attention from creating real economic value.

**Graph 1. Hedging and the cost of financial distress**

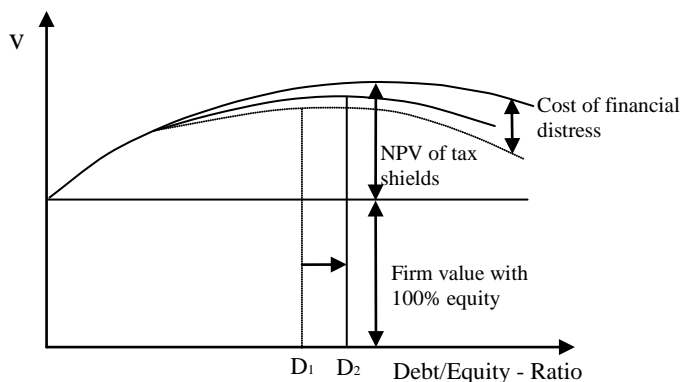


Source: Bartram, 2000

While the reduction of financial distress costs increases firm value, it augments shareholder value even further by simultaneously raising the firm's potential to carry debt. It is known that corporate debt creates a fixed cost that can be used as a competitive weapon (e.g. see Brander and Lewis, 1986; Maksimovic, 1988). This follows from the fact that interest payments of debt are made out of pre-tax income creating a tax shield of debt financing. As shown in graph 2, corporate risk management lowers the cost of financial distress, which leads to a higher

optimal debt ratio (or lower financing costs), and the tax shields of the additional debt capital further increases the value of the firm. However, shareholders must account for hedging costs when they decide among alternative hedging strategies (Smith and Stulz, 1985).

**Graph 2. Hedging and the cost of financial distress**



Source: Bartram, 2000

Dobson and Soenen (1993) have argued that foreign exchange hedging will lower the probability of corporate bankruptcy. By extending the longevity of corporations, hedging will tend to ameliorate the moral-hazard-agency-problem. Moral hazard arises from conflicts of interest among corporate stakeholders, for example management and debtholders. By reducing the probability of bankruptcy and thereby increasing the perceived duration of contractual relations between stakeholders, foreign exchange hedging increases the power of reputation to enforce contracts. They have also proven that when a firm undertakes international capital projects, uncertainty exists concerning the domestic currency value of the future cash flows from these projects. Foreign exchange hedging reduces this uncertainty by smoothing the future cash flow stream. Although this uncertainty is largely unsystematic, it does not just impact firm risk. It also impacts directly firm value. If projects are financed by debt, then the smoothing of the cash flow stream tends to lower the firm's cost of debt.

Bessembinder's (1991) model focuses on simple debt contracts and the senior claim, but the analysis can be extended to any obligation with higher legal

priority than equity. He has shown that hedging increases value by improving contracting terms. The hedging instrument specifically evaluated in his study is a forward contract, but the analysis also applies to other financial contracts, such as options and swaps, which alter the cash flow distribution such that there is a reduced likelihood of small cash flow realisations. Hedges provide net cash inflows in those states where the firm's cash flows are low, bonding its ability to meet commitments in additional states. Bessembinder's (1991) has proven that hedging can secure value-increasing changes in contracting terms with creditors, customers, employees, and suppliers if the contracts with these parties have initially positive Net Present Value (NPV).

When exploring corporate hedging behaviour, scholars are particularly interested in the relationship between hedging and leverage, since theoretical considerations suggest that both affect expected costs of financial distress and agency costs. Greater leverage exacerbates those costs, but greater hedging ameliorates them, suggesting a positive linkage. Dolde (1995) has controlled for financial risks differences by conducting a survey of Fortune 500 firms in 1992 and presents statistically significant evidence that leverage and hedging are positively related. He also constructed a direct measure of expected costs of financial distress and found some evidence that hedging measures interact with and mitigate the effects of leverage.

Haushalter (2000) has found that the use of commodity derivatives is to be related to the reduction of expected bankruptcy costs, which should increase firm value. He examined the hedging activities of oil and gas producers and has documented a wide variation in hedging policies among analysed companies. The tests conducted have found that this variation is associated with several differences in the firms' characteristics. Among oil and gas producers that hedge, the extent of hedging is related to proxies for financing costs. Conditional on a company hedging, the fraction of production hedged is increasing in the debt ratio, is greater for companies that pay out a smaller fraction of income in dividends, and is less for those that do have a debt rating. This finding is consistent with theories of the transaction cost of financial distress.

Mian (1996) has investigated all three types (commodity, interest rate, or currency) of hedging activities for a sample of 3,022 firms. He has found no

significant difference in leverage between hedgers and nonhedgers. Examination of type of a risk hedged yields results that are different to the two-way classification (hedgers vs. nonhedgers). The evidence indicates that interest-rate hedgers have higher leverage and longer term debt as compared to nonhedgers of interest-rate risk. In contrast, currency-price hedgers have lower leverage and shorter term debt as compared to nonhedgers of currency-price risk. Leverage is positively correlated with interest-rate hedging and negatively correlated with currency-price hedging. Mian's (1996) evidence has shown that lumping interest-rate hedging and currency-price hedging into one broad category essentially "averages out" the negative correlation between leverage and currency-price hedging, and the positive correlation between leverage and interest-rate hedging.

It could be concluded that the link between hedging and financial leverage supports the notion that hedging can reduce financing costs and it is also consistent with the predictions of Stulz (1996) who has argued that corporate hedging can be viewed as a technique that allows managers to substitute debt for equity. If financial distress is costly and if there is an advantage to having debt in the capital structure, hedging may be used as a means to increase debt capacity. As a result, a company's risk management policy should be made jointly with its financing policy. If hedging and financing policies are made jointly, evidence on literature survey presented in this paper indicates that studies of corporate financing decisions need to consider corporate hedging policies as well. In particular, a company facing relatively high costs of financing that hedges, may choose the same capital structure as a firm with lower costs of financing that does not hedge. Without controlling for hedging, the relation between capital structure and the determinants of the costs of financing will be missed.

## **2.2 The Agency Cost of Debt**

Besides being in a position to know more about the firm's prospects than investors, management also sometimes has the power to take actions that transfer value from bondholders to shareholders. The first agency conflict considered is usually referred to as the underinvestment problem. Jensen and Smith (1985)

have argued that when a substantial portion of the value of the firm is composed of future investment opportunities, a firm with outstanding risky bonds can have incentives to reject positive net present value projects if the benefit from accepting the project accrues to the bondholders. In this example, the manager of a levered firm has an incentive to limit the scale of investment because the additional returns from further investment accrue primarily to bondholders.

The second agency conflict considered is usually referred to as the asset substitution problem, also known as the risk shifting problem, which is encountered by the corporation in selecting among mutually exclusive investment projects. Jensen and Smith (1985) have observed that the value of the stockholders' equity rises and the value of the bondholders' claim is reduced when the firm substitutes high risk for low risk projects. Once a corporation has obtained debt financing, it is well known that by switching from a relatively safe investment project to a riskier one, the corporation can increase the value of its equity at the expense of its bondholders. This phenomenon can be explained by the fact that the residual claims of shareholders can be interpreted as a call option on the assets of the firm (e.g., see Black and Scholes, 1973). The value of the option will increase as the underlying assets' volatility increases. Thus management – acting in the interests of shareholders – will tend to prefer capital projects with volatile cash flow streams.

Jensen and Meckling (1976), Myers (1977) and Smith and Warner (1979) have indicated that actions available to the firm after bonds are sold can reduce the value of the bonds. Unless protected against these forms of managerial opportunism, creditors can be expected to reduce the price they are willing to pay for the bonds. This reduction in price (or increase in required yield), necessary to compensate creditors for managerial opportunism and combined with the costs of writing and enforcing covenants, are collectively described by economists as the “agency costs of debt”. Some of these actions are prevented by provisions in debt covenants (Mayers and Smith, 1982; 1987). But it should be noted that debt covenants could be welfare reducing as they limit the degrees of freedom of management and possibly obstruct the realisation of profitable, yet risky investment alternatives.

According to Dobson and Soenen (1993), there are three sound reasons based on agency costs why management should hedge corporate risk. First, hedging reduces uncertainty by smoothing the cash flow stream thereby lowering the firm's cost of debt. Since the agency cost is borne by management, assuming informational asymmetry between management and bondholders, hedging will increase the value of the firm. Therefore, management will rationally choose to hedge. Second, given the existence of debt financing, cash flow smoothing through exchange risk hedging will tend to reduce the risk-shifting agency problem. Finally, hedging reduces the probability of financial distress and thereby increases duration of contractual relations between shareholders. By fostering corporate reputation acquisition, hedging contributes directly to the amelioration of the moral-hazard agency problem.

MacMinn and Han (1990) have argued that, by smoothing cash flows, hedging will tend to ameliorate the risk-shifting agency problem. Thus, the existing claimholders of the firm are motivated to include provisions in the debt contract limiting the opportunities to transfer wealth from the bondholders. Debt indentures frequently contain covenants requiring the firm to maintain certain types of hedging activity. Mayers and Smith (1982) analysis suggests that these provisions reduce the incentive of the firm's other claimholders to accept certain risk-increasing negative net present value projects after the sale of the bond issue. Since potential wealth transfers from bondholders to the firm's other claimholders are increased the larger the fixed claims in the capital structure, they have argued that the probability of inclusion of hedging covenants will increase with the firm's debt/equity ratio.

The nature of the firm's investment opportunity set affects the conflict between the firm's fixed and residual claimholders. Myers (1977) has shown that issuance of claims with higher priority than equity (senior claims) creates incentives for the firm's equity holders to "underinvest". A profitable project may be rejected by management if the expected payoff is sufficient to cover the cost of debt only, thus leaving no residual cash flow for shareholders. Hedging mitigates this problem by decreasing the number of states in which the firm would default on bond payments. Corporate risk management represents a means to eliminate or alleviate conflict of interests between debt holders and

stockholders, and the associated welfare loss resulting from non-realised value-increasing investments by reducing the volatility of firm value.

