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İlhan DÖĞÜŞ

A POST KEYNESIAN APPROACH ON THE DECREASE IN BARGAINING POWER OF LABOUR BETWEEN 1970 AND 2008: FINANCIALISATION-INDUCED DECLINE IN CAPITAL ACCUMULATION: COMPARISON OF GERMANY AND UK

Joint Master's Programme European Studies Master Thesis

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Supervisors

Prof. Dr. Stefan COLLIGNON, Hamburg University
Assoc. Prof. Dr. Şükrü ERDEM, Akdeniz University

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Başkan	: Doç. Dr. Şükrü ERDEM	(İmza)
Üye (Danışmanı)	: Prof. Dr. Stefan COLLIGNON	(İmza)
Üye	: Yrd. Doç. Dr. Gülden BÖLÜK	(İmza)

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A Post Keynesian Approach on the Decrease in Bargaining Power of Labour Between 1970 and 2008: Financialisation-Induced Decline in Capital Accumulation: Comparison of Germany and UK

Onay : Yukarıdaki imzaların, adı geçen öğretim üyelerine ait olduğunu onaylarım.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CWED	Comparative Welfare Entitlements Dataset
CME	Coordinated Market Economy
EC	European Commission
EF	Expansion Frontier
EG-ECM	Engle and Granger Two-Step Error Correction Model
ETUI	European Trade Union Institute-Brussels
FF	Financial Frontier
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
ICTs	Information Communication Technologies
IMF	The International Monetary Fund
LME	Liberal Market Economy
MNCs	Multinational Corporations
NCs	National Corporations
NFC	Non-financial Corporation
OECD	Organisation for Economic Co-operation and Development
SBTC	Skill-biased Technological Change
TFP	Total Factor Productivity
TNCs	Transnational Corporations
UK	United Kingdom
ULC	Unit Labour Cost
US	United States
VoC	Varieties of Capitalism
WB	World Bank

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Since my high school years I was determined to be an economist and have engaged in economics and politics cause of unfair income distribution and lack of democracy around the world. Hence I can state that this master thesis corresponds, for me, to a yield of my endeavours and observations of years.

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SUMMARY

A POST KEYNESIAN APPROACH ON THE DECREASE IN BARGAINING POWER OF LABOUR BETWEEN 1970 AND 2008: FINANCIALISATION-INDUCED DECLINE IN CAPITAL ACCUMULATION: COMPARISON OF GERMANY AND UK

As it has been pointed out within the Post-Keynesian Approach, financialisation process by lowering reinvestment and thus capital accumulation incentives (due to enabling "financial profits" possibilities without investment and cause of shareholder pressure) leads higher unemployment levels after 1970. And higher unemployment may raise the degree of worker substitution for firms as hiring with a lower wage is easier because of higher amount of job seekers and because of lower "productivity lost" by replacement due to shorter vacant days. In other words, if unemployment rate is low cause of high investment level, firms are not able to threat incumbent workers to substitute them with new workers as turnover costs are higher since lost in productivity matters due to longer vacant days cause of less amount of job seekers and due to hiring with a lower wage is difficult; incumbents can negotiate for higher wage increases. In addition, cause of distortions in unemployment benefits in the last decades, ability of workers to survive during unemployment period had been decreased, too.

In short, financialisation leads less capital accumulation, less capital accumulation leads higher unemployment and higher unemployment leads higher degree of worker substitution which lessens bargaining power of the labour.

I will first try to explain the finance-dominated capitalism which is characterised by "*high profits, low investment*' and then focus on the relationship between capital accumulation and unemployment.

The argument will be tested via "Engle and Granger Two-Step Error Correction Model" through a comparison of Germany and UK within the period of between 1970-2008 in which deregulation has dominated. The reason behind this preference is that the United Kingdom is the prominent example of liberal Anglo-Saxon Model, whereas Germany is the leading figure of Social Market Model. Hence I think they will be best cases to test the argument.

The model consists of bargaining power of labour which is my own calculation and capital accumulation rate which is the growth rate of net capital stock. I presume that I can capture over capital accumulation rate both the impact of financialisation on investment level and also the degree of changes in financialisation and investment level, simultaneously.

Keywords: Bargaining power of labour, financialisation, unemployment, capital accumulation, degree of worker substitution, Germany, United Kingdom

ÖZET

EMEĞİN PAZARLIK GÜCÜNÜN 1970-2008 ARASINDAKİ DÜŞÜŞÜNE DAİR POST KEYNESYEN BİR YAKLAŞIM: FİNANŞALLAŞMANIN TETİKLEDİĞİ SERMAYE BİRİKİMİNDEKİ DÜŞÜŞ- ALMANYA ve BİRLEŞİK KRALLIK'IN KARŞILAŞTIRMASI

Post Keynesyen yaklaşım çerçevesinde hali hazırda açıklandığı üzere, 1970'te başlayan finanşallaşma süreci, yatırım yapmadan "finansal kar" olanaklarını artırması ve artan "hissedar baskısı" itibariyle yeniden-yatırımı ve böylece sermaye birikimini azalttığından, daha yüksek işsizliğe sebep olmaktadır. Yüksek işsizlik düzeyi ise, daha düşük ücrete çalışacak işçi bulma ihtimalini arttırdığından ve işçi arama süresini kısalttığından "verimlilik kaybını" azaltması itibariyle, firmalar için "işçi değiştirebilme derecesini" artırmakta, ve dolayısıyla işçilerin pazarlık gücünü azaltmaktadır. Başka bir ifadeyle, eğer yüksek yatırım ortamında işsizlik oranı düşükse, daha da uzayacak olan işçi arama süresinden kaynaklı yüksek verimlilik kaybı ve daha düşük ücrete çalışacak işçi bulma ihtimalinin zayıflamasından ötürü "işçi sirkülasyon maliyeti" artacağı için, firmalar çalışan işçileri yeni bir işçiyle değiştirmekle tehdit edemez. Bu durumda işçiler talep edecekleri maaş düzeyini yüksek tutabilirler. Ayrıca son yıllarda işsizlik sigortası bileşenlerindeki kötüleşme işçilerin işsizlik süresinde dayanma güçlerine de ket vurmaktadır.

Kısacası finanşallaşma; daha az sermaye birikimine, daha az sermaye birikimi daha yüksek işsizliğe ve daha yüksek işsizlik de daha yüksek "işçi değiştirebilme derecesine" sebep olmakta ve dolayısıyla işçinin pazarlık gücünü azaltmaktadır.

Öncelikle "yüksek kar oranı, düşük yatırım ve düşük birikim oranı" ile karakterize edilebilecek finansal kapitalizmi açıklamaya çalışacağız. Daha sonra ise sermaye birikimi ile işsizlik arasındaki ilişkiye odaklanacağız.

İddia, "Engle and Granger Two-Step Error Correction Model" kullanılarak, finans temelli deregülasyoncu kapitalizm türünün hegemonize ettiği 1970 ve 2008 yılları arasında Birleşik Krallık ile Almanya'nın gösterdikleri performansların karşılaştırılmasıyla test edilecektir. Bu tercihin arkasında ise, Birleşik Krallık'ın liberal Anglo-Saxon Modeli'nin ve Almanya'nın da Sosyal Piyasa Modeli'nin öncü örnek ülkeleri olması yatmaktadır.

Model, kendi hesaplamamız olan işçinin pazarlık gücü ile net sermaye stokunun büyüme oranı olan sermayenin birikim oranından müteşekkildir. Sermaye birikim oranı üzerinden hem finanşallaşmanın yatırım düzeyine negatif etkisini hem de finanşallaşma ile yatırım düzeyindeki değişimleri aynı anda yakalayabileceğimizi varsayıyoruz.

Anahtar Kelimeler: emeğin pazarlık gücü, finanşallaşma, işsizlik, sermaye birikimi, işçi değiştirebilme oranı, Almanya, Birleşik Krallık

INTRODUCTION

There is an affluent literature on the relationship between income distribution and financialisation within the Post-Keynesian Approach (Dünhaupt 2013; Hein 2010a, 2010b, 2012b; Hein and van Treeck 2010a and 2012a; Onaran et al. 2011, Stockhammer 2004a, 2009 etc.). Also as Stockhammer (2012) has pointed out that financialisation (rising dividend payments, buyouts, interest payments, and market capitalisation) has the strongest negative effect on the wage share. But what is absent in this literature is that through which mechanisms financialisation reduces the wage share. Hence the main objective of this research is introducing bargaining power of labour in order to explain this process; just because of that unless labour has not been weakened; lower wage share cannot be enforceable to workers.

As it is widely expected, level of unemployment is the main factor for bargaining power of labour via determining the "degree of substitution for firms" (Manzini and Snower, 2005). Since degree of substitution relies on labour turnover costs; during high unemployment periods due to large number of job seekers and lower wage claims of job seekers, turnover costs tend to fall and thus degree of substitution rise.

It is pointed out within the Post Keynesian Approach that the unemployment is mainly driven by the level of investments (Stockhammer, 2011) and thus by the concern of firms on capital accumulation (Stockhammer, 2008: 23). I would put forward that financialisation leads lower investment and higher unemployment levels which reduce labour turnover costs and thus lower the bargaining power of labour as incumbents cannot bargain for higher wage increases under high-unemployment and low inflation circumstances.

To sum up, the main objective of the thesis is to explain the relationship between financialisation and diminishing wage share. I will try to introduce bargaining power of labour by calculating it over "unemployment insurance" and "labour turnover costs" which indicates firms' ability to substitute and I will try to show that bargaining power of labour has been lessened mainly by diminishing investment and capital accumulation rate.

The paper is structured as follows: After describing shortly the declining labour power, in 2nd chapter I will try to draw a historical background to understand the shift to financialisation by investigating the macro-structural changes over the collapse of Bretton-Woods System. In the 3rd chapter I will try to clarify both financialisation and the decline in bargaining power of

labour over capital accumulation rate through Post Keynesian Approach. In 4th chapter I will construct my regression model and then compare the results in 5th chapter with the help of Varieties of Capitalism (VoC) Approach. Then I will conclude in the last chapter.

CHAPTER 1
DECLINING LABOUR POWER

There is a very strong consensus on that democracy is the political system in which power has been quasi equally distributed within the society and so it leads fair and efficient solutions via preventing domination (Shapiro, 2004). But the same concern and also the concept 'power' draw very little attention within economics discipline (Acemoglu, 1998). Especially power relations among employees and employers are out of the agenda of mainstream neoclassic economics literature (Bowles & Gintis, 1987). For example, in economics textbooks, it is almost impossible to come across with the term "capitalist" and also labour is considered as a simple "commodity".

On the other hand, as Collier (1999)[1] points out, also the literature on comparative democracy disregard the role of labour movements on the establishment and development of democracy. She stresses out that the role of labour movements is much bigger than it has been assumed. As Bowles and Gintis emphasise, not only economic and social rights, also most of basic human rights have been achieved by the contribution of labour movements in modern history (Bowles & Gintis, 1987; Docherty & van der Velden, 2012, Silver, 2009)[2]. Galbraith (2012: 103) states that "economic democracy" induces strong trade unions, fair income distributions, freedoms and welfare state. A very simple observation would tell us that recent distortions in the rights on the global level are very strongly related to the diminishing power of labour in the last decades, cause of lack of a 'contesting actor' to recover (Harcourt & Wood; 2006). Despite the fact that crucial nexus of an economy consists of power relations between the capital and labour which does not only effect the technological level, as Keynes has pointed out, also effects the level of social welfare; changes in bargaining power of labour have not yet succeeded to draw the required and deserved attention within social sciences. Rousseas' reminding is very crucial at that point:

> *"The distribution of wealth and income cannot be derived, as neo-classicists are wont to do, from the setting of prices in competitive goods and factor markets without doing gross violence to the world as it is. Prices, to repeat, are a function of the distribution of wealth, not the other way around. And the distribution of wealth mirrors the social and economic power structure of society."* (Rousseas, 1998: 11)

[1] Cited from Silver (2009, 17)
[2] For example in Belgium right to vote has been gained after the World War I through several strikes between 1886 and 1913 (Silver, 2009: 192).

In line with the fact that *the distribution of wealth mirrors the social and economic power structure of society*, as the gap between the productivity growth and the wage growth has being widened over time, the neoclassic argument states that the wage increases are depend on the productivity growth does not work (See Figure 1.1).

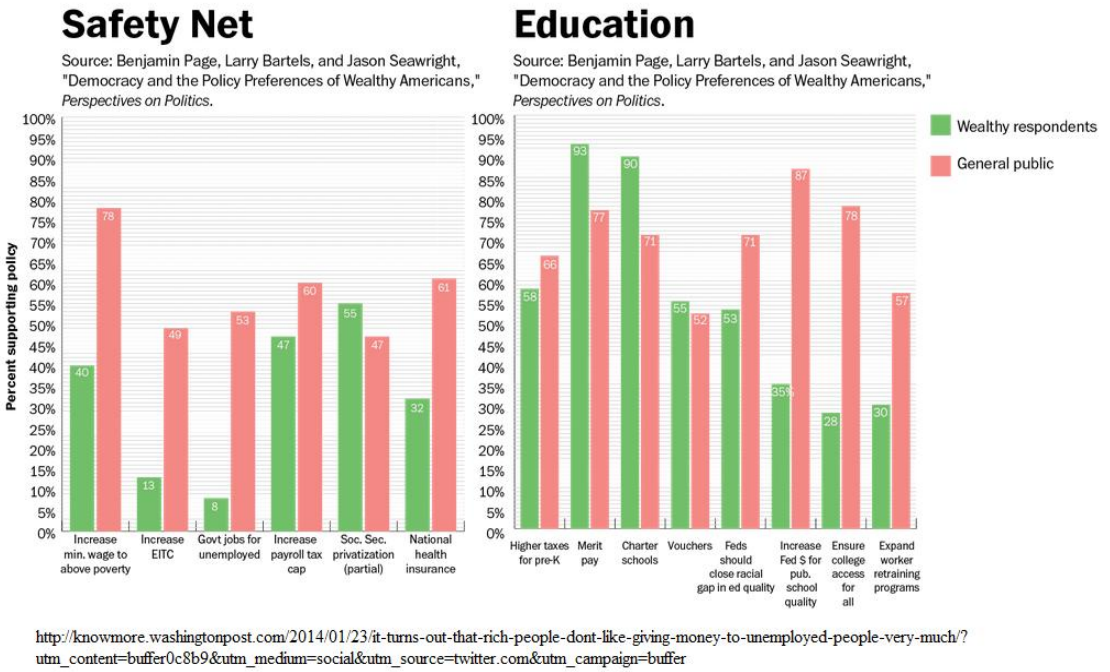
Figure 1.1 Labour Compensation and Productivity Growth

Sources: ILO Global Wage Database; ILO Trends Econometric Model, March 2012[3]

Hence, in line with a Polanian perspective[4], I can assert that the markets, especially the labour markets are not out of power relations. For example, if we compare the US economic policies in the last decades with the results of the report of Page et al. (2013) on policy preferences of wealthy Americans; it seems that almost all deregulative economic policies are in accordance with preferences of wealthy people (see Figure 1.2). I would argue that as much as labour loose bargaining power, there would be a wider room for cuts and distortions in social welfare policies and deregulations in favour of wealthy people's interests. It is quite interesting that the sharpest gaps between general public and wealthy people's opinions are concerning job markets. And it reminds us again that the core issue in economy is the power relation between capital and labour.

[3] Taken from http://www.talkradionews.com/united-nations/2013/05/07/world-labor-survey-rising-productivity-stagnant-wages.html

[4] Karl Polanyi puts forward that markets do not function unless they are socially embedded through institutions which are indeed the results of societal power relations. See Polanyi (1944)



http://knowmore.washingtonpost.com/2014/01/23/it-turns-out-that-rich-people-dont-like-giving-money-to-unemployed-people-very-much/?utm_content=buffer0c8b9&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Figure 1.2 Comparison of Wealthy People's Preferences with General Public in the USA (Page et al., 2013)

So an investigation on how bargaining power of labour has fallen is very crucial to understand the last four decades.

Bargaining power is mostly defined as the ratio of costs which one part can impose to the counterpart in case of not reaching an agreement (Bicerli, 2011: 333). Hence if one part has other options to survive in case of disagreement, the cost to be imposed would be less and so this part would have more bargaining power. Thus it is assumed that bargaining power of labour hinges on the ability of workers to perform a strike and the level of costs of strikes to impose, and also on strength of alternative options of employers and employees visa vis.

Mostly it is acknowledged that labour has lost its power due to increasing global mobility of capital after 1970s (Silver, 2009). According to Silver, vertical disintegration in production process has reduced the amount of fixed capital which grants bargaining power to labour through effective strikes.

On the other hand, Acemoglu (1998) puts forward that the main reason is the Skill-biased Technological Change (SBTC) which sets out that changes in production technologies after 1970s which have diminished the labour – capital substitution were in favour of high skilled workers who have less concern to unionise. In addition to IMF (2007), OECD's approach is also in line with it, as well:

"Total factor productivity growth and capital deepening – the key drivers of economic growth – are estimated to jointly account for as much as 80% of the average within-industry decline of the labour share in OECD countries between 1990 and 2007. This is consistent with the idea advanced by many studies that the spread of information and communication technologies has created opportunities not only for unprecedented advances in innovation and invention of new capital goods and production processes, thereby boosting productivity, but also for replacing workers with machines for certain types of jobs, notably those involving routine tasks."(OECD, 2012:3)

Abovementioned approaches which highlights the change in production technologies can partially explain but cannot answer properly the following questions:

- Why has bargaining power of labour decreased in not-vertically disintegrated sectors/ and in their countries and also within National Corporations (NCs)[5] throughout the process of globalisation of production?
- Why has not bargaining power of labour in host countries increased as much as the incoming fixed capital to be controlled by workers?
- Why has not SBTC worked out in Denmark, Sweden and Finland to decrease the union membership and hence bargaining power of labour? And also what about high-skilled workers' diminishing bargaining power over time?

Hanushek et al. (2013) conclude *that returns to skills are systematically lower in countries with higher union density, stricter employment protection, and larger public-sector shares*. That approach disregards three important points: First, decreasing the wage gap between low and high- skilled workers is an ontological aim for trade unions. Second, they don't consider the differences in skill composition of workforce across countries and its institutional relations with labour market regulations[6]. And thirdly, they don't examine the historical change; they only focus on cross-country differences in a point of time. Moreover, Stockhammer has found that the results of the European Commission (2007) and the IMF (2007)[7] which are in line with Acemoglu's approach are not robust at all and suffer from serious econometric problems (Stockhammer (2009).

[5] I mean by NCs, corporation which are not TNCs and run their business in a national broad. And I prefer TNCs instead of MNCs since they run their business in a transnational scope rather than being multinationally owned.
[6] I will discuss differences in skill composition in Chapter 5 based on Varieties of Capitalism Approach.
[7] See European Commission (2007): *The labour income share in the European Union*. Chapter 5 of: Employment in Europe and IMF, (2007): *The globalization of labor*. Chapter 5 of World Economics Outlook April 2007. Washington: IMF

One of the most prevalent explanations on why bargaining power of labour with globally fragmentation of production has decreased after 1970 is that 'horizontal structure' of TNCs makes strikes useless via increasing 'inside options` of firms to shift production to other outsourced plants in case of strikes (Poolsombat, 2004). Threat of relocation is another factor which lessens bargaining power and suppresses wages and also the other requests of workers such as working hours, healthy and secure conditions etc. (Bowles & Gintis, 1987). Harrison (2002) finds a negative correlation between trade openness and labour's shares in developed and developing countries. Trade does not worsen income distribution only via relative prices, but through affecting the bargaining position of the labour and capital (Rodrik 1997, Onaran 2011). On the other hand, perversely, the fact that share of trade in GDP has a positive correlation with collective agreement coverage (Schmitt & Mitukiewicz, 2011) contradicts with the surrounding assumption that lessened labour power leads more trade via lower ULC.

Despite I don't disregard these explanations, I presuppose and want to point out that main reason behind the decline in bargaining power of labour is the financialisation process after 1970 which lessens investment level and capital accumulation. Stockhammer (2013) points out that point as following:

> *"Financialisation has had two important effects on the bargaining position of labour. First, firms have gained more options for investing: they can invest in financial assets as well as in real assets and they can invest at home as well as abroad. They have gained mobility in terms of the geographical location as well as in terms of the content of investment. Second, it has empowered shareholders relative to workers by putting additional constraints on firms and the development of a market for corporate control has aligned management's interest to that of shareholders."* Stockhammer (2013)

I presuppose that if investment level and capital accumulation had not fallen cause of financialisation, fragmentation of production would only have channelled the bargaining power of labour from home country to the host country and so at global level it would have remained almost the same. But Figure 1.4 shows that labour share has decreased at global level, too. Streeck (2001) argues that the main reason behind the global fragmentation of production is the shareholder value pressure. In order to fulfil the expectations on share value maximisation/ profitability in a very short time, firms are forced to minimize their costs irrespective of other factors. I believe also that falling concerns of firms on investment, accumulation (growth) with respect to financialisation is also a decisive factor behind the

outsourcing and fragmenting the production via relocation, off shoring, due to emerging "*technical and logistical inefficiencies"* (Hein,2008:5) after a certain growth level.

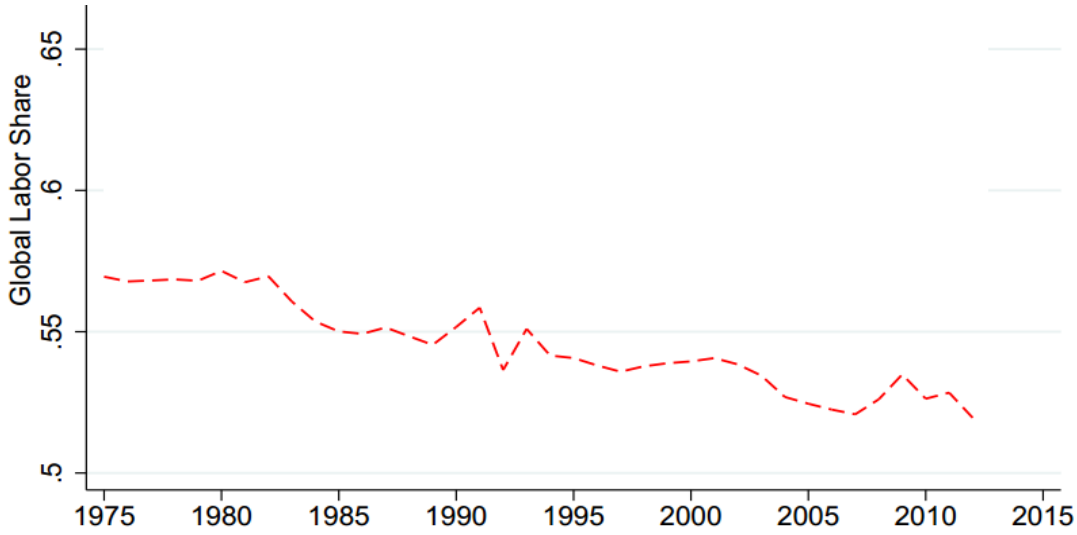


Figure 1.3 Declining Global Labour Share

Source: Karabarbounis and Karabarbounis (2013: 35)

In addition, if the investment level had not decreased, as labour could adapt itself, change in the production technology would not so much hamper the bargaining power of labour. Mishel (2014) reports that in the USA despite low-wage workers have more education in 2012 than they did in 1968; they are paid 23% less. This reveals two points very clearly: First, contrary to presumed by Acemoglu, low-wage workers do not stay as not-educated; rather they try to upgrade their skills in accordance with labour market dynamics. Secondly, having more education doesn't lead always higher bargaining power and so higher real wages.

More importantly, improvement of the production technology hinges strongly on capital accumulation and thus on investment (Hein, 2008). And in contrary to Acemoglu's argumentation, by examining 71 countries from 1970 to 2007 Stockhammer (2012; 32) has shown that technological progress is in favour of wage share and financialisation has the strongest negative effect on the wage share. Pissarides (2005) also points out that "*in the last 30 years, both aggregate productivity and aggregate employment benefited greatly from the introduction of new technology*". Stockhammer and Onaran (2004: 24) have found that the substitution of labour for capital in response to higher wage share is not verified empirically. Shortly, technology is a disputable factor to explain the decline in bargaining power of labour.

To explain why and how financialisation reduce wage share, an explanation of the relation between financialisation and bargaining power of labour is required since financialisation represents an alteration in the core, in the content of the capital. And the main aim of this work is to test this relation.

CHAPTER 2
HISTORICAL BACKGROUND: COLLAPSE OF BRETTON-WOODS SYSTEM

Before examining the theoretical basis, an explanation on the historical background on why financialisation has come out is required, as I deal with time, series of data and also I have chosen 1970 as a "historical-breakage". Hence I have to first historically understand what had happened in 1970s which has been driven that structural shift in the global economy.

There are vast explanations to describe this change in 1970s. The most prevailing explanations are Regulation School and Marxism: French Regulation School (see for a comprehensive discussion Jessop and Sum, 2006) argues that it was cause of the change in production technologies from mass production-based Fordist regime to flexible-specialised Post-Fordist production regime. They assert that in such a regime "Keynesian demand management" was not possible any more. In addition to them, Marxists (Holloway and Bonefeld, 1995; Saad-Filho and Johnston, 2005) argued that the main reason behind that historical breakage lies on declining profit rates.

Despite these explanations are not false, I think that they are not adequate regarding my subject cause of two main reasons: Firstly, the issue I want to understand is the shift to financialisation which is a matter of money. And secondly, with regard to first one, the core of capitalism which distinguishes it from other economic systems is that being an economic system of economic transactions based on contracts to deal with uncertain future (Collignon, 2009).

Hence the root of a structural change within the capitalist system should be found out within this core sphere, as capitalism needs for credit/liquidity to create surplus and through which mechanism uncertainty is being dealt. Moreover, as the money is the "means of exchange" and "store of the value" over which economic transactions are being held, first the nature of money and thus the monetary system has to be understood. Collignon criticises Marx by arguing that *"he did not understand the interaction between liquidity, uncertainty and credit contracts with the need to produce a surplus."* (Collignon, 2009: 11)

In a philosophical term, it could be asserted that the ways/ methods to deal with uncertainty and the understanding on it are the core constituents of a system[8]. If uncertainty is being assumed as an exception, then it would differentiate the system than it is being assumed as a core issue. Collignon emphasizes that in terms of economic theories:

> *"The essential difference between the two economic paradigms consists in the treatment of uncertainty: in the classic/neoclassic/monetarist tradition, uncertainty is reduced to temporary disturbances (shocks), which disappear automatically. In the Keynesian/informational paradigm uncertainty is inherent to the human condition and there is no guarantee that the probability characteristics of past observable events will also govern the probability distribution of future events. If that is so, uncertainty requires management." (Collignon, 2009: 11)*

Keynes puts forward that since the future is unknowable; the best way against uncertainty is minimizing the cost of uncertainty with given information (Keynes, 1937) while he explains liquidity preference. Hence I can call the Bretton-Woods System, in whose establishment process Keynes had an important role, as an "*uncertainty management system*" to stabilize the macro-economy via minimizing the cost of uncertainty. Collignon reminds that "*Bretton-Woods System was marked by exceptional stability*" (Collignon, 2009:3) and after breakdown of the system instability have dominated and lots of crises have been undergone. Jespersen illuminates the breakdown of Bretton-Woods in terms of cost of uncertainty:

> *"Tensions within the Bretton Woods system had become too costly, especially for the USA, which was the original architect of the global exchange rate system. There were two main reasons for this breakdown. Firstly, the political benefits could no longer compensate the economic loss for the USA due to maintaining the dollar at a fixed value in terms of gold. Secondly, the liberalization of financial capital flows had amplified the* pressure from real imbalances due to excessive speculation."(Jespersen, 2002: 189-190)

Foreign official dollar holdings in 1970 were threefold of in 1949. In the same period, U.S. gold reserves declined by 56% (Salvatore, 2013: 698). Davidson clarifies the political economic background of these costs, in terms of rising balance-of-payments deficits:

[8] I derive that assertion from readings of Ulrich Beck's *Risk Society (1992)* in which he argues that modern institutions are not anymore able to defeat the risks and to deal with uncertainty.

> *"Foreign aid grants exceeded the United States' trade surplus of demand for US exports over US imports. Unfortunately, the Bretton Woods system had no mechanism for automatically encouraging emerging trade surplus (creditor) nations to step into the civilizing adjustment role the United States had been playing since 1947. Instead, these creditor nations converted a portion of their annual dollar export earnings into calls on the gold reserves of the United States. In 1958 alone, the United States lost over $2 billion of its gold reserves."* (Davidson, 2002: 214)

Here it could be asserted that cost of "uncertainty management" began to exceed the cost of 'uncertainty'. Padoa-Schioppa and Saccomanni's (2007: 239) explanations on controls on international financial transactions during 1960s are in line with that assertion. Then the Neoclassical Approach which argues that uncertainty as a "temporal disturbance" will disappear automatically started to prevail: If it is temporary and will disappear within the self-adjusting markets, then there is no room to bear the cost of uncertainty management.

Now I can construct a link with financialisation process:

The alteration in treatment to uncertainty towards that it is a temporary disturbance has let a shift from long-termism to short-termism: Since uncertainty merely is the "disturbance" and it could be foreseen within a margin of error in the short-run whereas it is inherent and not-foreseeable in the long-run. Within that framework, describing the Bretton-Woods System in which exchange rate were fixed and a US dollar was pegged to gold, as a "*government-led monetary system*" and the post-Bretton-Woods as a "*market-led monetary system"* (Padoa-Schioppa and Saccomanni, 2007) fits well.

It is not so disputable that the fixed-exchange rate regime is in accordance with a long-term oriented and investment/ capital accumulation-induced economic structure which requires demand management and uncertainty management, as well. On the other hand, the floating-exchange rate regime (*market-led monetary system*) is in line with needs of a short-term oriented economy which has fewer concerns on investment/ capital accumulation due to excess capacity which lessens mark-up rates (Rowthorn, 1995). I don't mean that (exchange rate) stability is no longer the *norm* and instability is the desired situation. As Padoa-Schioppa and Saccomanni (2007) assert, it is still the objective of IMF, which is one of Bretton-Woods institutions, but the Fund has not the power to pursue this goal.

The requirements on liberalization of financial capital flows and globalisation of finance/ financialisation process are mostly attributed to the fact that after the Oil Shock in 1971, US

financial investors wanted to exploit the accumulated excess money of Arab oil exporters by transferring it to Asian countries who at that time were looking for capital to finance their development (Senses, 2007). Padoa-Schioppa and Saccomanni (2007) also highlight the role of newly emerging international financial issues after Oil Shock (such as failure of Special Drawing Rights, disagreement on substitution account in IMF) which were not manageable within a multilateral government-led monetary system.

I can put forward that these circumstances of overinvestment with decreasing profitability and high inflation and excess capacity have let NFCs to search for new solutions and new regimes to get rid of problems at the expense of the lower capital accumulation rate, weak growth and increased unemployment. To construct a link between uncertainty and excess capacity, Steindl's emphasis is useful: *Firms will hold excess capacity to maintain flexibility in the face of unexpected events, much the same way households hold cash* (Steindl, 1952)[9]. As the understanding on uncertainty has changed and short-term profit orientation prevailed long-term growth orientation, holding excess capacity which restrains mark-up rate and holding cash began to be perceived as irrational and costly.

To conclude, post-war economic order has collapsed since its accumulated costs/ problems had defaced its legitimacy and made prestigious the counter arguments of Monetarist Approach. In terms of employment-inflation trade-off: High inflation delegitimizes pro-employment policies and high unemployment delegitimizes pro-inflation policies.

Once if the hegemonic norms and understanding on uncertainty/ future has altered, then agents start to adapt themselves to the new conditions: Issuing equity and/or debt, in order to externalize and share the costs and risks with others and also in order to ease profitability, came out as an effective way to handle with uncertainty. High inflation and high nominal interest rates in late 1960s has steered NFCs into the short-term oriented financial markets from long-term oriented capital accumulation and investment. This new situation corresponds to the shift into the finance-dominated capitalism (Hein, 2012b) which I will elaborate in the next chapter.