Bessembinder (1991) has shown that corporate hedging reduces incentives to underinvest, effectively bonding the firm's equity holders to undertake additional positive NPV investment. He has argued that the hedge shifts individual future states from default to nondefault outcomes, increasing the number of future states in which equity holders are the residual claimants. As a result, the sensitivity of senior claim value to incremental investment is reduced. Bessembinder (1991) also noted that the hedge results in equity holders receiving a larger proportion of the incremental benefits from new projects, which increases their willingness to provide funds for additional capital investment, as well as it increases their value due to avoided agency costs.

Minton and Schrand (1999) have also documented that companies with more cash flow variation have lower levels of investment and higher costs associated with external capital. They conclude that cash flow volatility can lead companies to underinvest. Haushalter, Randall and Lie (2002) have argued that equity values reflect this potential underinvestment. Their empirical tests have shown that the sensitivity of an oil producer's value to changes in oil price uncertainty is related to proxies for the likelihood that the producer will encounter costly market imperfections, such as financial distress and underinvestment. They conclude that by reducing the expected costs from these market imperfections, corporate risk management can increase shareholder value. MacMinn (1987) has shown that an appropriately selected insurance portfolio will increase the safety of debt and allow stockholders to capture all the additional returns from further investment. The model has shown that the corporation has an incentive to purchase insurance because it may eliminate or reduce the bankruptcy and/or agency costs.

### **2.3 Capital Market Imperfections and Costly External Financing**

Smith and Stulz (1985) have demonstrated how the reduction in expected bankruptcy cost (due to a lower probability of entering bankruptcy) can increase the firm's value, *ceteris paribus*. In addition, the lower probability of financial distress can help the firm make sales or invest in future profitable projects which



would have otherwise been lost. Cash flow is crucial to the investment process, and the investment process is a key factor for a corporate value creation. Cash flow can often be disrupted by movements in external factors such as exchange rates, commodity prices and interest rates, potentially compromising a company's ability to invest.

This theory examines the role of capital market imperfections in determining the demand for corporate hedging. The main hypothesis is that, if access to external financing (debt and/or equity) is costly, firms with investment projects requiring funding will hedge their cash flows to avoid a shortfall in their funds, which could precipitate a costly visit to the capital markets. An interesting empirical insight based on this rationale is that firms which have substantial growth opportunities and face high costs when raising funds under financial distress will have an incentive to hedge more of their exposure than the average firm. This rationale has been explored by numerous scholars, among others by Stulz (1990), Lessard (1990), Shapiro and Titman (1998), Froot, Scharfstein and Stein (1993), Getzy, Minton and Schrand (1997) and Haushalter, Randall and Lie (2002).

Froot, Scharfstein and Stein (1993) have accepted the basic paradigm of the financial distress model, but they rationalised the cost of bad outcomes by reference to Myers (1977) debt overhang argument. In their model, external financing is more costly than internally generated funds due to numerous capital market imperfections (see Myers and Majluf, 1984). These may include discrete transaction costs to obtain external financing, imperfect information as to the riskiness of the investment opportunities present in the firm, or the high cost of the potential future bankruptcy state. At the same time, the firm has an investment opportunity set which can be ordered in terms of net present value. The existence of the cost imperfections results in underinvestment in some states, where internally generated funds fall short of the amount of new investment that would be profitable in the absence of these capital market imperfections.

Stated in another way, the volatility of profitability causes the firm to seek external financing to exploit investment opportunities when profits are low. The cost of such external finance is higher than the internal funds due to the market's higher cost structure associated with the factors enumerated above. This

reduces optimal investment and the cost of volatility in such a model is the forgone investment in each period that the firm is forced to seek external funds. Recognising this outcome, the firm embarks upon volatility reducing strategies, which have the effect of reducing the variability of earnings. Hence, risk management is optimal in that it allows the firm to obtain the highest expected shareholder value. All else equal, the more difficulty a company has in obtaining outside financing, the more costly a shortfall in cash flow will be and the greater is the value hedging provides. Froot, Scharfstein and Stein (1993) have supported this theory with reference to evidence offered by Hoshi, Kashyap and Scharfstein (1991) which presented evidence that internal cash flow is, in fact, correlated to corporate investment.

Haushalter, Randall and Lie (2002) have conducted empirical tests of the theory that shareholders of financially constrained firms can benefit from corporate risk management. Their analysis of 68 oil producers for the period 1992 to 1994 has shown that the point at which a company encounters a cash shortfall varies across firms according to firm-specific characteristics. For many firms, in particular those with stable cash flows, minimal financial obligations, and therefore significant financial flexibility, the expected costs of underinvestment and financial distress are trivial. However, firms with higher levels of financial leverage, and therefore decreased financial flexibility, face a greater likelihood of encountering the costs of market imperfections. Overall, their findings indicate that capital markets incorporate the anticipated costs from cash flow variability into stock prices. These findings also support Smith and Stulz (1985), Froot, Scharfstein and Stein (1993) and Mello and Parsons (2000), who suggested that the benefits that shareholders realise from reducing cash flow variability by managing risks are associated with the likelihood that the firm will encounter underinvestment or bankruptcy.

Haushalter, Randall and Lie (2002) results complement and extend the findings of other corporate risk management studies. Specifically, Geczy, Minton and Schrand (1997), Graham and Rogers (1999) and Haushalter (2000) show that companies that are more likely to face market imperfections manage risks more extensively. Haushalter, Randall and Lie (2002) results indicate that these are the types of companies that can realise the greatest benefits from

reducing cash flow uncertainty. Therefore, in a broad sense, observed risk management policies are consistent with shareholder value maximisation.

Getzy, Minton and Schrand (1997) conducted a research on the 372 of the Fortune 500 nonfinancial firms in 1990, and proven the hypothesis that hedging is used to reduce variability in the level of investments. They have found that firms with greater growth opportunities and tighter financial constraints (low accessibility to external financing) are more likely to use currency derivatives. This result is consistent with the notion that firms use derivatives to reduce the variation in cash flows or earnings that might otherwise preclude firms from investing in valuable growth opportunities. This result was confirmed by Allayannis and Ofek (2001) as well. Their study has proven that, similar to Getzy, Minton and Schrand (1997), firms with larger R&D expenditures are more likely to use currency derivatives.

A study by Gay and Nam (1998) has also provided strong support for the hypothesis that corporate hedging activity is carried out to minimise the underinvestment problem. Gay and Nam (1998) have found that firms with enhanced investment opportunity sets increase their use of derivatives as their levels of internally generated cash decline. They have shown that when internally generated cash flows are positively correlated with investment opportunities, firms use fewer derivatives. Gay and Nam (1998) results clearly support the shareholder value maximisation hypothesis. These results indicate that firms act in a manner consistent with the predictions of Froot, Scharfstein and Stein (1993) – minimising the underinvestment problem.

Risk managers spend much of their time examining the factors that cause cash flows to fluctuate. This is important work, since low cash flows may throw budgets into disarray, distract managers from productive work, defer capital expenditure or delay debt repayments. By avoiding these deadweight losses, risk managers can rightly claim they add to shareholder value. Consistent with this claim that cash flow volatility is costly, Minton and Schrand (1999) have documented that cash flow volatility is associated both with lower investment and with higher costs of accessing external capital. They have shown that higher cash flow volatility is associated with lower average levels of investment in capital expenditures, R&D, and advertising. This association suggests that firms

do not use external capital markets to fully cover cash flow shortfalls, but rather permanently forgo investment. Fazzari, Hubbard and Petersen (1988), Hoshi, Kashyap and Scharfstein (1991), Kaplan and Zingales (1997) and Lamont (1997) all found a negative relation between annual investment levels and liquidity, but could not distinguish whether firms with volatile cash flows time their investment decisions to match internal cash flow realisations or actually decrease their overall level of investment. In contrast to them, Minton and Schrand (1999) findings have revealed a negative relation between volatility, measured over a period, and the average level of investment measured over the same period, suggesting that firms that experience shortfalls ultimately forgo investment.

Another perspective related to Froot, Scharfstein and Stein (1993) pertains to the Myers and Majluf (1984) "pecking order" concept of financing. Hedging, by its ability to decrease the variability of cash flow, enables the firm to reduce the number of states of nature where it must obtain external financing (and thus hedging can help avoid sending a potentially negative signal to external investors). It is also important to note that although firms facing binding financial constraints can benefit from hedging, reducing firms' dependence on the capital markets, does not automatically translate to an increase in shareholder wealth. In fact, Tufano (1998) points out that hedging can lead to overinvestment. If hedging enables managers to take on projects without facing scrutiny from the capital markets, it can enable managers to finance projects that benefit managers but reduce shareholders' wealth. So although firms facing financial constraints hedge more extensively, this relation does not imply that hedging increases shareholder value.

## **2.4 Taxes**

Smith and Stulz (1985) have argued that the structure of the tax code can make it beneficial for the firms to take positions in futures, forward, or option markets. If a firm's effective tax function is linear (the firm faces a constant effective marginal tax rate), the firm's expected tax liability is unaffected by the volatility of taxable income. But if effective marginal corporate tax rates are an increasing function of the corporation's pre-tax value, or stated differently, if a firm faces a convex tax function, then the after-tax value of the firm is a concave function of

its pre-tax value. If hedging reduces the variability of pre-tax firm values, then the expected tax liability is reduced and the expected post-tax value of the firm is increased, as long as the cost of the hedge is not too large. By reducing the effective long run average tax rate, activities which reduce the volatility in reported earnings will enhance shareholder value. More convex the effective tax schedule is, the greater is the reduction in expected taxes. Froot, Scharfstein and Stein (1993) have argued that the logic of this thesis is straight-forward - convexity implies that a more volatile earnings stream leads to higher expected taxes than a less volatile earnings stream. Convexity in the tax function is quite plausible for some firms, particularly those who face a significant probability of negative earnings and are unable to carry forward 100 per cent of their taxes losses to subsequent periods.