[9] Cited from Stockhammer (2004b, 39)

CHAPTER 3
THEORETICAL BACKGROUND: POST-KEYNESIAN APPROACH

Post Keynesian Approach, *inspired by Keynes and Kalecki, Kaldor, Leontief, Sraffa, Veblen, Galbraith, Andrews, Georgescu-Roegen, Hicks or Tobin* (Goda, 2013: 6), emphasizes societal power relations, social norms and conventions, institutions and importance of history (Hort, 2007) since *the world is not sufficiently mechanistic for individuals to be rational* (Stockhammer, 2011: 297). The other important feature of Post Keynesian Approach is that it introduces the income distribution as a key variable to understand economic processes. Hence I think it is useful to understand the changes in bargaining power of labour despite it hasn't paid attention so much directly to bargaining power of labour. Besides it provides a scope for policy implications behind pure theoretical speculations, its analysis on financialisation over functional income distribution (Hein, 2010a, 2010b; Hein and van Treeck, 2010a, 2010b) is easily applicable to construct a link with bargaining power of labour. In addition, as bargaining power is a relational subject in Post Keynesian Approach, via focusing on the role of functional income distribution and its understanding on firm that prices are set strategically by firms in an oligopolistic market via mark-up rate over costs, helps firmly to understand both power of capital and labour interchangeably. Pressmans's following emphasis reveals why Post Keynesian Approach is workable at that point:

> *"For Post Keynesians, the key macroeconomic problem has always been unemployment. While the mainstream views unemployment as a temporary problem that will go away in the long run if wages, prices, and interest rates were sufficiently flexible, Post Keynesians see unemployment as a problem that will not go away unless macroeconomic policies are used to create jobs*."(Pressmann, 2007: 1)

Within mainstream economics which downgrades unemployment, it is argued that lower wage level leads higher employment level, by assuming that labour markets function alike simple commodity markets[10] and by disregarding the role of wages on effective demand. However there is no strong evidence that firms hire more when wages fall (Flassbeck, 2000). The fact is that if wages fall, firms keep on producing with the same amount of labour, in pursue of productivity. They only hire more if they decide on investing more (Herr, 2013). Keynes highlighted that *"the level of output and employment as a whole depends on the*

[10] As if workers supply their labour less if wages fall. However, labour supply is inelastic cause of sociological and psychological impacts of unemployment.

amount of investment" (Keynes 1937, 221). Under the same or lower investment circumstances, lower wage level doesn't play any role to increase employment level:

> "*Contrary to neo-classical expectations, little or no evidence was found for the hypothesis that changes in real wages, and thus income distribution, effect unemployment."* (Onaran and Stockhammer, 2004: 24).

And as it is emphasised by (Post) Keynesian Approach, the main factor which induces investment is that effective demand which hinges on the real wage level. That is an attempt to link labour markets with goods markets. Onaran and Stockhammer's empirical findings (Onaran and Stockhammer, 2004: 25) are in line with that argument. Since the effect of an increase in capital income on aggregate demand is lower than the effect of an increase in wage income, due to relative higher marginal propensity to consume of wage earners; rising wage share stimulates aggregate demand and in turn the investment level. As Keynes (1937) has pointed out if the aggregate demand is not enough high, firms do not invest even though interest rates are too low. And the main trend after 1970 could be described as such a situation: Despite the relative lower real interest rates; investment level has not shifted up as it could be expected. Even though technological progress has been indicated as the main engine of growth within the mainstream discourse, growth rate since 1970s does not reflect the provided technological progress, because of the weaker effective demand. Dallery and van Treeck stress out that "*a lower propensity to save and higher real wages can be consistent with higher growth in the long run, even in the absence of technical progress*" (Dallery and van Treeck, 2008:1). That is to say, without enough high effective demand, technological progress does not solely stimulate growth since a strong middle-class is required to consume these new high-tech products.

Now it is required to understand why investment rates have fallen after 1970s.

3.1 Understanding Financialisation within the Post Keynesian Approach

Firstly the question "what is financialisation?" should be answered. One of the most cited explanation is Epstein's following definition:

> *"Financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies."* (Epstein, 2005, p. 3)

However this definition is not enough to understand its relation with labour. His following definition fits better and reveals the shift from non-financial to financial activities:

> *"Financial markets' demands for more income and more rapidly growing stock prices occurred at the same time as stagnant economic growth and increased product market competition made it increasingly difficult to earn profits. (...) Non-financial corporations responded to this pressure in three ways, none of them healthy for average citizen: 1) they cut wages and benefits to workers; 2) they engaged in fraud and deception to increase apparent profits and 3) they moved into financial operations to increase profits."* (Epstein, 2003: 7)

As *the ratio of profits in the financial sector relative to the non-financial sector more than doubled since the mid-1980s* (Jackson, 2010: 23), finance is not anymore the mean of intermediation between households' savings and firms' investment, as it is assumed by mainstream economics; rather it has become an end, an aim in itself (Dallery, 2008: 4).

The argument of the hegemon Neo-Classic Approach that financial markets can make easier the access to capital, so it can boost investment and thus growth (Boyer, 2000)[11], based on the assumption that high propensity to consume out of rentiers' income can compensate the loss of consumption caused by falling share of labour. However, as Hein and van Treeck (2010a) and Hein (2008b) have shown empirically that this assumption does not work due to low propensity to consume of rentiers. It would be clear if we remember that most of these rentiers are consist of *institutional investors, such as investment funds, hedge funds, retirement funds and insurance companies* who have increased their *weight in the GDP in terms of assets from 70.5% in 1980 to 182.9% in 2004, in the US, and from 10% to 156.4% in France (OECD, 2006)* (Parelta and Garcia, 2008: 4). In addition, with respect to supply-side, as Orhangazi (2008: 870) highlights; since *"the return that firms have to provide to the market in the forms of dividends and stock buybacks has increased",* it raises the cost of capital, as well.

Moreover, his empirical findings show that the argument that income from financial investments can be used for real investments is only valid for small firms (Orhangazi, 2008: 882). So I can put forward that as the level of small firms being involved in financial markets is too low, positive effect of financialisation on aggregate real investment is very restricted

[11] Cited from Hein (2008b).

since negative effect of financialisation on real investment for highly involved large firms is too much. To portray by a simple model:

$$f = \beta s + \alpha l \qquad (1.1)$$

Where f indicates "total effect of financialisation on aggregate real investment", β "effect of financialisation on real investment for small firms", and α for "effect of financialisation on real investment for large firms"; and s represents "level of being involved in financial markets of small firms" and l the "level of being involved in financial markets of large firms". As l is greater than s and α is negative and its absolute value is greater thanβ;f, the net effect would be negative.

On the other hand, Vitols highlights the role of proportion of Small and Medium Enterprises (SMEs) in the economy on the differentiation of the stock market capitalisation. For example, the proportion of SMEs in employment is 65% in Germany and 70% in Japan, whereas it is about 30% in US and UK (Vitols, 2004: 19) in which stock market capitalisation ratio to GDP is relative higher (see Figure 4.1). Hence it could be asserted that the proportion of SMEs coincides with financialisation/ stock market capitalisation and capital accumulation: Higher proportion of SMEs, less market capitalisation.

One of the crucial reasons behind negative effect of financialisation on investment and capital accumulation is the shareholder pressure which shifted corporate power towards shareholders (Jackson, 2010: 13). With regard to SMEs; since they are less exposed to shareholder pressure, their concerns on capital accumulation decline less. Jackson explains the historical sequence in the US case as following:

> *"Prior to the 1980s, the U.S. was characterized by strong managers and weak owners. Top managers tended to view themselves as loyal to the corporation, rather than as agents of shareholders. The 1980s saw a huge wave of hostile takeovers that threatened the hegemony of U.S. managers. Likewise, institutional investors and particularly public-sector pension funds such as CALPERs became much more active players in corporate governance, using their growing blocks to exercise greater voice in corporate management (Useem, 1996). By the 1990s, managers had fought back by lobbying state governments to enact anti-takeover legislation, which made hostile takeovers much more costly (Useem, 1993). But managers also accepted the notion of "shareholder value" as a new underlying ideology for corporate America. In particular, the rise of equity-based*

> *pay such as stock options gave managers a greater stake in promoting restructuring and orientating their strategies toward the stock market."*(Jackson, 2010: 10)

As Orhangazi pointed out in his paper which examines financialisation process in the USA, the shareholder pressure leads also a shift from long-termism to short-termism since stock markets are, by definition, short-term oriented:

> *"Managers of non-financial corporations may be forced, or induced via stock options, to take the short horizon of financial markets as their guideline for decision-making. If financial markets undervalue long-term investments then managers will undervalue them too, as their activities are judged and rewarded by the performance of a company's assets. This may harm the long-run performance of companies."* (Orhangazi, 2008:871)

The shareholder pressure which was mainly because of hostile take-over during 1980s enabling new financial instruments, new pay schemes (Stockhammer, 2004: 726) and short-termism is accompanied has driven the shift from "*retain and reinvest strategy"* to *"downsize and distribute strategy"* in order to increase return on equity (Lazonick and O'Sullivan, 2000: 4). Downsizing means decreasing investment activities via cuts in staff and plant closures in order to increase the marginal productivity of labour and so increase the return to equity to fulfil shareholders' demands. Distribution means distributing revenues through dividend payments, interest payments and stock repurchases. Cordonnier describes this situation as "*profiting without investment*" (Cordonnier, 2006)[12]. However I prefer to call it "*higher profit with low re/investment*" since without investment and capital accumulation no NFC can survive.

In the next part I will try to clarify both how *higher profiting with lower investment* is possible and its relationship with capital accumulation.

Contrary to Marxists and Neoclassic, Kaleckians argue that the antagonism between capital and labour is not always valid (Bhaduri and Marglin, 1990). In a *wage-led regime*, cooperation between workers and employers is also possible and both can benefit where wage increases lead profit increases (Lavoie, 2006: 122), *if the demand effect on investment is stronger than the profit effect"* (Onaran and Stockhammer, 2005: 4) and if it is in an expansionary period (Lavoie and Stockhammer, 2012: 9). On the other hand, if increase in real wages lead decrease in profits during expansionary period, then it is *profit-led regime.*

[12] Cited from Hein (2008)

The issue at this point which should be emphasized is that "*if the demand effect on investment is stronger than the profit effect"*. This is crucial in order to understand the change into financialisation which is characterised by '*high profits, low investment*'. Bank-based financial systems[13] (Germany, Austria, France etc.) are designated according longer time horizons and credit worthiness (cash flow compared to leverage) of firms (Kalecki, 1971), whereas stock market-based financial systems (UK, the USA) appreciate short-term profit maximization. As cash flows hinge on sales and thus consumption/ effective demand; demand effect is stronger than profit effect. Hence bank-based financial systems perform higher growth rates than stock market-based financial systems (Stockhammer, 2005: 724).

Additionally, if demand effect on investment is stronger than profit effect, dependency of capital on investment is higher; however if it is weaker, capital dependency on investment is also lower and firms in such cases prioritize profitability over growth, in terms of "growth-profit trade-off". Hall and Sosckice's assertion is also in line with that: "*British firms tend to pass the price increase along to customers in order to maintain their profitability, while German firms maintain their prices and accept lower returns in order to preserve market share"* (Hall and Soskice, 2001: 16)[14]. If market share is prioritized, then capital accumulation and growth is also important for such that firms. On the other hand, if profitability is more important, then growth is not anymore a very core issue. And raising market share/ capital accumulation is possible and do matter in a wage-led regime. This coincides with Stockhammer's assertion which is based on Post Keynesian firm theory that managers concern more on growth [in a *managerial capitalism*] whereas owners do concern on profit maximisation and dividend payments [in a *patrimonial capitalism*][15] (Stockhammer, 2004: 723-724).

I can shortly conclude that as short-term oriented firms has less interest in long-term investment and capital accumulation due to "financial profits" possibilities and shareholder pressure; they don't need any more for higher aggregate demand as debt-financed consumption is being supposed enough effective (Hein, 2009) and hence they don't feel to make concessions to labour to stimulate aggregate demand which is main driving factor of

[13] Despite the financialisation (rising stock market capitalization) Germany has still bank-based financial system. See Table 5.4

14 The reason behind that could be found in differences in amount of capital stock. I will elaborate that point in part 3.3 more.

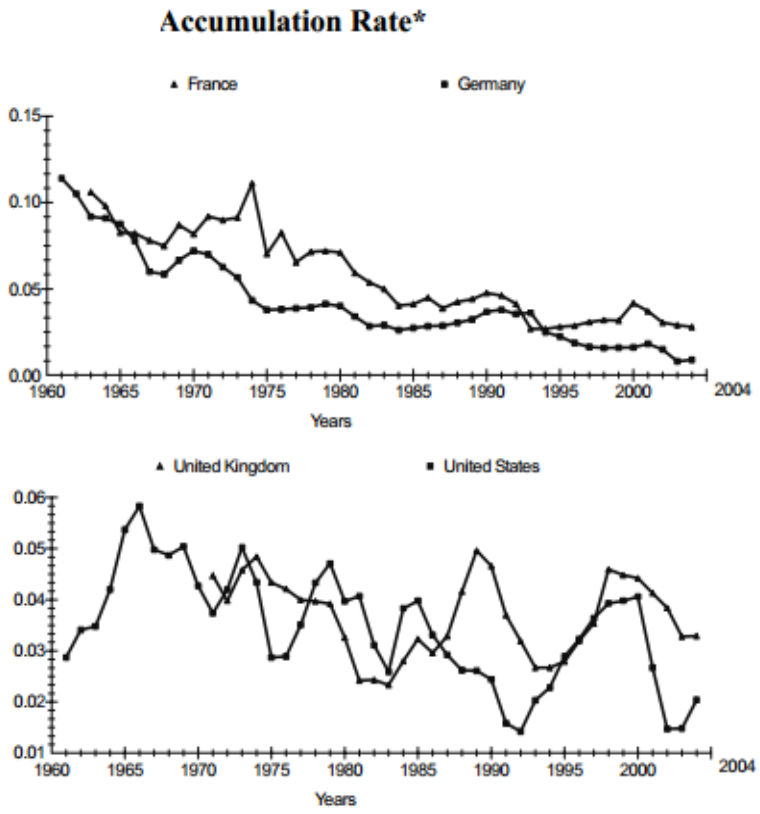
[15] This term belongs to Aglietta (1998) and cited from Peralta and Garcia (2008: 3). It refers to *the extension of employee shareholding; the importance of institutional investors in corporate governance; and the new role played by financial markets in national macroeconomic adjustments.*

investment. This implies a shift from wage-led regime to a profit-led regime. To clarify more, Dallery and van Treeck's highlighting is helpful:

> *"... during the Fordist period, accumulation has been constrained mainly by the availability of finance, while in the financialisation period, shareholders' preferences have been the main limiting factor"* (Dallery and van Treeck, 2008: 12).

Shareholders' preferences create finance constraints through *increasing dividend payments and share buybacks in order to boost stock prices and thus shareholder value."* (Hein, 2012b: 12-13) Hein points out that *managements' animal spirits* with respect to real investment in capital stock are reduced by shareholder power since shareholders have no binding relations with firms whose shares they hold and hence they can immediately jump to another firm whose profitability they think that might rise up. However, if shareholder pressure doesn't align management's preference only in line with their interests and so if resources are at disposal of management; Hein argues that under such a condition, shareholder might have a positive effect on productivity growth and capital accumulation (Hein, 2009: 21).

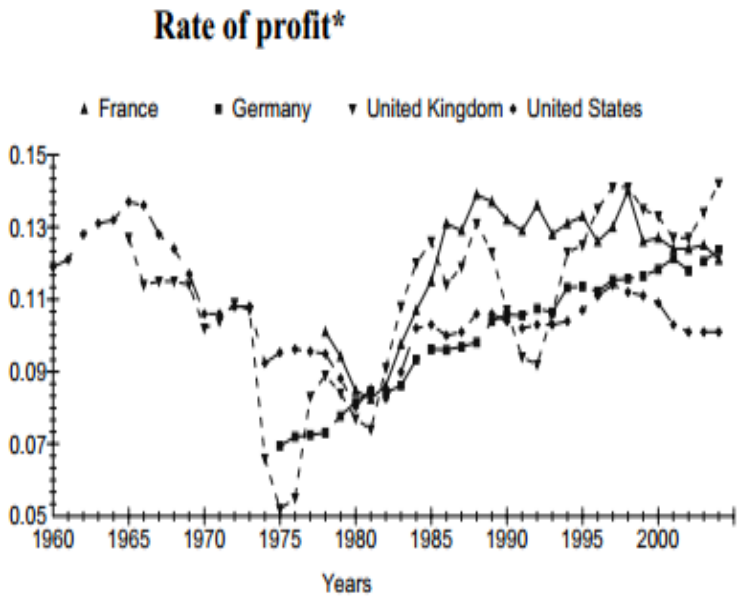
Since such that circumstances are very rare as shareholders have mostly diversified portfolios, rising distributed profits are strongly associated with *increasing rates of profit and capacity utilisation, but with a falling rate of capital accumulation*" (Hein, 2009:3), because "*for shareholders, the accumulation decision is subordinated to the profitability target"* (Dallery and van Treeck, 2008: 10-11). Figure 2.1 and 2.2 illustrate that fact clearly.