Statutory progressivity causes the tax schedule to be convex. In addition to statutory progressivity, tax preference items (for example, tax loss carry forwards, foreign tax credits, and investment tax credits) also make the effective tax schedule convex (Zimmerman, 1988). Tax preference items, which are subtracted from pre-tax income, indirectly create convexity in the tax liability (concavity in a firm value), because the present value of unused preference items decreases as they are carried forward to future periods. Reducing variance through hedging increases the expected value of tax benefits because the probability of using preference items increases with the level of a firm's taxable income. The tax code generally specifies that if the firm's pretax income falls below some level, the value of tax preference items is reduced by either the loss of the tax shield or postponement of its use (Gurel and Pyle, 1984). Hence, Nance, Smith and Smithson (1993) have concluded that the tax benefit is greater if the firm has more tax preference items.

Graham and Smith (1996) have used simulation methods in their work to investigate convexity induced by tax-code provisions. Authors have explored how uncertainty about future taxable income interacts with major provisions of the tax code, including statutory progressivity, tax-loss carry-backs and carry-forwards, investment tax credits, and the alternative minimum tax. From their analysis of more than 80,000 COMPUSTAT firm-year observations, they found that in approximately 50 per cent of the cases, corporations face

convex effective tax functions and thus have tax-based incentives to hedge. In approximately 25 per cent of the cases, firms face linear tax functions. The remaining firms face concave effective tax functions (which provide a tax-based disincentive to hedge). Among analysed firms facing convex tax functions, roughly one-quarter of the firms have potential tax savings from hedging that appear material - in extreme cases exceeding 40 per cent of the expected tax liability. For the remaining firms, the tax savings are fairly small - average tax savings from a five percent reduction in the volatility of taxable income are about 5.4 per cent of expected tax liabilities base.

Applied simulation methods also allowed Graham and Smith (1996) to decompose the basic structure of the tax code to examine the incremental impact of statutory progressivity, net operating loss, carry-backs and carry-forwards, investment tax credits, the alternative minimum tax, and uncertainty in taxable income. They found that much of the convexity is induced by the asymmetric treatment of profits and losses in the tax code. Carry-back and carry-forward provisions effectively allow firms to smooth their losses, thereby reducing tax-function curvature at its most convex points and making the function convex over a broader range of taxable income. In contrast, the alternative minimum tax and investment tax credits have only a modest effect on the convexity of the tax function.

Mayers and Smith (1982) have proven that firms with more convex tax schedules (e.g., due to large tax loss carry-forwards or very low net income) are more likely to engage in hedging activities. The evidence in Mian's study (1996) is mixed with respect to the hypothesis that hedging decisions are motivated by tax saving strategies. Consistent with the tax hypotheses, Mian has found incidence of foreign tax credit (as a proxy for tax shield) to be generally associated with a higher likelihood of hedging. Inconsistent with the tax hypothesis, there is no robust relation between hedging and incidence of progressivity in tax schedule, and between hedging and incidence of tax loss carry forwards.

It could be argued that, when judging the importance of the magnitude of the potential tax benefits, for firms with convex effective tax functions, the tax savings of hedging are not mutually exclusive from the hedging benefits of controlling underinvestment problems, increased debt capacity, or reduced agency

cost of various classes of the firm's claimholders. The total benefit of hedging is the combination of these motives. Therefore, with the appropriate choice of hedging instruments, a firm can simultaneously manage the impact on its value, reported income, and taxable income.

### **3. Managerial Utility Maximisation Hypothesis**

Shareholders hire managers because they have specialised knowledge and skills that increase the value of the firm. Managers cannot use their expertise unless they have some discretion in the choice of their actions. Yet, it should be emphasised that, unless faced with proper incentives, managers will not maximise shareholder wealth. Firm managers have limited ability to diversify their own personal wealth position, associated with stock holdings and their career earnings from their own employment position. Therefore, managers prefer stability to volatility because, other things being equal, such stability improves their own wealth, at little or no expense to other stakeholders (see Jensen and Meckling (1976) and Fama (1980)). To avoid this problem, managerial compensation contract must be designed in a way that, when managers increase the value of the firm, they also increase their own expected utility.

This rationale was firstly proposed by Stulz (1984). This argument can be traced back to the literature on the theory of agency. Ross (1973) has argued that an agency relationship has arisen between two (or more) parties when one, called an agent, acts as representative for the other, called a principal, in a particular domain of decision problems. Jensen and Meckling (1976) and Fama (1980) have discussed the conflict of interest between the owners and the managers of a corporation. They have assumed that the contracting parties form rational expectations and seek to maximise their individual expected utilities within the effective constraints implied by their contracts. Thus, conflicts of interests arise among the contracting parties whenever discretionary behaviour is authorised. Jensen and Meckling (1976) demonstrated that incentives exist to write contracts which maximise the current market value of the firm. Conflicts of interest between the owners and the managers can provide a basis for the corporate demand for hedging.

Amihud and Lev (1981) have argued that two versions of motive for corporate risk reduction exist. In the first one, managers seek to reduce the probability of bankruptcy in order to enhance their job security and preserve their investment in firm-specific human capital. For example, the manager's working life is limited while the corporate form gives the firm an indefinite life. This difference in time horizons produces an incentive conflict. The second version of the agency motive for corporate risk reduction maintains that if risk-averse managers are compensated on the basis of their firm's earnings, they prefer a stable earnings stream. The manager's claim on the firm has a life which is related to the life of his job. If his compensation package includes a bonus based on reported earnings, postponing selected expenditures until after retirement can increase his expected compensation. In this context, Holmstrom (1979) has discussed that managers may take a variety of risk reducing actions at the expense of shareholders.

Manager's behaviour is predictable and will be anticipated by the owners of the corporation, therefore his overall compensation is going to be adjusted to reflect manager's anticipated actions. Because the adjustment will include anticipated avoidable costs, managers have incentives to make believable promises not to engage in these activities by allowing monitoring and offering to bond their actions (Mayers and Smith, 1982). In both versions, the agency problem arises because managers care about total risk (systematic risk as well as business risk). Shareholders, however, care only about the systematic component of total risk, since they can diversify their portfolios to compensate for business risk.

Fatemi and Luft (2002) have argued that, under such conditions, the managerial risk aversion hypothesis predicts that the managers will engage in full cover hedging. That is, they will attempt to eliminate deviations below, as well as those above the mean of the probability distribution of the firm's net cash flows. This pattern of risk management may be further strengthened by managerial compensation schemes that encourage the achievements of static performance targets. Therefore, the managerial risk aversion hypothesis assumes that risk management strategies are implemented, principally, to enhance the position of the firm's management. This brings into focus the agency costs arising from the



conflicts between management and shareholders. In analysing this problem, it should be emphasised that full cover hedging eliminates desirable (upper tail) outcomes as well as all the undesirable (lower tail) outcomes. As such, full cover hedging does not enhance the firm's or shareholder value. The benefits derived from it accrue only to the management. In its extreme form, Fatemi and Luft (2002) have emphasised that the full cover hedging can be used to protect the management at the expense of shareholder.

Smith and Stulz (1985) have claimed that managers' compensation plans can influence their hedging choices. Specifically, the incorporation of option-like provisions in managers' compensation increases the incentives for managers to take risks. The expected utility of managerial wealth has a shape of a convex function of the firm's expected profits when managers own unexercised options. Therefore, they have concluded that the more option-like features there are in the compensation plans, the managers will hedge less. In this case, managers can choose to increase the risk of the firm in order to increase the value of their options. For instance, bonus plans that make a payment to managers only if accounting earnings exceed some target number will induce managers to hedge less since this payment is a convex function of accounting earnings. Results of some empirical studies have confirmed this hypothesis (e.g. see Tufano, 1996; Gay and Nam, 1998), while, in contrast, Geczy, Minton and Schrand (1997) and Haushalter (2000) have not found evidence that corporate hedging is affected by managerial shareholdings. However, it will generally not be efficient to eliminate all incentives to hedge. While presenting shareholder maximisation hypothesis in previous sections of our thesis, it has been shown that hedging is value increasing strategy. Moreover, a compensation plan that eliminates all hedging incentives would be costly to negotiate and implement.

Smith and Stulz's prediction is confirmed by Tufano (1996) who examined commodity hedging activities in the gold mining industry on the sample of the 48 North American gold mines. He has found that firms' use of commodity derivatives is negatively related to the number of options their managers and directors hold, and positively related to the value of their stock holdings. This evidence is consistent with theories of managerial risk aversion, but such use of derivatives may not add to the value of a firm. One must be

careful not to over-interpret the results of a single-industry study of a few dozen observations per year. With this in mind, Tufano (1996) study has suggested that risk management practices in the gold mining industry appear to be associated with both firm and managerial characteristics, although theories of managerial risk aversion seem more informative than those of shareholder value maximisation.

A very different managerial theory of hedging, based on asymmetric information, is put forward by Breeden and Viswanathan (1990) and DeMarzo and Duffie (1992), who focus on managers' reputations. They have argued that managers may prefer to engage in risk management so as to better communicate their skills to the labour market. Breeden and Viswanathan (1990) and DeMarzo and Duffie (1992) have argued that younger executives are more willing to embrace new concepts like risk management, than are their older colleagues. Managerial tenure might play a similar role, because it is possible that short-tenure financial managers would have less developed reputations than longer-tenure managers. Therefore, they would have an incentive to signal their quality through hedging. To the extent these assumptions are correct, firms with younger managers, and those whose managers have shorter tenures on the job would be more willing to manage risk.

Contrary to Breeden and Viswanathan (1996) predictions regarding the managers tenure, May (1995) has argued that managers years with the firm should be negatively related to the firm risk characteristics, therefore creating a greater incentive to hedge. This is because managerial skills become more firm-specific as time spent with the firm increases. May (1995) has assumed that, if diversification reduces human capital risk, firms whose managers have more years vested are more likely to pursue hedging strategies.

Tufano (1996) has tested these assumptions and found that there is no meaningful relationship between CEO and CFO age and the extent of risk management activity, except a negative relationship between CFO age and risk management. The lack of association between age and risk management might be the result of age acting as a factor that influences both risk aversion and predilection to use sophisticated financial instruments. However, tenure's association with risk management is stronger. Tufano (1996) has proven that

firms whose CFOs have fewer years in their current job are more likely to engage in greater risk management activities, confirming the hypothesis that newer executives are more willing to engage in risk management activities than are their counterparts with long-tenures. Thus, the results can be seen as consistent with Breeden and Viswanathan (1996) theory. However, their model would seem to apply to CEOs as well as CFOs – the finding that tenure of the CEO is not related to the level of risk management is a warning not to over-interpret these results. However, Tufano's (1996) finding supports the general contention that managerial motives may be relevant in creating corporate risk management policy. On the other hand, the result could also reflect that firms wishing to do financial risk management, tend to hire new financial managers who are skilled with the appropriate tools and techniques.

#### **4. Conclusion**

For a long time it was believed that corporate risk management is irrelevant to the value of the firm and the arguments in favour of the irrelevance were based on the Capital Asset Pricing Model (Sharpe, 1964; Lintner, 1965; Mossin, 1966) and the Modigliani-Miller theorem (Modigliani and Miller, 1958). It has been only two decades that both scholars and practitioners have realised that managing corporate risk lies in the heart of a competitive corporate strategy. As an explanation for this clash between theory and practice, imperfections in the capital market are used to argue for the relevance of corporate risk management function. Based on seminal work by Mayers and Smith (1982) in the area of the corporate demand for insurance, researchers such as Stulz (1984), Smith and Stulz (1985), and Shapiro and Titman (1998) have examined why large, diversified firms actively engage in hedging activities. These authors argued that the earlier theories are applicable to individuals and small, closely held firms but could not be used as a solid theoretical rationale for hedging by large corporations. The authors demonstrated several theories of hedging which overcome the irrelevancy arguments of modern portfolio and corporate finance theory. Most of these theories rely on the introduction of some frictions into the M&M model, and argue that market imperfections enable firms to add value through hedges that can not be exactly duplicated by individual investors.

The survey of literature presented in this paper has revealed that there are two chief classes of rationales for corporate decision to hedge - *maximisation of shareholder value or maximisation of managers' private utility*. Positive theories of risk management, as a lever for shareholder value creation, argue that firm value is a concave objective function because of capital market imperfections. The first theory suggests that, by reducing the volatility of cash flows, firms can decrease costs of financial distress (Mayers and Smith, 1982; Myers, 1984; Stulz, 1985; Smith and Stulz, 1985; Shapiro and Titman, 1998). In the MM world, financial distress is assumed to be costless. Hence, altering the probability of financial distress does not affect firm value. If financial distress is costly, firms have incentives to reduce its probability, and hedging is one method by which a firm can reduce the volatility of its earnings. By reducing the variance of a firm's cash flows or accounting profits, hedging decreases the probability, and thus the expected costs, of financial distress.

The second hedging rationale suggests that, by reducing the volatility of cash flows, firms can decrease agency costs (see Jensen and Meckling, 1976). According to Dobson and Soenen (1993) hedging reduces uncertainty by smoothing the cash flow stream thereby lowering the firm's cost of debt. Since the agency cost is borne by management, assuming informational asymmetry between management and bondholders, hedging will increase the value of the firm. Therefore, management will rationally choose to hedge. Additionally, given the existence of debt financing, cash flow smoothing through exchange risk hedging will tend to reduce the risk-shifting as well as the underinvestment problems (see Jensen and Smith, 1985). Results of MacMinn (1987), MacMinn and Han (1990), Bessembinder (1991), Minton and Schrand (1999) and Haushalter, Randall and Lie (2002) supports this hedging rationale.

Another theory that focuses on risk management as a mean to maximise shareholder value argue that, by reducing the volatility of cash flows, firms can decrease expected taxes. This rationale is put forward by Smith and Stulz (1985) who have argued that, if hedging reduces the variability of pre-tax firm values, then the expected tax liability is reduced and the expected post-tax value of the firm is increased, as long as the cost of the hedge is not too large. By reducing the effective long run average tax rate, activities which reduce the volatility in

reported earnings will enhance shareholder value. More convex the effective tax schedule is, the greater is the reduction in expected taxes. This rationale has been supported by Zimmerman (1988), Froot, Scharfstein and Stein (1993), Nance, Smith and Smithson (1993), Mian (1996) and Graham and Smith (1996).

In addition, reducing cash flow volatility can improve the probability of having sufficient internal funds for planned investments eliminating the need either to cut profitable projects or bear the transaction costs of obtaining external funding. An interesting empirical insight based on this rationale is that firms which have substantial growth opportunities and face high costs when raising funds under financial distress, will have an incentive to hedge more of their exposure than the average firm. This rationale has been explored by numerous scholars, among others by Smith and Stulz (1985), Stulz (1990), Lessard (1990), Shapiro and Titman (1998), Hoshi, Kashyap and Scharfstein (1991), Froot, Scharfstein and Stein (1993), Getzy, Minton and Schrand (1997), Gay and Nam (1998), Graham and Rogers (1999), Minton and Schrand (1999), Haushalter (2000), Mello and Parsons (2000), Allayannis and Ofek (2001) and Haushalter, Randall and Lie (2002).

Other line of reasoning that differs from the shareholders value maximisation hypothesis refers to the managerial utility maximisation hypothesis. It argues that firm managers have limited ability to diversify their own personal wealth position, associated with stock holdings and the capitalisation of their career earnings associated with their own employment position. Therefore, they will have an incentive to hedge their own wealth on the expense of the shareholders. Usually that kind of hedging is not conducted to improve value of company's stockholders but to improve managers own wealth. To avoid this problem, managerial compensation contract must be designed so that when managers increase the value of the firm, they also increase their expected utility. This can usually be obtained by adding option-like provisions to managerial contracts. This rationale was firstly proposed by Stulz (1984) and has been further explored by Smith and Stulz (1985). Results of some empirical studies have confirmed this hypothesis (e.g. see Tufano, 1996; Gay and Nam, 1998), while, in contrast, Geczy, Minton and Schrand (1997) and Haushalter

(2000) have not found evidence that corporate hedging is affected by managerial shareholdings.

A very different managerial theory of hedging, based on asymmetric information, has been presented by Breeden and Viswanathan (1990) and DeMarzo and Duffie (1992), who have focused on managers' reputations. In both of these models, it is argued that managers may prefer to engage in risk management activities in order to better communicate their skills to the labour market. Breeden and Viswanathan (1990) and DeMarzo and Duffie (1992) have argued that younger executives and those with shorter tenures have less developed reputations than older as well as longer-tenure managers. Therefore, they are more willing to embrace new concepts like risk management with the intention to signal their management quality. Tufano (1996) has tested these assumptions and found that there is no meaningful relationship between CEO and CFO age and the extent of risk management activity. However, he has proven that firms whose CFOs have fewer years in their current job are more likely to engage in greater risk management activities, confirming the hypothesis that newer executives are more willing to engage in risk management activities than are their counterparts with long-tenures. Thus, the results can be seen as consistent with Breeden and Viswanathan (1996) and DeMarzo and Duffie (1992) theory.

Overall, the results of the literature review presented in this paper suggest that the use of derivatives and risk management practices are broadly consistent with the predictions of the theoretical literature, which is based upon value-maximising behaviour. By hedging financial risks such as currency, interest rate and commodity risk, firms can decrease cash flow volatility, which leads to a lower variance of the firm's value. This means that not only the firm value moves less, but that the probability of occurring low values is smaller than without hedging. The analysis has shown that, if hedging decisions are capable of increasing firm values, they can do so for reasons such as the following: they reduce the probability or costs of financial distress, they reduce taxes or transactions costs, they reduce the costs associated with information "asymmetries" by signalling management's view of the company's prospects to investors, or they reduce "agency" problems (conflicts of interest among

management, shareholders, and creditors), including distortions of management's incentives to undertake all value-adding investments.

However, it needs to be emphasised that, in spite of the extensive body of literature on corporate risk management and the efforts that have been devoted in developing rationales for hedging, there is not yet a single accepted framework which can be used to guide empirical hedging strategies. There is no consensus as to what hedging rationale is the most important in explaining risk management as a corporate policy. The total benefit of hedging is the combination of these motives - e.g. the benefit of increased debt capacity is not mutually exclusive from the hedging benefits of controlling underinvestment problems, tax savings, increased debt capacity, or reduced agency cost of various classes of the firm's claimholders. It can be concluded that, if the costs of using corporate risk management instruments, e.g. financial derivatives that include employee salaries, computers, training as well as transaction costs and the costs of the internal control systems, are less than the benefits provided via the avenues mentioned in this paper, or any other benefit perceived by the market, then risk management is a shareholder-value enhancing activity.