*Growth rate of business capital stock, Source: OECD Economic Outlook.

Figure 3.1 Accumulation Rates in LME and CME Representatives
Source: van Treeck (2007:3)

And if I compare GDP growth rates before and after 1970 (see Figure 2.3), it became clear that a profit-led regime does not provide a high growth rate as much as provided by wage-led regime just because depressed capital accumulation influence negatively the productivity growth and hence long-run potential growth of the economy (Hein, 2009: 22).



*France: Net operating surplus/net capital stock (non-financial corporations), Source: French National Accounts (INSEE); Germany: Income from property and other/business capital stock, OECD Economic Outlook; UK: Net rate of return, private non-financial corporations, Blue Book (ONS); US: Net operating surplus/private fixed assets, NIPA and Fixed Assets Tables (BEA).

Figure 3.2 Profit Rates in Two Leading Representing Countries of CME and LME. Source: van Treeck (2007:4)

The inverse related performance of accumulation rate and profit rate is comprehensible through remembering the fact that *corporate overinvestment progressively undermined the marginal profitability of new investments during the late 1960s* (Marglin and Shor, 1991; Setterfield, 1997).[16] Since excess capacity and higher capital stock limits markup rates of NCFs (Rowthorn, 1995) and thus distorts their profitability, they have downgraded capital accumulation and investment and have shifted their business to run financial activities. As I had emphasized in Chapter 2, the accumulated problems of former regime makes prestigious the opposing actors who propose to build new regimes regardless of the gain and loss statement of the new regime.

[16] Cited from Peralta and García (2008: 10)

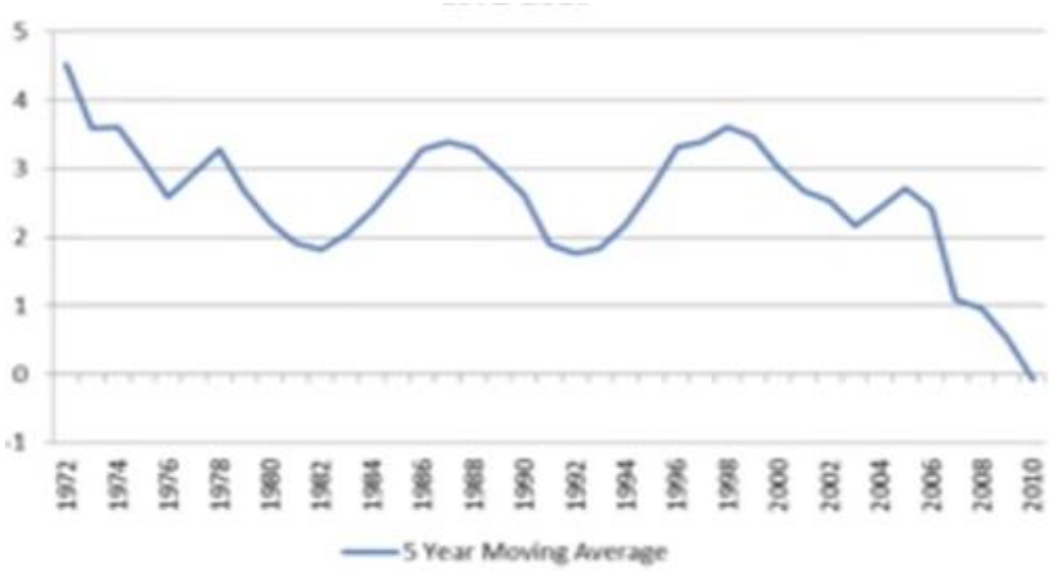


Figure 3.3 Annual Average Growth Rates of 20 OECD Members, 1972-2010[17]

In order to understand the inverse related performance of accumulation rate and profit rate at macro level since 1970 in this new regime, a firm level analysis is also required. However, first a distinctive explanation of Post-Keynesian firm theory should be put forward: Contrary to neoclassic assumption that firms seek profit maximization, due to uncertainty of real world it is not possible. Hence firms define a satisfying profit threshold for themselves (Lavoie, 1992: 105).[18] And the satisfying profit level is accompanied with growth-profit trade-off.

There are several factors behind slowdown in capital accumulation: *high real interest rates (Schulmeister 1996), an increasingly uncertain investment climate (Maddison 1991), or rising rates of return required by financial markets* (Stockhammer, 2000: 5). In line with that assertion, Hein (2008) explains the relation between accumulation /growth rate and profit rate at firm level as following. Unlike assumptions of both neoclassic economics and ordinary people's presumptions; higher profit rate doesn't always lead higher accumulation rate. The amount of profit which has not been converted to investment in order to accumulate capital represents the distributed profit due to shareholder pressure. Figure 3.4 depicts the growth-profit trade-off.

[17] Taken from Wolfgang Streeck's lecture at The Anglo-German Foundation (http://www.youtube.com/watch?v=bQ_TxhVOD6M)
[18] Cited from Dallery (2008)

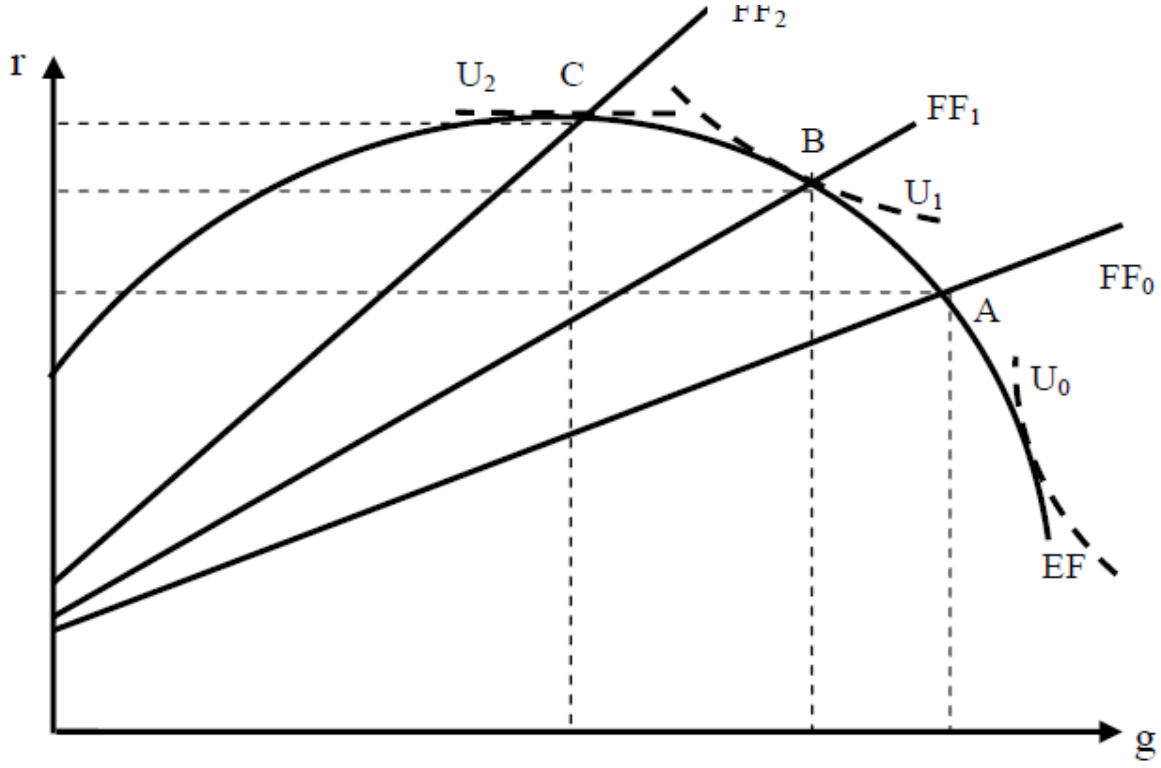


Figure 3.4 Financial Constraints and Relation Between Profit and Capital Accumulation (Hein and van Treeck, 2008: 4)

Let's first explain what the figure tells:

Finance Frontiers (FF_i) reflect the maximum rate of accumulation (g) to be financed with a given profit rate (r) of managers regarding investment. With other words, they indicate the required profit rate to achieve the targeted accumulation rate. And Expansion Frontier (EF) reflects *the relation between profit rate and the particular growth strategy* (Hein, 2008: 5) with regard to given capital stock. The decision on rate of capital accumulation is determined by the point of intersection (Ui) of the finance frontier and the expansion frontier (Ui reflects different preferences of managers faced with the growth-profitability trade-off in the downward-sloping segment of the expansion frontier). "*The expansion frontier is assumed to be upward sloping for low accumulation rates (due to economies of scale and scope, etc.), and downward sloping for higher rates (due to technical and logistical inefficiencies, etc.)"* (ibid).

If the exposed dividend payments and interest obligations are lower and the proportion of externally financed investment (with a tolerable leverage ratio) is higher; then managers can finance a higher growth with the given profit rate (Hein and van Treeck, 2008). Then FF

curve shifts to right. But if the proportion of distributed profits is higher, then managers' ability to invest more in order to grow/ accumulate is restricted. Then FF curve shifts to left.

To conclude, managers' preference for growth is weakened as a result of remuneration schemes based on short-term profitability and financial market results (Hein and van Treeck, 2008: 6). The second core reason behind the shift in preference is that excess stock which is held in order to handle with uncertainty restrains mark-up rates. As I tried to explain in chapter 2; since understanding on uncertainty has changed because of rising costs, firms are reluctant to hold excess capacity.

After have clarified the relation between financialisation, now to construct a robust and clear link between bargaining power and financialisation, the relation between unemployment and capital accumulation which has been lowered by financialisation should be explicated.

3.2 Identifying Bargaining Power of Labour within the Post Keynesian Approach

The most common approach to bargaining power of labour is that source of bargaining power of labour is union membership and strike density. And as it is reported by Silver (2009, 173-174) there is a sharp decline in both union membership and strike density since 1970 in developed countries. Silver's *Forces of Labour* (2009) is one of the most comprehensive works on power of labour; but it could be asserted that it is not on *bargaining power of labour*, rather it is about *power of labour* which is measured by her over strike activities-*associational power of labour*. She argues that strike activities shifted to developing countries with FDIs and workers in these host countries became stronger. But as I pointed out above labour share has declined at global level, too and bargaining power of labour has not channelled to developing countries. Hence it could be asserted that unless *power of labour (ability to strike, union membership etc.)* has not converted to *bargaining power of labour* which comes up at negotiation table with employers, labour cannot gain a higher share.

To clarify, I would argue that both union membership and strike density are not the source; rather the derivative of bargaining power of labour since attendance of workers to both trade unions and strike activities relies on whether they think it is strategically useful to achieve the goal or not. It is not a scientific survey but all non-union member workers (both in Germany and in Turkey) have always replied me "It doesn't work", when I asked them why they don't attend in any union and/or don't perform any strike. Also Dünhaupt found out that neither union membership nor strike activity have statistically significant effects on wage share (Dünhaupt, 2013: 16).

It is not disputable that if investment level is low and thus unemployment level is high, neither union membership nor strikes does not work; since under low investment circumstances firms do not need for labour and also under high unemployment circumstances firms' degree of substitution is high. If bargaining power of labour were solely based on union membership and/ or strike activity, then wage share in the USA or UK, which is not so far from in Sweden or Denmark, wouldn't be explicated since union membership in Sweden and Denmark is more than threefold in UK and the USA. Hence a definition of bargaining power of labour should be mainly derived from levels of investment and unemployment. As Crouch highlights:

> *"Workers' interest in investment which generates employment is in practice considerably stronger than that of capital, which does not need to make its investment in sectors which will directly increase employment opportunities within the country concerned. It can, for example, loan money to the property markets or finance the deficits of foreign governments, or increase productive capacity overseas, creating employment for labour somewhere, but not in the economy in which the profits were generated."* (Crouch, 2005: 89)

In line with that assertion, Stockhammer's empirical findings show that capital accumulation and real interest rates are the strongest factors which determine unemployment level (Stockhammer, 2008: 23), contrary to neo-classic arguments, Labour Market Institutions do have a minor role.

3.3 Measuring Bargaining Power of Labour: Labour Turnover Costs and Unemployment Insurance

In a wide range of literature on bargaining power, it is defined as the cost which one part can impose to the counterpart in case of not reaching an agreement (Bicerli, 2011: 333). Hence if one part has other options to survive in case of disagreement, the cost to be imposed would be less and so this part would have more bargaining power. For example Eric Leifer (1991) has found out that *skilled chess players differ from novices not so much in that they are able to see more moves ahead but rather in their ability to keep their own options open while at the same time downsizing the range of their opponents' viable choices*.

In accordance with that perspective, I believe that focusing on "*marketplace bargaining power*" of labour is more significant and meaningful rather than on "*workplace bargaining power*" and on "*associational power*" (Silver, 2009: 26-27). I think that shortcomings of two

explanations on decline in bargaining power of labour emanate from not focusing on "marketplace bargaining power":

The approach focuses on "associational power" i.e. union membership fails to explain the not-diverging wage shares despite the differences in union density among countries such as the USA and Sweden. In the USA union membership is about 15% and wage share is 63% whereas in Sweden wage share is 68% and union membership is about 70% in 2008. In addition, there is no huge gap between Turkey and the USA in union density but wage share in Turkey is less than half of in the USA.[19] And the approach focuses on "workplace power" i.e. strike activity are not able to explain adequately the fact that bargaining power of labour has not channelled through relocation from home country to host country and that wage share at global level has fallen[20] (See Figure 1.3). More importantly, if firms do not invest adequately and have less concern on capital accumulation, strikes do not matter since in such a case costs of strikes are not binding. Also since German workers perform less strikes with compare to other European workers due to *Betriebsräte* (Work councils) as a conflict resolution tool in Germany (Blanpain, 2010: 563), measuring bargaining power of labour over strike activity is not a proper way. Moreover if vacant days are shorter and hiring with a lower wage is possible because of high unemployment, worker cannot threaten employers with strikes. Secondly, fragmentation of production and outsourcing which are attributed by Silver (2009) and Poolsombat (2004) as main factor behind decline in bargaining power of labour are mainly driven by falling growth/ accumulation concerns of firms due to financialisation and shareholder pressure as managers are reluctant to handle with *technical and logistical inefficiencies* (Lavoie, 1992: 114-116*).*

Hence measuring and defining bargaining power of labour should be based on unemployment level which is a derivative of investment level and on capital accumulation as the core relation between capital and labour emerges within investment process; since employers do not need for labour unless they don't invest.

According to Silver (2009, 27) there are three main components of *marketplace bargaining power*: demanded labour skills, unemployment rate and degree of survivability in case of not working. I exclude labour skills because of three main reasons: First, the analysis of this paper relies on macro level structural changes and skills are rather the matter of

[19] AMECO and OECD (2008)

[20] Silver (2009) points out that militancy of worker is not also an adequate explanatory factor for bargaining power: Despite workers in textile industry are more militant then workers in automotive industry their bargaining power is lower.

negotiations at individual level. Second, with regard to the first one, at macro level, workers adopt their skills to labour market dynamics in the long run, as Mishel (2014) has reported. Thirdly, if investment level and thus labour demand are too low, skills do not matter so much. And finally, skills are already embedded in "productivity lost" within turnover costs at macro level: If there is a shortage of skills, then productivity lost would rise and degree of substitution decline. On the other hand, Sennett explains very well in a sociological manner in his works *The Corrosion of Character* (1999) and *The New Culture of Capitalism* (2006) how the new short-term oriented capitalism trivializes the skills of workers and hence having high skills do not work properly in favour of workers' interests unlike one would expect. He points out that pressure of high volatility of changes in markets makes worker feel that they are useless and insecure and thus due to the must to adapt to rapid changes workers lose their self-confidence.

Hence, to get a more meaningful model, I employ unemployment rate and the "degree of survivability" in case of disagreement which is based on unemployment insurance; since if workers think that they could survive in case of disagreement, they can challenge more effectively via strikes or treat of performing a strike the conditions suggested by employers.