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## **Imperialism: Old and New Theories**

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### **Abstract**

*The old theories of imperialism attempted to explain the phenomenon of the militarization of the industrial nations and their conflict over colonies that led to World War I. It was the rise of monopoly capitalism, the emergence of finance capital and the control over the state that led inter-capitalist rivalry and finally to War. In the 1960s a new version of imperialism was related to the ideas of the dependency school, while there is a gap during the 1980s and the 1990s. Recently, new theories of imperialism emerged, that discuss globalization and militarization from a different perspective. They undermine inter-capitalist rivalry and focus on American hegemony and capitalist accumulation on a world scale. The work of three representative writers (Harvey, Amin and Panitch) is critically discussed here indicating the limits and some merits of their approach.*

**Keywords:** Imperialism, Inter-capitalist Rivalry, Accumulation Crisis, Globalization, American Hegemony

**JEL classification:** B14, B24, B51

## **1. Introduction. The different perceptions of imperialism**

Imperialism is a theory that refers to a very specific historical conjuncture, the period between 1880 and 1910. It attempts to provide answers to major and crucial political questions. The specific conceptual framework concerns the *inter-imperialist rivalry*. It provides an explanation as to why the inter-imperialist rivalry gained such a momentum as to become the primary motive of foreign policy of many competing states. Under nationalist slogans many nation states, all at the same time, look for geographical expansion and control of other areas, and participate in the “imperialist project” (Smith T., 1981, Smith W. 1982).

This phenomenon was in direct conflict with the peaceful arrangements that international capitalist trade was supposed to promote. As long as trade is to benefit all of its participants, it would deter international conflict, not only among industrial nations, but also among industrialised and rural nations, as the Ricardian theory had underlined, and the Smithian tradition had before him indicated. Capitalism is inclined to produce peace, rather than war, as industry and free trade would produce wealth for each and every nation directed to its comparative advantage and being part of the free trade process (Psalidopoulos, 2003).

Thus, when the conflict between old and newly industrialized countries, both in Europe and elsewhere, emerges and leads to World War I (Joll, 1984), it came as a surprise. The 19<sup>th</sup> century is a prolonged period of peace in Europe, among the big powers (Polanyi, 2001). The industrialization process speeded up after 1880 in Germany, Sweden, Italy, Japan, and U.S.A., and also in France, which was already in the process. These countries were added to the only existing industrial nation, England. But even in countries in the periphery such as Russia, Czech, Spain, some Balkan states and others a first wave of industrialization is present.

In effect, the theory of imperialism is not primarily a theory of the relations between developed and underdeveloped countries, this is part of the explanation as to why developed economies need to take control of the pre-capitalist underdeveloped world, but the basic argument is about conflict among the industrialised countries. So, the theory of imperialism does not refer to the

political, military and economic dependency of the underdeveloped world by the developed one, but to the analysis of the capitalist world itself. The major subject of inter-imperialist rivalry is this peculiar process of the industrial nations searching for vital geographical and economic expansion, usually identified with raw materials and controlled markets. Yet, the analysis focuses on the accumulation process in the industrial nations and the changing circumstances that led to imperialism as a distinct phenomenon.

It is after the Second World War that imperialism becomes a theory that refers to the relations between developed and underdeveloped countries. Cold War and decolonization brought a new political agenda at the forefront focusing on the issue of development. The western response is a modernization paradigm underlying the integration of the underdeveloped world to the processes of open market export oriented strategies. On the other hand, a new set of theories under the heading of dependency, speak of underdevelopment as the historical outcome of these same processes that the modernization paradigm proclaims. In effect, polarization and a cumulative process of a growing gap between centre and periphery is the outcome of the modernization paradigm. Thus, a break with free trade and the world economy is a precondition for development. Imperialism is viewed as a permanent element of capitalism going back to the 16<sup>th</sup> century.

Nowadays imperialism tends to be identified with American imperialism. This idea builds on shift of power in the post-war era. In the aftermath of World War II, US imperialism is present in practically every part of the world. It exercises power through direct or indirect economic, military and political means. The common theme may be the prevention of a communist takeover and this involvement leads to extensive involvement in Latin and Central America, South-East Asia, Middle East and Africa. However, after the collapse of communism, American imperialism seems to continue uninterrupted its established practices. In effect, it may imply that in the post-war era, the American initiatives on the political and economic architecture of the world were capable to produce more sustainable structures.

The other imperialist countries of the past are in decline. France, after its defeat in South East Asia and Algeria, retreated from its colonial past. Britain, proved totally unable to control the decolonization process and thereafter turned

to a rather peace meal approach to the Commonwealth countries. The defeated countries, Germany, Japan and Italy had practically to abandon foreign policy altogether.

The shift from inter-capitalist rivalry of the theories of old imperialism, - found on the rise of national monopolies, leading to militarism and war-, to the theories of the new American imperialism, -based on dependency and the extraction of surplus, but also strongly on geopolitical premises-, are very different theoretical patterns. Thus, the theory of imperialism comes to refer to different things from its very foundation to the current time.

The old theories of imperialism have two different elements, a historical and a theoretical one, which have to be carefully distinguished. The historical one has to do with the specific phase of industrialization, a process involving old (England, France) and newly industrializing countries (Germany, Japan, Italy, Sweden, Czech, etc.) and a political process of geographical expansionism (Smith W., 1978, Cooke, 1973).

At the same time, there is an explosion worldwide of trade, of capital mobility and emigration, giving rise between 1880-1910 to what is now called the first major phase of *globalization* (Rodrik, 1997). World trade remained very much, under the influence of the British, free trade oriented ideas. Thus, this is a highly contradictory phase, which includes the protected industrialization of many countries, neo-colonialism and the partition of Africa and South East Asia, as well as the attempt to open the economy of China. Yet, at the same time the “North Atlantic economy” is formed as trade and capital between North America and European reaches huge proportions and emigration from Europe to North America (and to a lesser extend South America) reaches peak levels. These processes gained momentum and led to drastic increases in average incomes in both sides of the Atlantic. In effect, the 1880-1910 period, is a highly contradictory period where there is a parallel movement of contradictory elements.

The theoretical element is less obvious. The analysis of capitalism by Marx is based on a highly abstract venture where the capital labour relation is viewed as the central focus in the production, circulation and distribution process. The capitalist mode of production is perceived as a distinct historical

stage turned apart by its internal contradictions and leading to communism, identified as the “end of history”, as the end of “history as class struggle”. Prior to *Capital*, the *Communist Manifesto* (Marx and Engels, 1998, orig. 1848) and Marx’s writings on India (Avineri, 1969) indicated that globalization was the natural state of affairs of capitalism and no pre-capitalist formation could resist to the capitalist expansion. Capital was remaking the world to its own image.

Imperialism can hardly be viewed as a general theory of capitalism. Marx’s *Capital* tends to focus on the internal dynamics of capitalist accumulation and undermines the issues related to the geography of accumulation. There is no doubt that the global geography of capitalist accumulation, the role of primitive accumulation, the robbery of raw materials around the globe, the search for new markets by capital, the commercial exploitation of pre-capitalist modes of production, are all full of historical interest, but in theoretical terms it has little, if any, relevance to the analysis of the capitalist dynamics.

Historical and theoretical issues have to be examined as separate areas of research and the process of integrating the one with the other can only take place under strict and quite clear methodological steps, such as is the case for example with *Capital* itself. If abstract theoretical concepts and propositions are mixed with historical empirical data and specific historical processes, then quite often Marxist analysis turns into empiricism and the analysis turns against the comprehension of the capitalist phenomenon.

Imperialism is a theory that introduces this dual theorizing, moving at the same time in theory and history, and trying to adjust theoretical concepts to specific historical trends, giving rise to a new type of theoretical construction based on the periodization of capitalism and the attachment of specific theoretical adjustments to specific historical stages. This trend of “historizing theory” is highly debatable, as will be indicated later when discussing the new theories of imperialism.

On a first reading, this type of approach comes closer to the *Communist Manifesto*, probably the best political text ever written on capitalism. Yet, the *Manifesto* is unique. It is a highly theoretical text, which while it incorporates history at the same time it abstains from it. It is a comprehensive theoretical text that proposes a simple theoretical scheme as to the change and development of



human society, as to how classes and class struggle is the key factor in comprehending historical change and as to how successive modes of pre-capitalist societies appeared, developed and declined.

It is a unique text as to how capitalism emerged and dominated the world scene. Yet, although it is a text on the 19<sup>th</sup> century capitalism there is not a single word on the dominant power of the time (England), or to the specific forms of the world capitalist system. It refers to capitalism in general. It presents capital as a force, capable to create a “world on its own image”, moving aside any obstacle and constrain. It views capitalism as world capitalism from the outset, and at the same time it presents the emergence of the nation state as totally compatible with global capitalism. It ends up with a theory of revolution, very much influenced by ancient Greek thought (Arendt, 2002), which somehow has this vision, of an internationalist working class breaking away with all forms of domination and exploitation, which includes nationalist modes of thinking and acting and giving rise to a new culture of freedom and internationalism based on human solidarity.

Imperialism at the turn of the 20<sup>th</sup> century is identified with a revived nationalism. It demands from the working classes to join forces in a war under patriotic slogans. The worst of all is that working class parties lined up to such a nationalist project bringing a shock to those on the Left that had believed in the Communist Manifesto slogan of “workers of the world unite”. Even more they turned their power against those on the Left that felt that there should be a break with such politics and turn the worst possible political situation into a revolutionary one, as the Bolsheviks did in Russia, the Spartakists in Germany, and other smaller groups elsewhere (Eley, 2002).

The answer, given by the theory of imperialism, to this basic theoretical question as to why national capitalisms were ready to go to war, is well known. The stage of competitive capitalism was over. Monopoly capital is the new dominant form. Cartels dominate national economies and a merge between finance and industrial capital had been completed. The merge has a second element. The state became part of this new finance capital block losing all existing autonomy that the state might have.

This monopoly capitalism had outscripted the potential of national accumulation of capital. Faced with a more or less permanent crisis of

overaccumulation available capital required new markets and new areas of investment, i.e. new sources of raw materials and massive investment in infrastructure. In addition, population was increasing and it had to find a way out to move. In effect, capital and population required new geographical space.

Yet, the older colonial forces already occupied the existing world and the dominant one had the largest share that is Britain. Few areas were outside this old colonial world. Africa was one, South East Asia another. Africa became the primary ground of imperialist control. Within a 30-year period, it was taken over by Germany, Belgium, Italy, France, and England and was split into parts, more or less drawing the borderlines that form nowadays the various “nation states” of Africa. The same happened in South East Asia with France, England and Holland dominating the scene. Japan, the new force in the East, had already started its imperial vision aiming at Korea, Philippines, and China, the latter being already the centre of British colonial expansion. Even the isolated USA, entered the scene in the case of Philippines with the American-Spanish war of 1898 in order to contain the Japanese expansionism.

If this new movement is capable to take advantage of sea routes and develop new areas of control, the existing empires that had originated from a different set of arrangements, such as the Ottoman, the Austro-Hungarian and the Russian were becoming outdated. The Ottoman Empire, having lost already its European parts, has still a control in Middle East, but not for long. It has no industry and financially is practically dependent on the West. The Austria-Hungarian is ready to dissolve among the nation-states that comprised its main forces. Russia has still space to expand. But this is to the East, the Siberia, with little valuable economic space at the time. New Empires are related to sea and naval dominance, rather than land and army arrangements. This would change only when some nation states would attempt to control the heart of the system, the European imperial powers themselves.

## **2. The Old Theories of Imperialism**

### **Hobson**

Imperialism is a movement towards conquer and as such was based on fresh ideological constructions. Imperialism took the form of an ideology. It had theoreticians, journalists, pamphleteers, a huge propaganda machine, it was part of the public debate, it was discussed in the parliaments and the royal courts. The unique book on Imperialism by Hobson (2005, orig. 1902) presents in detail these ideological constructions and the political processes of mobilizing the people in favour of this new political project.

This book starts with a *quantitative* estimation of imperialism, an attempt to estimate with some indices as to “how much imperialism do we have”. It then proceeds with the estimation of the cost of imperialism, how much does the whole project cost and then compares it with the benefits of imperialisms. The balance sheet may be of positive but rather insignificant value and even more the benefits are directed to just a small fraction of financiers and traders. In terms of emigration, imperialism had little to offer. Emigrants from the British Isles continued to flee towards the U.S., rather than move to the colonies of the imperialist project.

The final point of Hobson is also crucial. While imperialism proves to be a project of limited financial benefit, at the same time it absorbed the resources that could support social reform and the rise of wages and salaries in Britain.

In political terms Hobson views imperialism as undermining democracy at home. He criticises extensively the biological, sociological and cultural theories that spoke of the superiority of white man that made imperative the rule over the subordinate races. In a highly critical fashion he proposes, that instead of trying to rule other races, it is better to start with a respect for self rule and the independence of other nations and races and then see how through trade or other economic exchanges it may produce some benefits for all involved. The acceptance of existing cultural systems may open the space for their development through cultural exchanges, and thus create a more balanced world. Elements of the civilised world may be incorporated in existing civilizations rather than try to administer and change them by force. There is little doubt that Hobson’s moderate and liberal approach saw the virtues of liberal values as

superior to the use of force and power either as in the colonial past or the imperialist current.

### **Hilferding, Luxemburg, Kautsky**

The incorporation of imperialism in the Marxist framework produced 5 major works by Hilferding (1981, orig. 1910), Luxemburg (1913), Kautsky (1914), Bucharin (1917) and Lenin (1917). All of them are important in many respects as they focused on different aspects of the phenomenon of imperialism and provided more or less a first theoretical account of the phenomenon (Brewer, 1980, Barone, 1985). Hilferding's work brought imperialism and inter-imperialist rivalry within the Marxist framework. Yet, it was Bucharin that reorganized Hilferding's ideas into a more coherent framework. Lenin mostly popularized these ideas, rather than adding new ones. Luxemburg's work stands on its own right, as it is very distinct in trying to examine the relation of capitalist and non-capitalist modes of production. Kautsky's idea of ultra-imperialism lies against the trend of inter-imperialist rivalry.

Hilferding's work is based on the idea that capitalism had changed since Marx's time, and that new theories should accommodate these changes. Capitalism had moved from a competitive to a monopolistic stage. Hilferding starts with a treatment of money, which is both very interesting and highly problematic. It follows the analysis of the joint stock company as the dominant form of capitalist firm, which facilitated the centralization of capital. It led to the emergence of a very small group of individual capitalists with enormous wealth and a wide range of business interests spread in many sectors, including banking. In effect, the rapid rise of monopoly in one or more sectors was soon to be extended to other sectors as well. The banking system that controlled all forms of finance and soon became a highly centralized sector had an interest in keeping industries in the form of trusts and cartels. This led to the concept of finance capital used by Hilferding in order to underlie the fusion of the banking and industrial capital and their common support for monopoly capitalism.

The argument then shifts to protectionism, without which national monopolies cannot be sustained. If the profitability of monopoly is secure at home, it is the export of capital that gains momentum as finance capital is in need of new areas of investment, primarily in raw materials. This process leads

to economic and political dependence for the regions involved. At home, finance capital requires the full support of the state. Unlike British capitalism that was formed at an earlier date with emphasis on competition and political liberalism, in Central Europe capitalism was formed through the active support of the state, protectionism included, and when finance capital became dominant it needed both a strong and aggressive state. Imperialism is the outcome of the political control exercised by finance capital and socialism is the only response to imperialism.

Thus, Hilferding's analysis refers to a specific model of capitalist development that differed from the British one. There, the emphasis was on the market mechanism, competition and individuality. In Germany, Italy (and Japan could be added) the emphasis is on the state, the regulated internal monopolistic markets and the planned drive to exports of capital and goods.

Hilferding's work is a theoretical breakthrough that influenced successive generations of Marxists of various trends. This wide range of perspectives, include neo-Marxists, such as Baran and Sweezy (1968) with their version of monopoly capitalism, or even the state-monopoly capitalism approaches that dominated the orthodox communist parties. Despite the changes that the capitalist system underwent during the 20<sup>th</sup> century, the relation between monopolies in industry and banking and the state and the combination of national protectionism and geographical expansion, through trade and export of capital, remained the major theme in successive waves of theoretical constructions.

Luxemburg focuses on the incorporation of pre-capitalist formations within the capitalist production as a permanent process of overcoming successive waves of underconsumption crisis. In each and every circle of an underconsumption crisis, capitalism was supposed to try to find non-capitalist formations where surplus products could be absorbed and non-capitalist production would generate new surpluses. This endless process would come to an end when the incorporation of pre-capitalist formations would be final, implying a state of stagnation or collapse of capitalism.

As expected, this line of argument gives emphasis to the expanded reproduction schemes of Marx's Capital in volume two, though most of the book

is an extensive review of all theories of reproduction from Quesnay to Tugan-Baranowsky. Luxemburg thought that Marx underestimates the problem of realization of the surplus value. Wages and the consumption of capitalists leave a significant part of value produced non-realized and investment has to absorb this surplus. Each year an ever-increasing mass of commodities has to be produced through this investment process, i.e. a production for the sake of production, which if money relations are included, makes the whole process almost impossible. Thus, in order this process to continue, “outside” buyers from the non-capitalist world have to be found to absorb these surpluses.

Luxemburg views the world through this dichotomy of the capitalist and non-capitalist sectors, the “inside” and the “outside”, and examines in length how, historically, this dichotomy has worked out. Although this movement from the “inside” to the “outside” had included the relation between the industrial and the rural sector in capitalist countries in the past, it was the shift towards the rest of the world that had become predominant as states and companies competed for such new space.

There is little doubt that the analysis of Luxemburg uses a rather simplistic version of the extended reproduction schemes (although Kenysian and post-kenysian thinking is in line with this argument). In addition, it gives an absolute priority to economics in terms of the crisis theory and it more or less implies that the collapse of capitalism may be inevitable, if the world turns into a purely capitalist economy. Besides the many theoretical problems of Luxemburg’s approach, it is the first systematic attempt to examine the movement of capitalism in search of new geographical space, the incorporation of the pre-capitalist formations as a vital parallel aspect in the accumulation process and the identification of “primitive accumulation” as a permanent characteristic of capitalist accumulation.

Kautsky is in a different line of argument. His idea was that national bourgeoisie was very much in a process of mutual diffusion with other national bourgeoisies, in a process that was to end up in a kind of common interest, an interest identified with the defence of capital itself, as an abstract and general concept. In effect, he argues that the major powers would have an interest to exploit the world jointly, rather than struggle over the division of this world. The

German Social Democracy was by far the most important force of the Left and had a tradition in favour of free trade, instead of protectionism, and worked a lot on inter-capitalist rivalry. It viewed the state as an agency where the conflicts between the various fractions of capital were regulated. So the idea of Hilferding of finance capital and the unification of capital and state into a coherent force undermined this tradition.

Kautsky's ultra-imperialism identifies imperialism and militarism as the work of a fraction of capital, finance in the traditional sense, and feels that other fractions, industrial included, would find an interest in the peaceful exploitation of the world together with other national capitals. The rise of monopoly did not prevent, as Marx had indicated, competition as competition generates monopoly and monopoly generates at a different level competition. In effect, Kautsky indicated that even the coming war would not prevent the common interest of capital to exploit the rest of the world and this process would produce peace among the industrial nations in the long run. The Left should of course have to fight this arrangement, but still it was different if inter-imperialist rivalry turned capitalism into a system of more or less permanent war among its members or into a system where the common exploitation of the rest of the world prevailed.