The second crucial factor for bargaining power of labour is the "degree of substitution" which hinges on labour turnover costs. With other words, it is the "possibility to be fired" for an incumbent worker. However, *within the literature on bargaining power of labour, turnover costs has not been considered* (Manzini and Snower, 2005: 4). Lindén (1994) also considers turnover effects; however he focuses on matching issues. Manzini and Snower introduce turnover costs but they don't consider the negative effect of unemployment on turnover costs and their analysis lies on firm-level. On the other hand, the works which consider the negative effect of unemployment on bargaining power of labour do not formulate it within labour turnover costs to capture well. "*Keynesian economists, on the other hand have usually downplayed the role of unemployment in determining real wages*", as well (Onaran and Stockhammer; 2004: 13). Stockhammer covers very shortly the literature as following:

> *"IMF (2007a) and EC (2007) include union density, employment protection legislation, unemployment benefit generosity and the tax wedge as wage push variables that may also affect income distribution. Benolila and Saint–Paul (2003) include (only) a variable measuring strike activity. Azmat, Manning and van Reenen (2007) are the only study (which investigates only the distributional effects in certain service sectors) that focuses on the bargaining power of firms."*(Stockhammer, 2009:14)

What I will try to do is that constructing a formula to calculate bargaining power of labour through incorporating "degree of survivability" which depends on unemployment insurance components and "degree of substitution" which depends on labour turnover costs and thus on unemployment level. That is to say, unemployment doesn't tell anything by itself about bargaining power of labour. What is crucial is that the position of workers against unemployment: The probability of being fired which is designated by turnover costs and the degree of survivability in case of unemployment which is determined by unemployment insurance components are decisive determinants of bargaining power of labour.

I calculate the "degree of survivability" through subtracting the "unemployment cost" for workers from the lastly received wage. And "cost of unemployment" is defined as the lost income of workers in case of unemployment at macro level. I calculated it over unemployment insurance components provided by Comparative Welfare Entitlements Dataset (CWED).

By employing unemployment insurance components whose levels are mainly determined by governments, policy makers (Ek, 2012); I would have covered the role of politics and institutions on bargaining power of labour to capture the interaction between economic and political dynamics. If I categorise, turnover costs correspond in "internal power of labour" and unemployment insurance components correspond in "external power of labour". In addition, current unemployment insurance components could be considered as the result of previous yields of bargaining process.

More importantly, generally bargaining process and bargaining power is being considered between management and incumbents, especially trade unions. However, interacting unemployment insurance components and labour turnover costs do help to cover jointly the bargaining power of incumbents and jobseekers; rather than focusing on only incumbents. If large numbers of job seekers ask for lower wage level due to lower unemployment benefits, incumbents would also not ask for an increase in their wages in pursue of defending their position.

If investment level is low due to financialisation which makes possible making "*higher profit with low re/investment*", turnover costs decrease cause of higher unemployment level and also higher turnover rates don't matter for firms due to lower dependency on investment.

Requested increase in wages is compressed by labour turnover costs and unemployment costs. If labour turnover costs are relative higher (lower) and unemployment costs are lower (higher); then workers can (not) negotiate for a higher increase in wages. In addition, job seekers can (not) negotiate for higher wages if unemployment cost is lower (higher).

Turnover costs decline due to underinvestment because of following reasons:

- the "wage cost" of replacement decreases as longer unemployment duration suppresses the reservation wage level because job seekers tend to accept and incumbents request lower wage increases,
- firing costs decrease due to diminishing job tenures in line with high labour turnover rates and lower real wage increases (due to less accumulated severance wages),
- Productivity lost via replacement decreases due to shorter vacant days and the gap between starting salary and experienced workers' salary can compensate easily the productivity lost.

In other words, if unemployment rates are low cause of high investment level, firms are not able to threat incumbent workers to substitute them with new workers as turnover costs are higher since lost in productivity is higher due to longer vacant days and hiring with a lower wage is difficult and the level of productivity lost matters for firms due to higher dependency on investment; incumbents can negotiate for higher wage increases.

Hence I can write down a simple equation for bargaining power of labour as following:

Bargaining Power of Labour= Degree of surviving of workers in case of unemployment/ Degree of worker substitution

= (1- Unemployment cost)*(Unemployment Insurance Duration) / (Firms' ability to replace less costly)

= log [(Unemployment Insurance Duration; UEDUR)* (1- ((Unemployment Rate; UNEMP- Unemployment Insurance Rate to the Salary; URR * Percentage of the labour force insured for unemployment risk; UECOV)[21]* Unemployment Rate; UN)] / [(Unemployment Rate; UNEMP)]

[21] This part represents unemployment cost. As the level of analysis relies on macro level to capture the structural changes, including percentage of the labour force insured for unemployment risk (UECOV) within the equation may offset the unemployment cost at aggregate level; despite this cost is higher for workers out of unemployment insurance.

$$BPL = \log\left[\frac{UEDUR*(1- UNEMP-URR*UECOV*UNEMP)}{UNEMP}\right] \quad (2.1)$$

Degree of worker substitution for firms hinges on labour turnover costs (Manzini and Snower, 2005). Since there is no available data on turnover costs, I employ unemployment rate as a proxy as it is the main factor for core components of turnover costs (lost in productivity in replacement, hiring costs)[22]. Hence my calculated BPL[23] may not be accurate however it is useful to infer and interpret. With other words, my calculated BPL is also a proxy. Indeed, neither workers nor managers have any exact information on turnover costs, both sides estimate it over unemployment rate. Hence I expect that my equation might present meaningful results.

In order to check the robustness of the equation; I reverse the equation to measure bargaining power of employers, and I get meaningful results, too: Firstly, except the period between 1970 and 1974 in which unemployment rates are very low, as it is expected bargaining power of employers is higher than bargaining power of labour. In these four years, in Germany workers are a little bit powerful and in UK employers are little bit powerful. Secondly the sum of bargaining power of labour and bargaining power employers is equal to a constant value (=4) as it is expected in line with the fact that bargaining process is a zero-sum game.

Whereas mainstream economists argue that unemployment insurance raises unemployment level and unemployment duration as it discourages workers to find a job (Ek, 2012), but they don't consider the following facts:

- First, unemployment insurance components have been mostly adjusted according business-cycles (Ek, 2012). Hence in case of given longer unemployment duration and higher unemployment level, governments are subject to better off in accordance with expectations. With other words, UEDUR is longer in Germany than in US and UK because both unemployment levels is relatively higher and average unemployment

[22] I assume that firing costs are not so decisive cause of two main reasons: First, rather than dismiss, firms mostly try to workers quit via mobbing to not pay severance payments. Secondly, if firms do not invest anymore, and see that present value of wage costs are not bearable; they don't care about firing costs. In addition, average job tenure doesn't fluctuate well with regard to investment and unemployment level to reflect the interaction.

[23] I took log, in order to smooth fluctuations.

duration is longer due to structural features of German economy. So there is a misunderstanding or conscious manipulation on the cause and effect relation[24].

- Second, they assume that workers supply less their labour if wages are low. But it is not the real case[25]. By disregarding the sociological and psychological impacts of unemployment they don't consider the inelasticity of labour supply. If the difference between received URR and the offered new job fulfils their expectations then job seekers prefer to work instead of being unemployed.
- Third, they also contradict with their novel argumentation that search frictions in labour market lead inefficient results. If UEDUR is not enough long, job seekers would accept the first job offer even though it doesn't match with their both skills and expectations due to pressure of unemployment costs.
- Lastly, behind their argument the presumption lies that jobseekers have enough power to determine the unemployment duration: As if, despite there is a high labour demand, but jobseekers do not accept offered vacancies. However, in reality unless firms do not hire, job seekers cannot find a job.

In line with abovementioned statements, I added UEDUR into the equation in order to capture the differences across countries; if it is shorter, workers cannot endure to unemployment through unemployment insurance.

3.4 Interrelating Bargaining Power of Labour and Capital Accumulation

In my equation for bargaining power of labour, there are two main components: unemployment rate and unemployment insurance. Before examining the relation of capital accumulation with unemployment, its relation with unemployment insurance has to be clarified.

Firstly it should be indicated that unemployment insurance is not only the yield of labour movements' struggles and it was firstly proposed in 1920s by C. W. Mitchell who was one of the founders of National Bureau of Economic Research (Kazgan, 2009: 190). It is clear that the logic behind that proposition is stimulating the effective demand whose absence was presumed as the main reason behind *Great Depression*. The crucial point to understand why unemployment insurance has been introduced after Great Depression and why it has been reduced after Oil Crises in 1971 is that during Great Depression deflation, high level of unemployment and excess inventories, stocks were the main problem, whereas after 1971

[24] See Stockhammer (2004c) for a discussion on whether wage-push factors (unemployment benefits, union density, tax wedge etc.) raise unemployment level or not.
[25] Stockhammer (2011) has showed that effective labour demand need not be downward sloping.

high inflation, "*maximized capacity utilisation rates with low unemployment*" (Bowles and Gintis, 1987) were main challenging issues. Since a wage-led regime was attributed as a solution to the crisis, wage-friendly regulations have been implemented after Great Depression, whereas a deregulatory profit-led regime has been constructed after Oil Crisis. At that point, Herr's reminding is useful:

> *"A long period of low investment can lead to a physical capital stock which is too small for full employment. This means full capacity utilisation is reached long before the unemployment rate drops to low levels. In such a case only increasing investment demand can help to increase labour demand as only investment increases capacities and allows employment to increase."*(Herr, 2013: 28)

To get to the point to construct a relation between bargaining power of labour and capital accumulation over unemployment level which is the second component of my equation: Constructing such a relation implies that I have already assumed that *capital accumulation is not exogenous as it is argued by neoclassic economics* (Stockhammer and Klär, 2008: 10). It is endogenous since the increase in investment demand hinges on given capital stock and on the concern on growth/ capital accumulation. Hence investment is the intermediary tool between profit and capital accumulation, capital accumulation is the decisive factor regarding profit- growth trade-off. To emphasize with other words, firms do not decide on investing or not; they indeed decide on growth /accumulating or not. If growth/ accumulation is prioritized, then firms would reinvest easily in an expansionary "wage-led regime with an enough high effective demand"; however if profit is prioritized then they wouldn't reinvest in a "profit-led regime with a weak effective demand".

Mainstream economics mostly denies the influence of capital formation on the unemployment problem (Karanassou et al., 2008: 980). Stockhammer (2004b) proved empirically that wage-push factors (unemployment benefits, union density, tax wedge etc.) are not econometrically significant factors to increase unemployment, unlike it is argued by mainstream economics. He found no evidence for the argument that reducing unemployment benefits reduces unemployment progressively. Also Karanassou et al. (2008) showed that the slowdown of capital accumulation in Nordic countries in the period of 1970-2005 drive the intensity and longevity of the rise in unemployment.

Now I have to clarify the mechanism through which lower capital accumulation leads higher unemployment. If we call the equation for capital accumulation rate, that point would be clearer:

$$ACCCU = \frac{NCSt - NCSt-1}{NCSt-1} = \frac{GCSt-DEPRt\ -(GCSt-1-DEPRt-1)}{(GCSt-1-DEPRt-1)} \quad (3.1)$$

ACCU stands for capital accumulation rate, NCS for net capital stock, GCS for gross capital stock (all fixed assets) and DEPR for depreciation.

Let's add the equation for investment rate:

$$INV = \frac{GFCF}{GVA} \quad (3.2)$$

INV stands for investment rate, GFCF for gross fixed capital formation and GVA for gross value added.

If we incorporate these two equations, it would be clear that depreciation, with other words consumption of fixed assets, and adding value require labour to operate the fixed assets. Hence I agree with Silver (2009, 77) that bargaining power of labour emerges from fixed assets since firms need for labour as long as they want to accumulate capital and invest.

At that point it should be noted that if we follow the argument that progress in technology lessens wage share and bargaining power of labour, then we have to have assumed that technology leads decrease in investment and capital accumulation. If it were so, why innovation and technology is being attributed as the main engine of growth? In reality, it doesn't lead a decrease in investment and capital accumulation by itself; rather it might increase the productivity of labour. On the other hand, Verdoorn (1949) pointed out that the growth rate of labour productivity is positively associated with the growth rate of output (Hein, 2009: 12). So it could be put forward that current rise in labour productivity is associated with decreasing labour costs, not with slowly increasing outputs. Indeed, as Stockhammer found out, technology has a positive impact on wage share (Stockhammer, 2013)[26], by strengthening *workplace power of labour*, unlike it has been put forward by OECD (2007).

Hence, I disagree with Silver's main assumption that bargaining power of labour hinges *purely* on "strategic position of workers along the production chain"[27] which refers to *workplace power of labour*. I strongly resist that if unemployment rate is high because of lower concern on capital accumulation and thus lower investment level, "strategic position

[26] At a given and constant level of financialisation, observing whether the impact of technology on bargaining power of labour is positive or not would give more clear results.

[27] Silver, in line with World-System Approach, presumes that firms have downgraded investment and fragmented production process mainly in order to diminish the maximized bargaining power of labour. However I assert that main reason behind lower investment and fragmented production was financialisation which has been induced by rising problems in late 1960s, such as overinvestment with low profitability and high inflation.

along production chains" wouldn't be strategic anymore. With other words, workplace power functions only under low unemployment rate which is the main factor of market power of labour[28]. That is to say, unless workers are not able to influence investment decisions of firms, workplace power wouldn't derive marketplace power, rather the other way around is valid: Marketplace power which is the function of labour demand derives workplace power. For example, the subject of bargaining process varies along the changes in labour market: If employment level and labour demand are high, trade unions and workers would follow a progressive strategy in order to raise wage levels. But if unemployment rate is high they would follow a conservative strategy to keep their position by avoiding raising wages.

Rowthorn's assertion supports us at that point: *"unemployment reduces the ability of workers to push up wages, while excess capacity limits the ability of firms to raise prices"* (Rowthorn, 1995)[29]. That point is also helpful to comprehend the low inflation rates in a finance-dominated regime since 1970: If conflict between workers and employers on income claims is being suppressed by high unemployment rate and low investment level with an excess capacity; then inflation decreases because of diminishing effective demand and thus not-passed mark-up rates into prices. Kalecki's reminding is useful at that point to construct a link with bargaining power of labour:

> *"Kalecki claims that the power of trade unions has an adverse effect on the mark-up. In a kind of strategic game, firms anticipate that strong trade unions will demand higher wages if the mark-up and hence profits exceed "reasonable" or "conventional" levels, so that the high mark-up can only be sustained at the expense of ever rising prices and finally a loss of competiveness of the firm. This will induce firms to constrain the mark-up in the first place."* (Hein, 2013: 19)."

Despite mark-up rates are not passed to prices, they rise in a finance-dominated capitalism at the expense of labour costs and thus distorts income distribution: An increase in distributed profits (dividend and interest payments) would lead firms to raise their mark-up rates in order to survive (Hein, 2013). Since *mark-up is a function of the given capital stock, a higher capital stock lessens mark-up, because of excess capacity* (Stockhammer, 2004b: 73), NFCs began to prioritize profit over accumulation after late 1960s. With other words, *a lower*

28 Despite it is out of scope of this paper, it could be asserted that under though conditions such as high unemployment and debt-financed consumption, workers incentive on collective action may diminish. See for a discussion on impact of fear on collective action, Miller et. al (2009)
29 Cited from Stockhammer (2004b, 73)

capital stock increases firms' desired mark-up, which can only be realized in a non-inflationary way if unemployment increases to restrain wage claims (ibid: 73).

To conclude; since investment is the intermediary tool between profit and growth, capital accumulation is the more decisive regarding profit- growth trade-off: If growth/ accumulation is prioritized, then firms would reinvest in an expansionary wage-led regime with an enough high effective demand; however if profit is prioritized then they wouldn't reinvest in a profit-led regime with a weak effective demand. That is to say, in order to reinvest, a certain amount of capital has to be accumulated.

CHAPTER 4
DATA AND METHODOLOGY: ENGLE AND GRANGER TWO-STEP ERROR CORRECTION METHOD

Engle and Granger Two-Step Error Correction Model (EG-ECM) will be employed to test the argument as the data set is time series, non-stationary and cointegrated. In the first step, unit root test and cointegration test will be carried out (See test results Appendix III). Then in order to handle with trend effect, non-stationary and conintegration, an EG-ECM will be constructed.

4.1 Why comparison of Germany and UK in the period of 1970-2008?

As it is seen from the following Figure 4.1, United Kingdom, as one of the most financialised (highest level of market capitalisation)[30], whereas Germany, as the relative less financialised country, will be studied as the cases to test the argument. In addition, UK and Germany are leading representers of two different modalities of capitalism within the EU: Anglo-Sakson (Liberal Market) Model and Rhenish- Coordinated (Social) Market Model.