### **Bucharin and Lenin**

Bucharin is probably the most interesting work. It follows very much the line of arguments found in the Communist Manifesto, where the movement to global capitalism is compatible with the strengthening of the nation state, and it is on this double movement of *globalization* and *nationalization* that in analytical terms imperialism may be conceived. These two parallel processes may be conflicting or their balance may be interrupted by war and breakdown. Yet, Bucharin is quite certain that both processes will be at work. His perception of globalization indicates that although inter-capitalist rivalry may lead to war and the national domination of one or more powers over the others, globalization and international competition will come back in the future ready to challenge existing systems of national domination. The movement towards global capitalism is the absolute imperative of capitalism, including not only world trade, but also money capital. As national capital and the state merge as Hilferding had indicated, national blocks are formed which compete at the international level, and as there

is no international state, the formation of giant national blocks may lead to the common exploitation of the “periphery of underdeveloped countries”, but also to the increased competition among dominant national blocks. The anarchy of capitalist production may be contained at the national level only to be reproduced at the international level. For Bucharin imperialism, as both policy and ideology, expresses this large-scale concentration and centralization of capital that absorbs not weak capitals but whole countries.

As in most theories of imperialism the idea of monopolies and the state that more or less is identified with their interests may sound a bit dubious. These agents turn to be rather static. In other words, there is no elaborate theory of the state in the theories of imperialism. Yet, Bucharin seems to try to minimize the problems arising from this theoretical gap, by his emphasis on the contradictory movement of capitalist accumulation at the national and international level.

Lenin’s approach is probably the most weak in theoretical terms but probably the most sound in political terms. For Lenin every political conjuncture, no matter how negative it may be for the revolutionary movement, it may turn into a political opening if properly fought. The First World War was a disaster for the Left as it attached itself to the nationalist fever that led to the War. Yet, for Lenin it was a matter of break and conflict, of moving against the trend and turns every obstacle into a revolutionary event. Much of the book fights the ideas of Kautsky’s, the idea that capitalism may be compatible with peace, rather than be in a state of crisis and war. His idea of imperialism as a stage of capitalism sprung from this polemic, as did the idea of “labour aristocracy” that attempted to explain the incorporation of the Left in the nationalist fever.

His theory of imperialism lies with the famous five tendencies (the rise of monopolies, the formation of finance capital, the export of capital as distinct from the export of commodities, the formation of international monopolistic combines sharing the world and the completion of the territorial division of the world). All tendencies are not discussed in any detail, and after all they draw conclusions from much of the previous literature on imperialism that is Hobson, Hilferding and Bucharin. The key elements that draw together these tendencies is the rise of monopoly and the uneven development of world capitalism which turned national capitalisms into permanent agents of the redistribution of existing



colonies, of constantly redrawing of the boundaries and the spheres of influence. Capitalism was a dynamic system based on world hierarchies and the changes of such hierarchies that the process of uneven development generated. For the revolutionary movement the priority should be to locate the “weak link” in these hierarchical structures and gain power wherever such a prospect was possible.

This kind of analysis had to a certain extent to be descriptive. This perception was less demanding in theoretical terms. Capitalism is presented as a system of national flags, competing one with other in order to incorporate as many as possible less developed nations. Fragmentation and the split of the world into spheres of influence of national capitalisms seem to undermine the globalization process of capitalism. It is true that to some extent this process is reversed by the formation of world monopolies in certain sectors (oil, raw materials, etc.), that comes in line with Bucharin’s and even Kautsky’s work. Yet Lenin’s work for a variety of reasons became the most influential. This had a major negative consequence. The previous works with more sound theoretical undertakings somehow were forgotten. Imperialism was reduced to an “obvious” phenomenon, which common political action could properly fight. Imperialism lost in this respect the theoretical momentum it gained from the classic works.

### **3. New Theories of Imperialism**

The theory of imperialism with its emphasis on inter-imperialist rivalry leading to war, seemed to be adequate for the Left, as World War I was to be followed by World War II, and in between capitalism faced the most severe economic crisis, which dissolved the world economy. With the end of the Wars and the rise of American hegemony inter-capitalist rivalry came practically to an end. Under the circumstances the old theory of imperialism should have been abandoned.

Until the early 1970s the term of imperialism was extensively in use, but in a new context. But this time it was the outcome of the strong influence that the theories of dependency exercised (Rhodes, 1970). There is no need to go into any detail here in discussing these theories. The basic idea is that development and underdevelopment are historically the result of a common process, of the formation of world capitalism from the 16<sup>th</sup> century onwards. Accumulation was always taking place on the world scale. Surplus from the periphery was

transferred to the centre through unequal exchange, the relocation of profits and incomes in the centre and financial dependency, producing polarization and increasing the gap between the industrial centre and the rural periphery. Peripheral capitalism, even if industrial activity takes place, is unable to generate the typical accumulation process of the centre, as two crucial links, capital and technology, are not part of this internal process. Capitalism in the periphery is unable to attain the typical process of expanded reproduction and thus form capital and labour as social agents. Thus, social formations remain extremely heterogeneous. Imperialism is the continuation of colonialism. Societies have structures that were formed under hundreds of years of European colonialism and more recently by American domination. It is the links between the periphery and the centre that are of the most crucial importance.

Then during the 1980s and the 1990s the term imperialism was forgotten. During the last ten years, however, it started being used again, either through the term new imperialism, or through the use of the traditional term but in a different context. Among the many works that attempt to use this concept are the works of Harvey (2003), Panitch (2004), Arrighi (1994), Brenner (2002), Petras (2001) and Amin 2001, 2004a, 2004b). A very important theory, standing opposite to the theories of imperialism, is the theory of empire as presented by Negri and Hardt (2000).

Here we will restrict to the presentation of the arguments of Harvey, Amin and Panitch as representative of three different perceptions of imperialism. They all try to relate a modern version of the theory of imperialism with various pre-existing theoretical frameworks, which lie more or less with the Marxist or neo-Marxist that emerged in the '60s and the '70s.

### **Amin**

Amin's work is well known, as he is a prominent writer of the dependency school. His recent work tries to update much of the previous arguments in the historical context of the post-1989 world, the American hegemony and globalization. In a major article and three recent books he develops his idea of "collective imperialism". By this term he refers to the "Triad" of USA, Western Europe and Japan. The common interest arises from a different perception of the new oligopolistic structures. Nowadays multinational companies irrespective of

their national background have to be able to have a strong international position in markets of quite large size, and this is the way to be competitive in their national markets as well. These oligopolistic structures have common interest not only in globalized markets, but also in the active support of American hegemony, which is the only force that can keep the world under control.

However, the American hegemony lies on a huge asymmetry. In economic terms the U.S. economy has lost much of its competitive advantage and practically has turned into a parasitic one, leaving at the expense of the rest of the world, an arrangement, which, the rest of the world is ready to accept, as long as there is no alternative. Now the U.S. seems to try to use its military power and political supremacy, to turn to its own advantage much of the common arrangements of “collective imperialism”, that is supposed to be shared by all. The militarism of the U.S. and the shift to extreme policies by the Bush administration raises a whole number of questions as to the viability of the “collective imperialism” arrangements.

As globalization persists so is polarization at a world scale. Much of the South is in a desperate position facing a “new agrarian question”. Three billion of peasants are faced with “pauperization” as the free trade arrangements pursued by the North will lead to extreme phenomena of dislocation. With the same token “pauperization” is present in the urban population of both the North and the South. In effect, “pauperization” is a phenomenon inseparable from—an inherent product of the expansion of “real-existing capitalism”, which for this reason Amin calls it “imperialist by nature”.

Amin sees that within the framework of “collective imperialism” the conflict among the Triad may become intense. The U.S. as are weakening in economic terms, may become even more aggressive. Europe, according to Amin, unlike the U.S., shares a different political tradition, giving more emphasis to social and political equality. In effect, Amin considers that Europe, Russia, China and the South have the option of moving their own way and forming a multi-centre world, leaving aside the American hegemony altogether (Amin, 2006).

## **Harvey**

Harvey's work is of a completely different nature. He goes back to Luxemburg in order to indicate that capitalism is in need to use non-capitalist formations. But, unlike Luxemburg and her underconsumption thesis, he turns into an overaccumulation thesis. In effect, capitalism is presented as being in a permanent state of overaccumulation, in great need of finding space to expand, space dominated by pre-capitalist formations, which may be turned into capitalist. In other words, Harvey brings back the idea of "primitive accumulation", as a permanent characteristic of capitalism, reproduced over and over again. His perception is even stronger than expected. He considers "primitive accumulation" as becoming the predominant theme of modern capitalism and the whole globalization project is viewed through this angle.

Harvey uses the term "accumulation by dispossession" as a solution to the overaccumulation problem. These concepts are presented as following: "What accumulation by dispossession does, is to release a set of assets (including labour power) at very low (and in some instances zero) cost. Overaccumulated capital can seize hold of such assets and immediately turn them to profitable use. ...Privatization (...) has, in recent years, opened up vast fields of overaccumulated capital to seize up. The collapse of the Soviet Union and then the opening up of China entailed a massive release of hitherto unavailable assets into the mainstream of capital accumulation. ... Put another way, if capitalism has been experiencing a chronic difficulty of overaccumulation since 1973, then the neo-liberal project of privatization makes a lot of sense as one way to solve the problem. ... Another way would be to release cheap raw materials (such as oil) into the system. ... The same goal can be achieved by the devaluation of existing capital assets and labour power." This means crisis but regulated crisis is part of the game. "This is often what state-administered austerity programmes, (...) are often all about." (Harvey, 2003, p. 149). The same process is the regional financial crisis, produced more or less on purpose by the IMF, such as the one of South – East Asia.

In other words, for Harvey everything has to do with the devaluation of various assets (public and private, national or international) to be reused as profitable takeovers by overaccumulated capital. This looks like a capitalism of

theft rather than a capitalism of expanded reproduction, investment, increased productivity of labour and the rest.