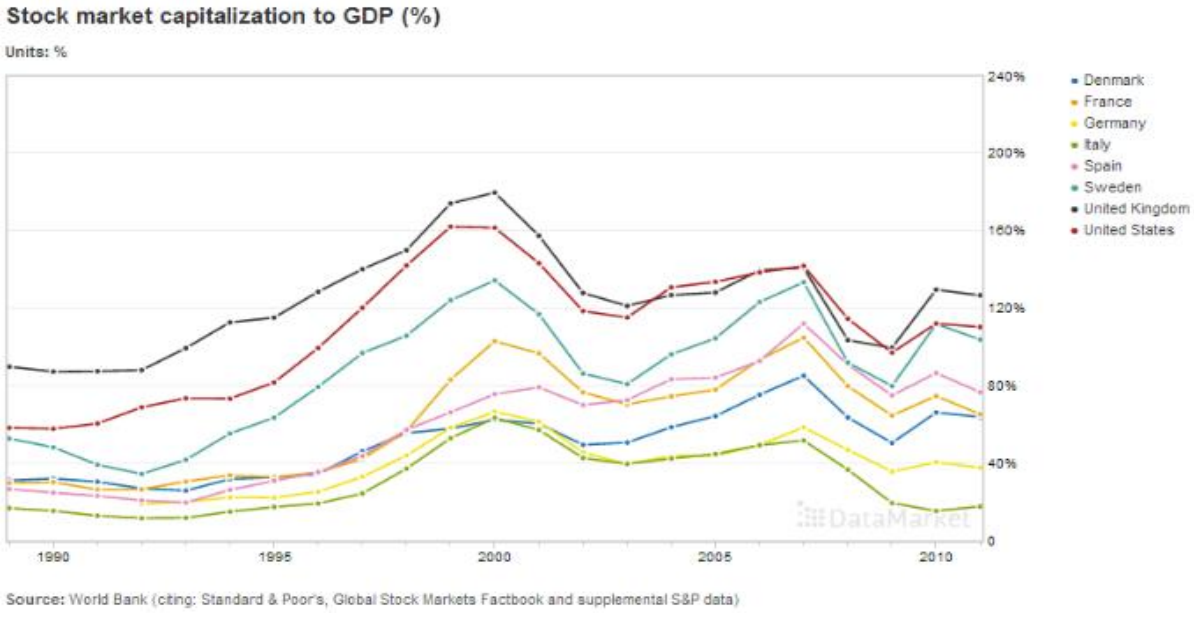


Figure 4.1 Stock Market Capitalisation Ratio to GDP[31].

Source: World Bank

[30] I think that market capitalization ratio to GDP is one of the best representative measures for financialisation at macro level since as much as more shares and shareholders, and then they would be more pressure on managers.

[31] Since the available data on market capitalisation ratio to GDP ratio is only since 1988 provided by World Bank, I had to confine myself to that reliable dataset.

The period 1970-2008 is useful to study as the time in which deregulated market mentality has dominated. However Orhangazi points out that financialisation started in 1980 and the events in 1960's and 1970's have only paved the way for financial liberalization and deregulation (Orhangazi, 2008). Indeed I wanted to test the period between 1950 and 2008, to see the structural shifts after 1970; however CWED has no data for unemployment insurance components before 1970.

Data for unemployment benefit components are provided Comparative Welfare Entitlements Dataset (CWED; calculated by Scruggs et. al, 2013); investment level (Gross Fixed Capital Formation ratio to Gross Value Added), accumulation rate (growth rate of net capital stock) (Hein, 2009: 14) and wage share are collected from AMECO.

4.2 Defining Variables and the Model

There are several other factors which have a role on bargaining power of labour, such as size and degree of monopoly of the firm, skills of workers and hence technology, price level, GDP, organisational strength of workers, level of bargaining, bargaining coverage, socio-cultural values, personal financial position of workers and firms etc. However, as I have tried to explain above, I believe in that much of these factors are derivative of capital accumulation (investment level) and unemployment, and even if not they have a minor role, compared to these two core factors; as it had been illuminated by Stockhammer (2009 and 2012).

Since I aim at revealing the impact of financialisation (and hence lower investment) on bargaining power of labour, due to increasing degree of substitutability (via decreasing labour turnover costs cause of higher unemployment); I have to focus only on the relation between bargaining power of labour and these core factors. As unemployment level has been already included within the formula of bargaining power of labour; in order to avoid autocorrelation and biased, inflated results; I restrict the regression only with accumulation rate.

The impact of financialisation, with other words shareholder pressure, on the aggregate economy will be measured and captured through change in accumulation rate. Dividend and interest payments or retained earnings would be also meaningful to capture shareholder pressure, like it has been regressed and analysed by Hein (2009), Orhangazi (2008); but I thought that it would be useful if I had a firm-level analysis.[32] For example, Hein (2012) employs following variables to measure financialisaton: increasing shareholder value orientation and increasing short-termism of the management, rising dividend payments,

[32] In addition, I couldn't avail any reliable and ordered data before 1995 on retained earnings or distributed profits at macro level.

increasing interest rates and interest payments in particular in the 1980s, increasing top management salaries, increasing relevance of financial investment compared to real investment and hence of the financial sector relative to the non-financial sector; hostile takeovers, mergers and acquisitions, as well as liberalization and globalization of international finance and trade (Dünhaupt, 2013:8).

One could ask why capital accumulation rate has been preferred instead of investment rate. Firstly, I presuppose that accumulation rate may represent the interaction between investment and financialisation simultaneously. I suppose that the difference between the rising rate of profit and the falling rate of investment corresponds to the "not accumulated capital" and thus it shows the degree of financialisation. By doing so, I expect to get more significant and proper results by a simpler model. Secondly, capital stock, thus accumulation rate is a demand-side variable like investment (Stockhammer and Klär, 2008: 21) but investment is rather a secondary variable. That is to say, since investment may fall cause of other factors such as external shocks, rather than financialisation; I cannot capture the influence of financialisation on bargaining power of labour by employing investment rate in the regression. Hence I assume that as it contains capital stock; accumulation rate would provide a more direct relation in terms of financialisation. Stockhammer's findings also support the link between financialisation and slowdown of capital accumulation as higher distributed profits and more financial investment of non-financial firms due to financialisation leads less investment (Stockhammer, 2004: 727). Thirdly, as I mentioned above, since investment is the intermediary tool between the profit and capital accumulation, capital accumulation is more decisive regarding profit- growth trade-off: If growth/ accumulation is prioritized, then firms would reinvest in an expansionary wage-led regime with an enough high effective demand. However if profit is prioritized then they wouldn't reinvest in a profit-led regime with a weak effective demand. That is to say, in order to reinvest, a certain amount of capital has to be accumulated. Lastly, whereas left side of the equation should consist of a variable concerning labour; the right side should belong to capital.[33]

Another possible critic could be that why I have not restricted the variables with private sector data. The reason behind not excluding public sector is that public sector investment and wage levels are crucial and prominent to shape "norms" at macro level. As Keynes (1937) already pointed out public investments can stimulate aggregate economy and if wages in

[33] In addition, if I compare OLS regression results between unemployment-accumulation and unemployment-investment, unemployment- accumulation rate regression gives stronger and more significant results (in terms of t-value, degree of coefficient, R^2) for both countries.

public sector raise, then "wage norms" in labour market would shift up. Moreover, during the period that I investigate, an enormous privatization had been undergone. This also has by itself an important role on determining macroeconomic outcomes and its effect is embedded in a regression in which public sector has not been excluded.

Hence the regression model is as following:

$$BPLt = \beta o + \beta 1 \ ACCU \ t + ut \qquad (4.1)$$

However since the data is time series and non-stationary, cointegrated; I will run an "Engle and Granger Two-Step Error Correction Model" since the appropriate strategy for econometric modelling would be forming an error correction model in case of cointegration (stationary linear combination of non-stationary variables) (Brooks, 2008: 340).

$$\Delta BPLt = \beta o + \beta 1 \Delta ACCUt - \beta 2 \ BPLt - 1 - ut - ACCUt - 1 \ + vt \qquad (4.2)$$

Where ΔBPL stands for change in bargaining power of labour, ΔACCU for change in accumulation rate (growth rate of net capital stock), u for residuals of (4.1), BPLt-1 for value of bargaining power labour of previous year, and ACCUt-1 for value of accumulation rate of previous year.

4.3 Empirical Results

The results of this regression ran via E-Views 7.0 are reported in Table 4.1:

Equation: UNTITLED Workfile: GER UK MODEL::Untitled\

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: BPLC
Method: Least Squares
Date: 02/06/14 Time: 19:41
Sample (adjusted): 1971 2008
Included observations: 36 after adjustments
GRBPLC=C(1)+C(2)*GRACCUC-C(3)*(GRBPL(-1)-GRRESID-GRACCU(-1))

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.100496	0.038135	2.635294	0.0127
C(2)	22.38630	3.431052	6.524617	0.0000
C(3)	0.083847	0.029754	2.818038	0.0081

R-squared	0.671045	Mean dependent var	-0.029200
Adjusted R-squared	0.651108	S.D. dependent var	0.091604
S.E. of regression	0.054108	Akaike info criterion	-2.916013
Sum squared resid	0.096613	Schwarz criterion	-2.784053
Log likelihood	55.48824	Hannan-Quinn criter.	-2.869956
F-statistic	33.65885	Durbin-Watson stat	1.589395
Prob(F-statistic)	0.000000		

* GRACCUC= Change in Accumulation Rate for Germany,
GRBPLC= Change in Bargaining Power of Labour for Germany
GRRESID= Residual for the regression of GRBPL=c(1)+c(2)*GRACCU (Actual GRBPL- Fitted GRBPL)

Equation: UNTITLED Workfile: GER UK MODEL::Untitled\

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: UKBPLC
Method: Least Squares
Date: 01/29/14 Time: 14:20
Sample (adjusted): 1971 2008
Included observations: 38 after adjustments
UKBPLC=C(1)+C(2)*UKACCUC-C(3)*(UKBPL(-1)-UKRESID-UKACCU(-1))

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.519282	0.124206	4.180795	0.0002
C(2)	10.68060	3.560883	2.999424	0.0050
C(3)	0.489304	0.112777	4.338701	0.0001

R-squared	0.505169	Mean dependent var	-0.019011
Adjusted R-squared	0.476893	S.D. dependent var	0.086715
S.E. of regression	0.062718	Akaike info criterion	-2.624686
Sum squared resid	0.137673	Schwarz criterion	-2.495402
Log likelihood	52.86903	Hannan-Quinn criter.	-2.578688
F-statistic	17.86563	Durbin-Watson stat	0.818846
Prob(F-statistic)	0.000004		

*UKACCUC= Change in Accumulation for UK,
UKBPLC= Change in Bargaining Power of Labour for UK,
UKRESID= Residual of the regression UKBPL=c(1)+c(2) *UKACCU (Actual UKBPL- Fitted UKBPL)

Table 4.1 Regression results for Germany and UK

Before evaluating results I should notice that in the regression for Germany the year 1990 was excluded as capital accumulation rate was inflated/ deviated in this year because of German unification.

As it is depicted by Unit Root Test results (see Appendix III), both variables are at 1% level non-stationary and since BPL and ACCU are I (1) and RESID (0), there is cointegration. Hence I built an EG-ECM as a "stationary linear combination of non-stationary variables" (Brooks, 2008: 340).

The results are statistically significant (t-values are greater than 2.00) and in line with my theoretical assumptions: There is a strong and positive relation between bargaining power of labour and capital accumulation. One unit change in capital accumulation leads a change as 22.38 units in bargaining power of labour in Germany whereas it leads a change as 10.68 in UK.

As the regression model consists of lagged variables and error correction term, Durbin-Watson (DW) statistics doesn't matter. And White Test results are significant at 5% confidence interval. As it is seen by Appendix III- Test Results, samples are normally

distributed at 5%, both in Germany and in UK, as Jarque-Bera statistics are smaller than 5.99. And R^2 results for both regressions are optimal.

CHAPTER 5
QUANTITATIVE COMPARATIVE ANALYSIS

Despite this paper lies within the scope of economics, in this part I would like to benefit from Varieties of Capitalism Approach (Hall and Soskice, 2001) which draws a comparative economic sociology framework based on historical-institutional roots[34]. As Post-Keynesian Approach highlights societal power relations, role of institutions and history, as well; I think that it would not contradict; rather it would enhance the analysis.

According VoC Approach, UK, the USA fit to Liberal Market Economy (LME) in which innovation type of dominant sectors (biotechnology, semiconductors, software) is rapid, thus labour force have general skills and finance system is stock market-based; whereas Germany, France etc. are the example of the Coordinated Market Economies (CME) in which the innovation type of dominant sectors (telecommunications, defence, airlines) is incremental, thus workers have firm/ industry specific skills and financial system is bank-based. Shortly, VoC explains how workers' skill composition and innovation structure of dominant sectors have been interacted and created paths, through a historical intuitionalist perspective (Hall and Sockice, 2001).

Since I will compare UK and Germany in terms of labour and financial markets, this framework is helpful for us to understand why Germany has not financialised as much as UK, why unemployment insurance duration is longer and unemployment level is higher in Germany than in UK and so on.

Before examining the results of my regression model, I would like to discuss about the relation between bargaining power of labour and wage share of labour in order to see whether my own calculated bargaining power of labour works out and provide meaningful results. If yes, then I can pass on to discuss the relation between accumulation rate (and so financialisation) and bargaining power of labour, mind at peace.

As it seen from Figure 5.1, there is a strong positive correlation between wage share and bargaining power of labour, for both countries. Secondly, German workers have a higher bargaining power compared to British workers. It could be explained through that in Germany the relation between worker movements/ trade unions and political parties is stronger than in

[34] The understanding of VoC Approach on institutions differs from mainstream understanding which presumes that institutions are efficient solutions. VoC Approach considers institutions as a result of power relations and they depict the power configurations within a society.

UK[35], as governments are the main actors who determine unemployment insurance components (Ek, 2012). The sharper decrease in these components in UK may be explained through stronger and wider lobbying activities of business networks on government decisions.

Despite British workers are relative weaker, they have a bigger wage share compared to German workers. So it could be put forward that the effect of bargaining power of labour on wage share in Germany is lower than in UK. That might be explained through that the other factors (except bargaining power) such as redistributive welfare policies which also determine wage share are stronger in Germany. That is also in line with VoC Approach: Whereas in CMEs economic relations are carried out mostly through non-market relations, in LMEs relations are arms' length and rely on formal contracting and supply-and-demand signalling (Hall and Soskice, 2001: 8-9). So, bargaining process as a market-relation does influence more in UK as a LME where labour markets are more flexible than in Germany as a CME since non-market processes do play more roles in Germany, as well.

However I should remind that one of shortcomings of my own calculated bargaining power is that it doesn't reflect well the decline in wage share in Germany after 2000 due to "internal devaluation" which was carried out in order to enhance comparative advantage of Germany. Despite of depressed wages, bargaining power of labour doesn't decline sharply after 2000, as wage share did.

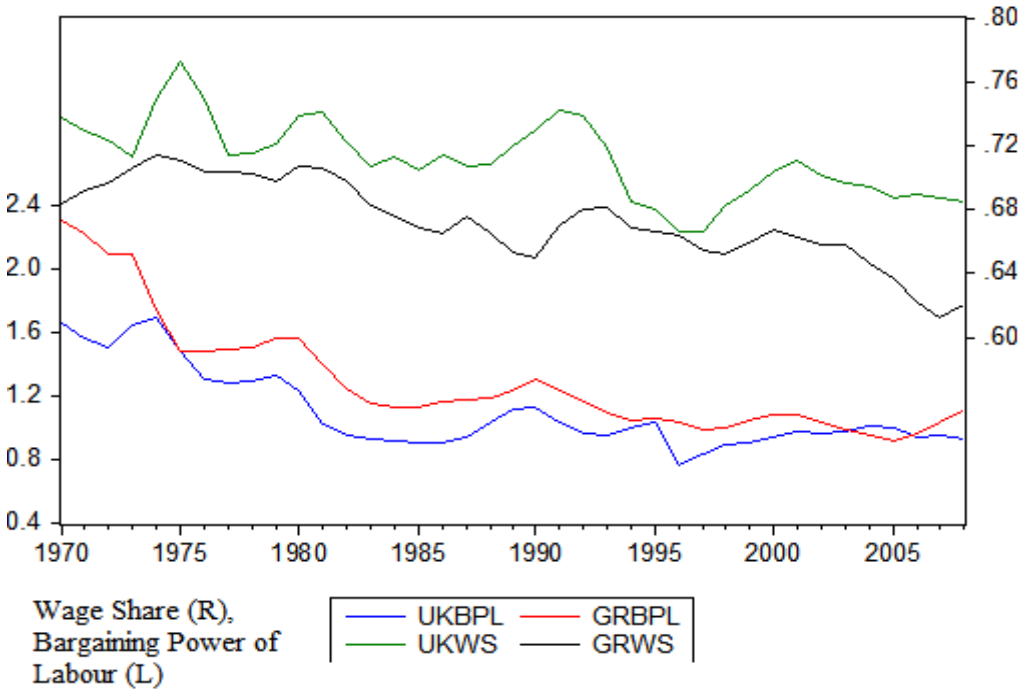


Figure 5.1 Bargaining power of labour (BPL) and wage share (WS). UK and Germany, 1970-2008

[35] See Hymann (2001) for a historical comparison of trade unionism across Europe.

To get to the main point of present paper, as it is depicted by Table 4.1, the relation between capital accumulation and bargaining power of labour is stronger in Germany than in UK. So it could be asserted that bargaining power of labour is more sensitive to capital accumulation in Germany than in UK and thus the negative impact of financialisation on bargaining power of labour is higher in Germany since UK has so far financialised. With other words, UK has been set to stock market-based financial system, before 1970 compared to Germany. I imply that if I had compared the periods before and after 1970 in both countries, then most probably I would have found out a stronger negative impact of financialisation on bargaining power of labour in UK than in Germany. And also the region under the regression line of UK in Figure 5.2 is consists of years after 1990 after which stock market capitalisation ratio to GDP has risen dramatically (see Figure 4.1). This tells us that more financialisation also distorts the relation between bargaining power of labour and capital accumulation.

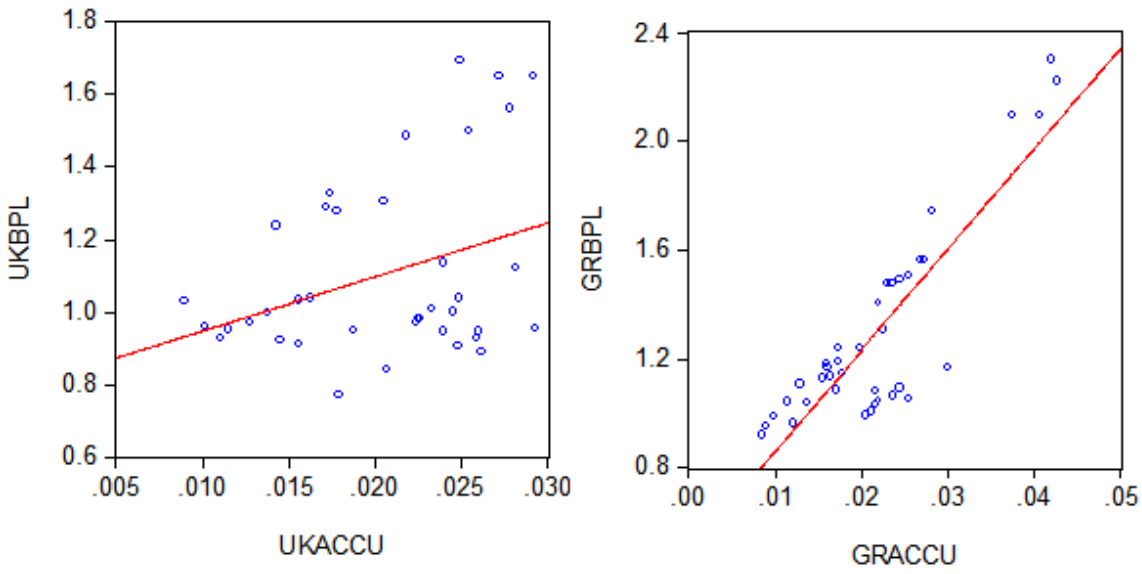


Figure 5.2 Capital Accumulation Rate (ACCU) and Bargaining Power of Labour (BPL). UK and Germany, 1970-2008.
Source of ACCU: AMECO

This result is also applicable to VoC Approach: Since in Germany labour force is firm/ industry-specific skilled due to dominant incremental innovative sectors, German workers are more dependent and sensitive on capital accumulation. If investment decreases in Germany, because of more difficult matching process of specific skills, unemployment lasts longer. On

the other hand, workers in Germany have a higher bargaining power, if investment level is high since their specific skills are required for investment and generating capital accumulation.

In order to clarify why the types of skills and innovations differ bargaining power of labour and the relation between capital accumulation and bargaining power, two points should be highlighted:

First, whereas German firms, who prioritize market share and growth, to come up with incremental innovation, provide workers with secure environments, autonomy in the workplace, opportunities to influence firm decisions, education and training (Taylor, 2004: 6-7), and consent to high protection for unemployment and employment in order to encourage workers to invest in specific skills (Estevez-Abe, M. et al, 2001: 148-149). On the other hand, British workers, in order to be able to deal with rapid changes, have general skills which are recognized by all employers and carry a value that is independent of the type of firm or industry (Estevez-Abe, M. et al, 2001: 154). Hence they are exposed low protection for unemployment and employment which reduces their bargaining power. Secondly, as rapid innovations induce short-term orientation since they make future vague, British firms are reluctant to bear the costs of employment and unemployment protections as these protections raise the labour turnover costs. Also why unemployment insurance components (UECOV, UEDUR, and URR) since 1970 have performed a sharp fall in UK, but a modest decrease in Germany is explicable through that matter of skills (See Appendix I- Data Set).

To clarify the argument that UK has already been more financialised, the relation of market capitalisation with investment and capital accumulation should be examined comparatively.

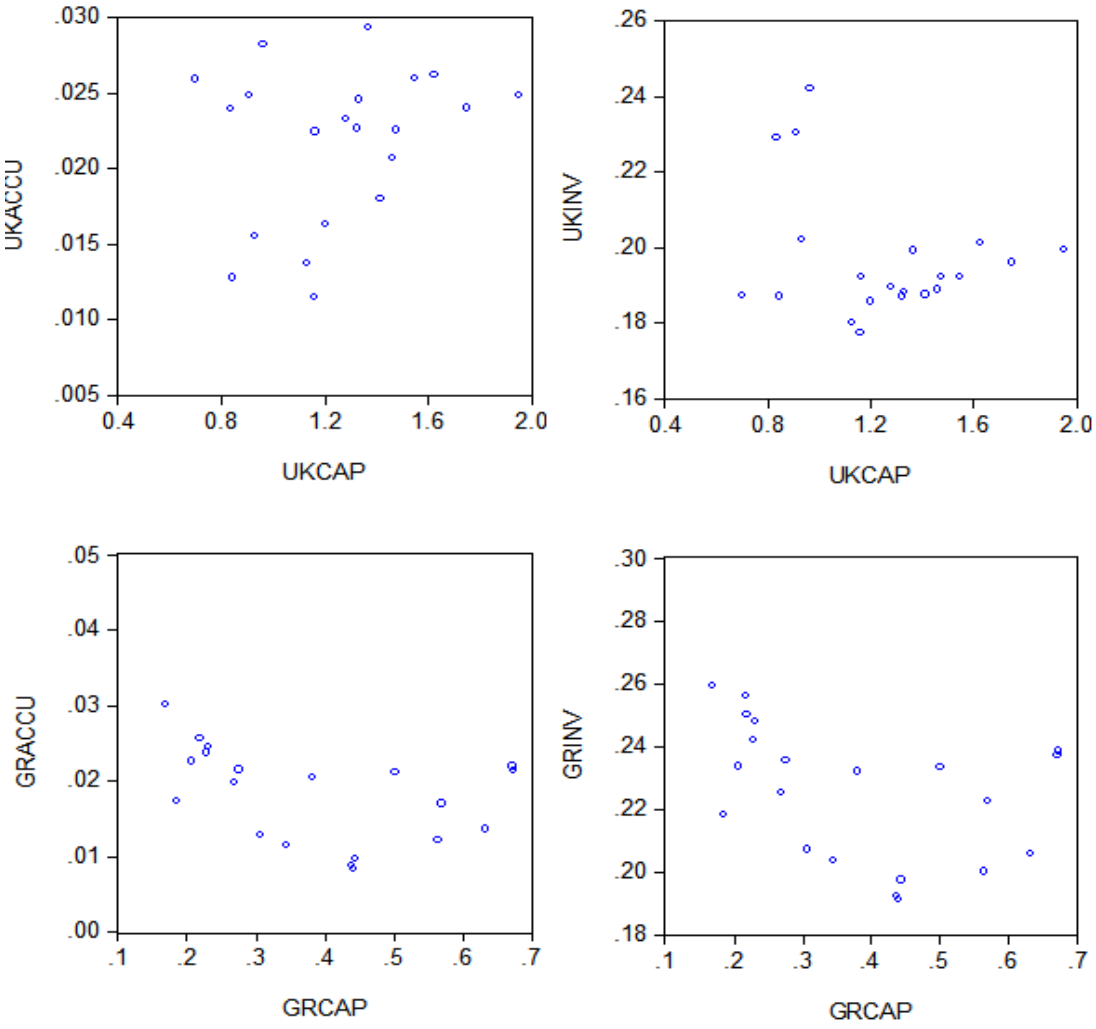


Figure 5.3 Market Capitalisation (CAP), Investment (INV) and Capital Accumulation Rate (ACCU). Germany and UK, 1988-2008.
Source: WB and AMECO

Firstly it should be noticed that, as it is seen from Figure 5.3, highest market capitalisation rate of Germany (67.3%, 2000) is almost equal to lowest market capitalisation rate of UK (69.9%, 2008). That supports my argument that UK has already financialised.

Secondly, with compare to UK, there is a stronger negative relation between market capitalisation and investment in Germany, because Germany is a wage-led regime in which access to capital provided by banks hinges on cash flow of firms, as mentioned above. Since macroeconomic structure and sectors' configuration (rapid innovative) in UK have already been set to dominance of finance and it is a profit-led regime; shareholder pressure do not sharply reduces investments as much as in Germany, as the main tool of financing is stock markets. Figure 5.4 depicts the differences across countries in households' financial assets.

Whereas the proportion of currency and deposits in German households' total financial assets is higher, the proportion of equities and insurance technical reserves in British households' total financial assets is higher.

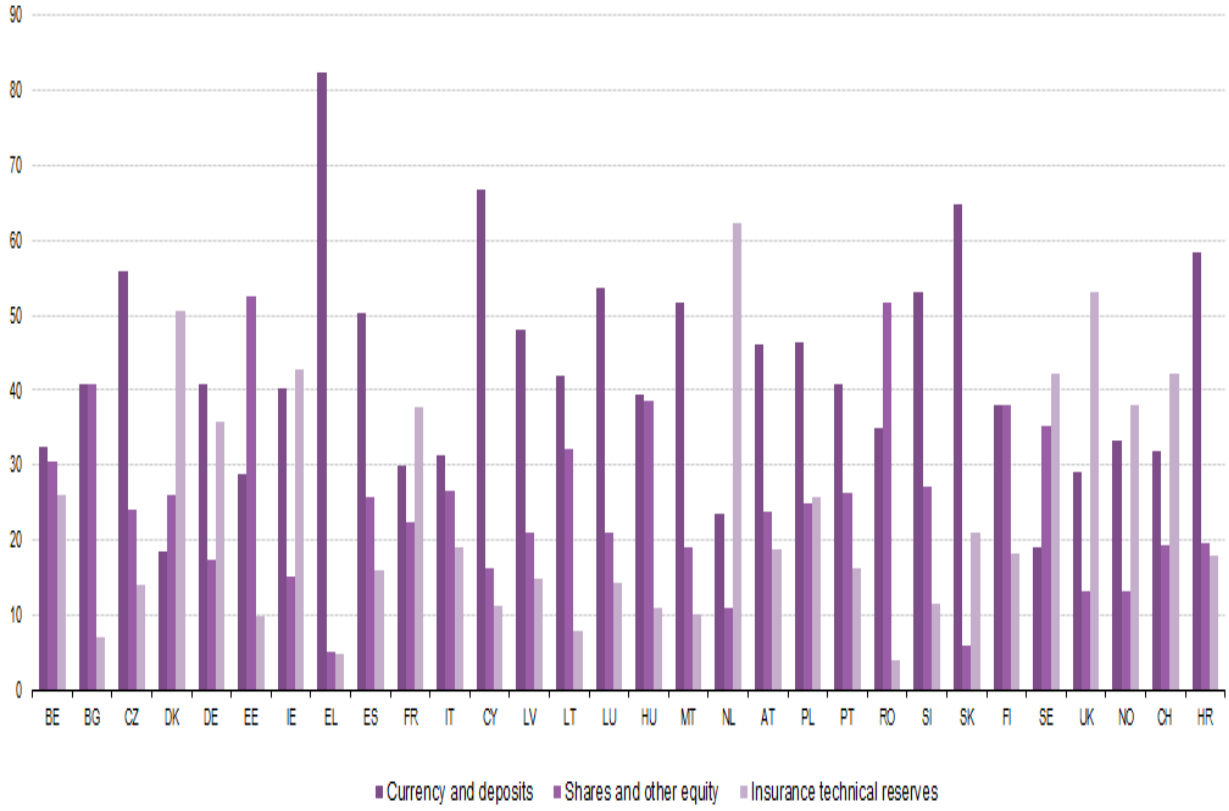


Figure 5.4 Comparison of Financial Assets of Households (Proportion in Total Financial Assets).

Source: Eurostat

Regarding the relation between market capitalisation and capital accumulation, there is a strong negative relation between them in Germany but in UK there is no clear relation. It is strange that in UK whereas the relation of market capitalisation with investment is negative but with capital accumulation is ambiguous (seems a bit positive but not clear). That issue is comprehensible over the relation between capital accumulation and investment. As it is seen from Figure 5.5, the relation between capital accumulation and investment in UK is positive but weaker than in Germany. That is to say, British firms do depend less on reinvestment to accumulate capital with compare to German firms, especially after 1990s. And again the region under the regression line of accumulation and investment in UK (see Figure 5.5) consists of years after 1990 after which stock market capitalisation ratio to GDP has risen dramatically (see Figure 4.1). That is to say that in UK the relation became weaker as the

investment rate at the same accumulation rate has become lower in this period. This difference may emanate from the difference in debt level, namely leverage ratio: A higher proportion of investments might be financed through debt in UK. As it is seen from Figure 5.6, British NFCs have a higher debt ratio to gross operating surplus. As it has been pointed out in theoretical part, finance constraints due to distributed profits lead firms to borrow more. This is also in line with categorisation of VoC Approach based on innovation type: As rapid innovations make the future vague and raise the risk-level, British firms prefer to share and externalize the risk through debt-based (external) financing if cost of debt is lower than cost of capital. On the other hand, as incremental innovations do not have such an impact, German firms prefer to finance their investments through internal funds.