Yet, the argument of Harvey becomes even stronger. “But how and why does accumulation by dispossession emerge from this background state to become the dominant form of accumulation relative to expanded reproduction?” (Harvey, 2003, p. 153). The answer lies with the typical crises of expanded reproduction, but also with those states and business classes that “are ready to ‘join the system’ and seek the benefits of capital accumulation directly”. This all-inclusive process includes China as a primary example, of state-orchestrated capitalism, done by consent, or it may be pursued by external pressure or a combination of the two.

In effect, Harvey identifies privatization and the inclusion of any new economic or geographical space into the market process as the real process of ‘primitive accumulation’ and considers that these two processes have become more important than the classical expanded reproduction process. This strong argument leads to a perception of imperialism as a result of the “rise on importance of accumulation by dispossession”. It symbolizes “the rise of international politics of neoliberalism and privatization, correlates with the visitation of periodic bouts of predatory devaluation of assets in one part of the world or another. And this seems the heart of what contemporary imperialist practice is about” (Harvey, 2003, p. 182).

By following Arendt (1968) on this point imperialism is identified with “robbery”. “American bourgeoisie rediscovered what the British bourgeoisie discovered in the last three decades of the nineteenth century, that, as Arendt has it, “the original sin of simple robbery” which made possible the original accumulation of capital. (...) ‘New imperialism’ appears as nothing more than the revisiting of the old, though in a different place and time” (Harvey, 2003, p. 182).

Harvey tries to draw elements from the old theories and primarily from Luxemburg, as to the need of capitalism of the outside non-capitalist world, its inability to pursue internal reforms to contain some sort of crisis (underconsumption or overaccumulation is irrelevant) and the permanent inability of the capitalist system to increase the profitability of capital other than

through its deviation from the proper generation of surplus value under competitive conditions. In other words, this means either the formation of monopolies, as the old theories thought, or the use of theft.

This kind of approach undermines all the basic elements that lie at the heart of capitalist restructuring and the ability of the capitalist system, through periodic crisis to rearrange the relation between capital and labour and incorporate technological changes, which is at the centre of any such rearrangement. The theory of “dispossession” has not a single word on technology and technological changes in the post-1973 period, remains silent on the changing balance of the capital-labour relation (in favour of the former) and disregards the transition of capitalism into a post-industrial society. It undermines very important works, such as the one of Castells (1996, 1997, 1998), which has focused extensively on these issues. It reproduces a static picture of capitalism that everything is done through a permanent process of devaluation and revaluations of assets, either of public assets (privatised) or assets of geographical areas, brought into the system.

There is little doubt that this phenomenon may be real, but the main engine of growth remains the typical system of expanded reproduction based on technological changes and a changing capital-labour relation. The fact that this is done on a broader geographical space, with the incorporation of pre-existing capitalist and pre-capitalist formations alike (neither China, nor the ex-Soviet Union were pre-capitalist, nor the state companies of the Western world) and that in this very process new centres of enormous capital accumulation arise (China, India, Brazil, South East Asia, etc), is an issue that can hardly be explained by a retreat to the theory of “primitive accumulation”. It looks more like Marx’s vision of capitalist expansion around the globe, as indicated in the Manifesto, and as Warren (1981), had indicated 30 years ago.

If Warren had attacked the dependency thesis that there is no capitalist development in the South because of imperialism, and indicated that a lot of capitalist growth was already in progress, Harvey, comes back not to deny that such capitalist growth is in progress, but that it is not capitalist in the proper sense. It has the features of “primitive accumulation” and therefore, it is both fragile and non-sustainable, as capital moves around various locations producing

devaluations to some and revaluations to others, which takes him back to the dependency school thesis, but from a different perspective.

The dependency school has a strong position on the need of development, growth and modernity of the South in the proper sense, through processes that oppose the polarization and pauperization produced by capitalist globalization, Harvey attacks Amin's theory of imperialism on this point. Harvey defends the struggles of any pre-capitalist group (indigenous population, farmers, etc.) against this "primitive accumulation" which leads to their dislocation. His critic includes also the modernization ideas of the traditional Left (Soviet experience of "forced collectivization", the problems that Sandinistas had in Nicaragua and other examples). In effect, he sees that modern struggles arise around the world from this "accumulation by dispossession", which includes the most famous ones, the Zapatistas, but also struggles against any modernization scheme (dumps, extraction of oil, free industrial zones, privatizations of all sorts, etc.). Now these movements often retreat to very traditional ideological constructions, something that Amin in his work remains very critical of including Islamic political movements). Harvey with his "dual domain of anti-capitalist and anti-imperialist struggle" thesis attempts to reconcile in a dialectical manner the traditional working class movements with the anti-imperialist struggles produced by "dispossession". The new reconciliation "has to acknowledge the significance of the multiple identifications (based on class, gender, locality, culture, etc.)" (Harvey, 2003, 179).

Harvey's social and political analysis attacks three different schools of thought. Firstly he attacks "post-modernism" that has proclaimed that the multiple identities and the heterogeneous capitalist development has produced no unifying social class, but a "multitude" engaged in specific struggles. He attacks the dependency school, which looks for modernization through broad inter-class and international social and political alliances. And attacks the traditional working class politics as partly outdated, as "dispossession" has become the primary form of accumulation. His dialectic reconstruction of unity is however dubious, as much so, as the economic analysis that lie behind the "accumulation by dispossession" thesis.

## **Panitch**

Panitch and Gindin propose a very different approach which is very interesting because they bring back the idea of state and class, two concepts that both Amin's and Harvey's approach have undermined. The basic idea is that there is no historical trajectory produced by theory. On the contrary, it is necessary to "historize theory". Thus, any form of crisis does not produce predictable outcomes. The crisis back in the 1870s accelerated inter-capitalist rivalry (and war), the great depression reversed the internationalizing trajectory (but again produced war) and the 1970s produced the deepening, acceleration and extension of capitalist globalization (without inter-imperial rivalry or war). The globalization tendencies of capitalism cannot be understood apart from the role played by state.

Thus, the expansionism of old imperialism is perceived not as the outcome of economic crisis and monopoly formation, but as the combination of competition, opportunities and capacities of a developing capitalism. Even more consumption, both private and public, was increasing in industrial nations as not only external, but internal accumulation was deepening. In effect, "capitalist imperialism needs to be understood through an extension of the theory of the capitalist state, rather than derived directly from the theory of economic stages or crisis" (Panitch and Gindin, 2004, p.40).

Panitch and Gindin criticise all theories of imperialism that attempt to interpret the phenomenon in terms of economics. He rather shifts the emphasis to politics, identifying imperialism as a political project combining elements of the "formal and informal empire". In effect, it is a complex political and economic process and imperialism should be kept apart from capitalism. It is thus about the state, it is about the state making "free markets" possible and then to make them work. The British imperialism of "free trade" in the 19<sup>th</sup> century requires this complex analysis of the "state" and the "market", rather than the simplistic perception of a national state-monopoly alliance in search of new protected markets.

The analysis then shifts to the American empire, the historical pattern of "extensive empire and self-government" that produced unique historical elements of the economic and cultural formation of American capitalism, and



most importantly of all, the unique agent: the American imperial state. This state managed in the Cold War era to reconstruct the world order in ways that were not restricted to the “containment of communism” but were also aiming through “informal imperial rule” to open the world in cultural, political and economic terms. Through this active process the American state was internationalized, preparing itself through the transitional “golden age” of the 1950s and the 1960s, for the constitution of American empire in the neo-liberal era.

The globalization outcome is not inevitable. But there is a very coherent formation of the three economic centres (U.S., Europe, Japan) and the unchallenged hegemony of the U.S. in the military and political front. This grand scale world reorganization is a feasible project under the specific historical circumstances and the U.S. was ready to follow it. By following Poulantzas, Panitch and Gindin, underlie the transformation of the capitalist states in order to establish the necessary internal conditions for sustained international accumulation, a process that did not weaken the position of the state but added to its functions.

Neoliberalism is viewed as a political project, changing the capital – labour relation in favour of the former. It was done in the U.S. and was followed by the others. The same happened with the hyper-mobility of financial capital and the emergence of the complex processes of international capitalism with enormous links between the American, European and Japanese economies, which makes inter-imperial rivalry of very limited importance. Following again Poulantzas, the crisis of imperialism is being located in “world class struggles”, as it is not American imperialism that is in crisis, but the whole of imperialism under this hegemony.

These “world class struggles” may sound too loose as an analytical tool and to some respect “too restrictive in light of the diverse social forces now at play”, as Panitch and Gindin underlie. But still in their own vision it is the most appropriate approach to the complex set of tensions and contradictions arising within the framework of an American empire.

#### **4. Conclusion**

The old theories of imperialism opened up very interesting research areas, which however, were discontinued. The theoretical ventures of Hilferding raised the question of money in Marxist theory, Luxemburg opened up the space of underconsumption, an issue that was later taken up by Kenysian theory, and globalization in Bucharin and Kautsky gained new theoretical insights in the tradition of the Communist Manifesto. Lenin turned much of these theories into a political project of great practical use but that somehow undermined the continuation of the theoretical project itself.

The new theories of imperialism, although they seem to make interesting points as to neoliberal era of world capitalism, they tend to reproduce some of the main deficiencies of the older theories. They are inclined to economism (Harvey), with emphasis on a sense of crisis and with a very simplistic perception of capitalist dynamics. Amin's approach remains very much within the dependency discourse, with again a rather poor comprehension of the economic and political processes involved, particularly with the rise of new economic powers from the periphery. Panitch stands for a break with economism and the shift towards a better understanding of the relation between the states, the international proliferation of the markets, and the rise of the American empire. Bringing the state and class back into the picture may open a more interesting perspective, yet to be developed. The theories of imperialism remain however in a rather poor state, as they did in the last fifty years. Renewing this very interesting theoretical tradition requires much more coherent theoretical trajectories, most probably coming from other areas of research in economic and political theory.

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