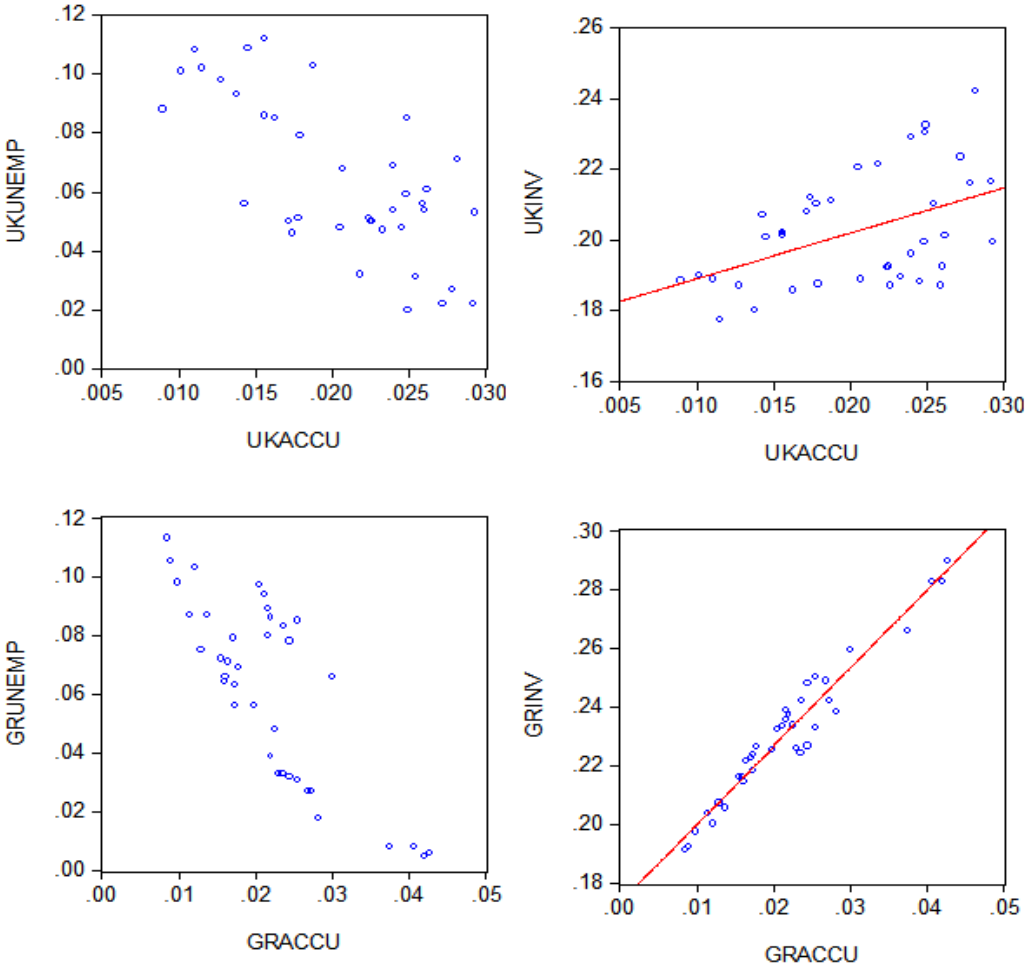


Figure 5.5 Accumulation Rate, Investment and Unemployment. Germany and UK, 1970-2008.

Source: AMECO

Regarding the relation between capital accumulation rate and unemployment rate, as it is expected in accordance with abovementioned analysis in subpart 3.2.2; again in UK there is a

weaker negative and less significant relationship between capital accumulation and unemployment than in Germany. I derive it from that points in UK are more dispersed and at a certain point of capital accumulation rate there are lots of coinciding unemployment rates in UK, whereas in Germany number of corresponding unemployment rates to a certain accumulation rate is very small. It is because of that Germany is a rather wage-led regime regardless of expansionary or contractionary in sub-periods, whereas UK is predominantly a profit-led regime. Secondly, since German firms who prioritise growth and market share over profit do not pass rising costs immediately to prices and confine themselves to relative lower returns, unemployment is more sensitive to capital accumulation in Germany as excess capacity is relative higher which lessens mark-up rates of NFCs as it has been illuminated in part 3.3.

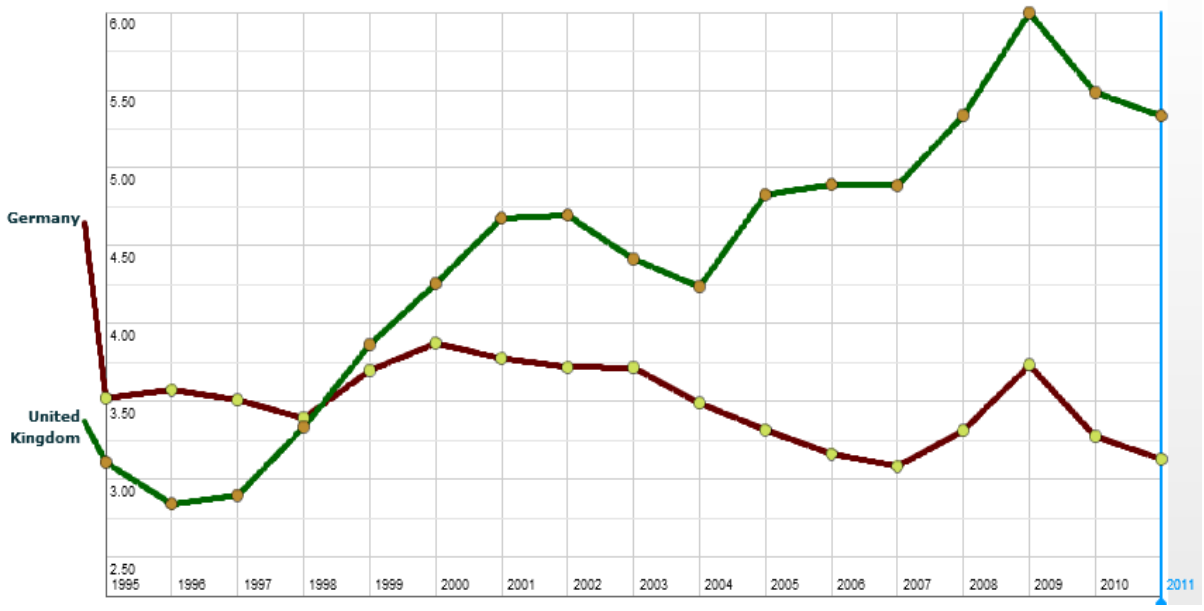


Figure 5.6 NFCs Consolidated Debt to Gross Operating Surplus UK and Germany, 1995- 2011.
Source: OECD

To sum up, despite the different nuances across countries, there is a strong negative relation between financialisation and bargaining power of labour.

CONCLUSION

Results:

- The hypothesis has not been falsified: Bargaining power of labour has strongly been affected negatively by rising unemployment due to lower capital accumulation and underinvestment induced by financialisation.
- If a macro-economic regime cannot handle anymore with its own created problems and if these problems exceed threshold of people's tolerance and not no longer bearable; then it would be questioned and proponents of a new regime will gain legitimacy. The macroeconomic events in late 1960s and rising counter-voice of Monetarists could be simply described so. Hence shifting to financialisation and fragmenting production is not solely driven by the concern on lessening the bargaining power of labour, it might be the fact but rather the more decisive factor is that a wage-led regime at that point of history was not sustainable anymore due to excess capacity which distorts profitability and high inflation rates which depress ordinary people.
- As UK has already financialised and Germany is a late-comer; impact of financialisation after 1970 on capital accumulation, investment and thus bargaining power of labour is limited with compare to Germany.
- Since UK has already been set to dominance of finance and it is a profit-led regime; shareholder pressure does not sharply reduce investments as much as in Germany, as the main tool of financing is stock markets.
- The relation between bargaining power of labour and wage share in UK is stronger than in Germany. It could be because of that redistributive welfare policies which also determine the wage share are stronger in Germany.
- The differences between Germany and UK that I found out are in accordance with VoC Approach.

Self-Critics:

- Since there is no accurate data on turnover costs at macro level, my equation may not provide exact results. However, employing unemployment rate as a proxy makes sense, as it is the core determinant of labour turnover costs. In addition, neither firms nor workers have any exact data on turnover costs; they only predict it over unemployment rate.

- As I dealt with macro variables in order to see the structural changes, I might have disregarded some deviations and differences which could be captured at a sectoral and firm-level analysis.
- One might argue that financialisation has to be calculated over dividend and interest payments. It is right but some firms do not prefer to pay dividends or buybacks. And also it would be meaningful at a firm-level analysis. Hence stock market capitalisation ratio to GDP depicts well financialisation at macro level.
- A Marxist critic could be as following: "More capital accumulation requires more surplus value/ exploitation of labour. That is to say, in order to accumulate more, bargaining power of labour has to be lessened. Hence asserting that 'bargaining power of labour hinges on capital accumulation' is inconsistent." However, such that an assertion misses that bargaining power is inherent to conflict, and the conflict between workers and employers doesn't come out if firms do not invest, produce.
- Our equation for bargaining power of labour doesn't reflect well the "internal devaluation" in Germany aftermath of Euro.
- I should have provided a clear comparison of my equation for bargaining power with other possible equations such as based on union density, strike activity, labour market institutions etc. over testing their degree of explanatory power the wage share. I couldn't it just because of time constraint to access global exact data.
- It might be argued that role of technology has been downplayed and debate on SBTC-Approach is not well revealed and the contesting arguments have not been supported with data. Such a critic is right however because of available time-series data on skills is restricted and it also exceeds scope of this paper which focuses on impact of financialisation. Hence I only have contented myself with benefiting from given critics on SBTC- Approach in the literature.
- Changes in unemployment insurance components (such as UECOV, URR, and UEDUR) should have been examined more in detail.

Prospective Research Areas:

- A research agenda on measuring both turnover costs and bargaining power of labour is required in order to create a Bargaining Power of Labour Index.
- If bargaining power of labour has been decreased by financialisation and if financialisation has strengthened shareholders, a research agenda on measuring power of shareholders with compare to workers and managers would be useful to comprehend the whole power relations within the economy.

- The question whether technology is in favour of labour power or not and whether financialisation is a stronger factor to determine bargaining power of labour than technology could be tested with a regression model by fixing financialisation. To put it more clearly, at a given and constant level of financialisation, observing whether the impact of technology on bargaining power of labour is positive or not would give more clear results.
- Since it exceeds the scope of this paper, I have not mentioned it but examining the relation between corporate tax rates and financialisation (lower accumulation and investment, higher distributed profits) would enhance the analysis. Do lower corporate tax rates reduce investments? If yes, why? Since lower corporate tax rates induce financialisation and "higher profit with lower investment"? Do lower corporate tax rates decrease effective demand by distorting income distribution which prevents *animal spirits* of investors?
- If capital accumulation, conflict in labour nexus and a strong middle-class are among main determinants of innovation, is the innovation performance in last four decades weaker than in the period of social welfare regime between Great Depression and Oil Crisis? If yes, most of innovations in finance-dominated regime correspond to "incremental innovations" and most of innovations in social welfare regime fall in "rapid innovations"?[36]
- Our equation for bargaining power of labour in developing host countries into which FDIs have flowed need for being tested. However there is limited time series data on unemployment insurance components in these countries.
- The role and position of governments need to be deeply examined in terms of defining and determining the unemployment insurance components within a Post Keynesian Approach.
- As trade unions cannot influence investment and capital accumulation levels and thus unemployment rate or relocation decisions of NFCs in the short run, rather they could benefit by focusing on unemployment insurance components in short-run to raise the degree of survivability of workers. It would be a more useful strategy under a finance-dominated capitalism with high unemployment.

[36] See for a discussion on innovation categorizations Soskice and Hall (2001)

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APPENDIX I - DATASET

Germany

obs	GR_UECOV	GR_UEDUR	GR_UNC	GR_URR	GRACCU	GRBPL	GRCAP	GRGDP	GRINV	GRUNEMP	GRUNION	GRWS
1970	0.81	1	0.002469	0.625	0.042102	2.299957	NA	6.027078	0.282433	0.005	0.320300	0.683555
1971	0.86	1	0.002775	0.625	0.042627	2.220642	NA	6.040474	0.289625	0.006	0.321331	0.691846
1972	0.87	1	0.003650	0.625	0.040755	2.095322	NA	6.058760	0.282570	0.008	0.323658	0.697326
1973	0.88	1	0.003600	0.625	0.037601	2.095344	NA	6.079028	0.265926	0.008	0.324323	0.705825
1974	0.88	1	0.008100	0.625	0.028266	1.741195	NA	6.082876	0.238119	0.018	0.337453	0.714309
1975	0.88	1	0.013253	0.680	0.023128	1.475692	NA	6.079096	0.226058	0.033	0.345794	0.710217
1976	0.88	1	0.013253	0.680	0.023655	1.475692	NA	6.100075	0.224346	0.033	0.351062	0.703741
1977	0.87	1	0.013069	0.680	0.024586	1.489137	NA	6.114374	0.226756	0.032	0.352440	0.704411
1978	0.88	1	0.012450	0.680	0.025526	1.503198	NA	6.127247	0.232717	0.031	0.355380	0.702408
1979	0.89	1	0.010660	0.680	0.027489	1.563982	NA	6.144908	0.242027	0.027	0.353039	0.697972
1980	0.89	1	0.010660	0.680	0.026893	1.563982	NA	6.150983	0.248732	0.027	0.348953	0.707457
1981	0.89	1	0.015397	0.680	0.021903	1.402196	NA	6.153276	0.237513	0.039	0.351460	0.705763
1982	0.87	1	0.022870	0.680	0.017383	1.241764	NA	6.151558	0.223802	0.056	0.350217	0.697529
1983	0.86	1	0.028649	0.680	0.017751	1.148527	NA	6.158333	0.226230	0.069	0.349991	0.683115
1984	0.87	1	0.032085	0.630	0.016444	1.134579	NA	6.170423	0.221760	0.071	0.348978	0.675830
1985	0.87	1	0.032537	0.630	0.015486	1.128302	NA	6.180418	0.216226	0.072	0.346661	0.669193
1986	0.88	1	0.029410	0.630	0.016028	1.167492	NA	6.190240	0.214476	0.066	0.339157	0.665706
1987	0.89	1	0.028115	0.630	0.015989	1.181435	NA	6.196287	0.216298	0.064	0.333302	0.675211
1988	0.89	1	0.027676	0.630	0.017325	1.188471	0.185842	6.212096	0.218264	0.063	0.331124	0.665294
1989	0.89	1	0.024601	0.630	0.019766	1.240994	0.269612	6.228697	0.225510	0.056	0.324100	0.652962
1990	0.88	1	0.021389	0.630	0.022635	1.309369	0.207061	6.250940	0.233691	0.048	0.312197	0.649632
1991	0.91	1	0.023895	0.630	NA	1.241308	0.217295	6.272577	0.256028	0.056	0.359875	0.669599
1992	0.90	1	0.028578	0.630	0.030094	1.167864	0.168574	6.280801	0.259373	0.066	0.338601	0.680470
1993	0.89	1	0.034265	0.630	0.024624	1.092763	0.230878	6.276427	0.248172	0.078	0.318221	0.681315
1994	0.88	1	0.040120	0.600	0.025634	1.052798	0.219049	6.287032	0.250218	0.085	0.303793	0.668684
1995	0.87	1	0.039674	0.600	0.023754	1.063341	0.228853	6.294254	0.242202	0.083	0.292177	0.666581
1996	0.86	1	0.043076	0.600	0.021533	1.031487	0.275341	6.297675	0.235595	0.089	0.277528	0.663453
1997	0.85	1	0.047530	0.600	0.020462	0.992080	0.382543	6.305155	0.232189	0.097	0.269821	0.654625
1998	0.83	1	0.047188	0.600	0.021121	1.005879	0.502239	6.313167	0.233609	0.094	0.259432	0.652723
1999	0.84	1	0.042656	0.600	0.021944	1.046570	0.672060	6.321218	0.237380	0.086	0.253228	0.659226
2000	0.86	1	0.038720	0.600	0.021456	1.079760	0.673368	6.334298	0.238694	0.080	0.245708	0.667635
2001	0.85	1	0.038710	0.600	0.017014	1.085227	0.569808	6.340825	0.222748	0.079	0.237476	0.662697
2002	0.85	1	0.042630	0.600	0.011519	1.041561	0.344428	6.340870	0.203800	0.087	0.235073	0.658163
2003	0.84	1	0.048608	0.600	0.009775	0.987133	0.445177	6.339236	0.197549	0.098	0.230184	0.658668
2004	0.82	1	0.053340	0.600	0.008871	0.955005	0.438139	6.344250	0.192479	0.105	0.221710	0.646897
2005	0.78	1	0.060116	0.600	0.008447	0.919996	0.441482	6.347213	0.191616	0.113	0.216786	0.637472
2006	0.77	1	0.055414	0.600	0.012106	0.962404	0.564233	6.362992	0.200270	0.103	0.207165	0.622363
2007	0.77	1	0.046806	0.600	0.013620	1.039662	0.633462	6.376962	0.205734	0.087	0.198874	0.612114
2008	0.78	1	0.039900	0.600	0.012917	1.107255	0.305754	6.381641	0.207276	0.075	0.191281	0.621237

United Kingdom

obs	UK_UECOV	UK_UEDUR	UK_UNC	UK_URR	UKACCU	UKBPL	UKCAP	UKGDP	UKINV	UKUNEMP	UKUNION	UKWS
1970	0.76	1.0	0.012954	0.541	0.029142	1.651915	NA	5.770865	0.216429	0.022	0.429760	0.738294
1971	0.76	1.0	0.015899	0.541	0.027860	1.561676	NA	5.779485	0.216006	0.027	0.434370	0.729036
1972	0.76	1.0	0.018914	0.513	0.025435	1.500346	NA	5.794955	0.210313	0.031	0.443075	0.723416
1973	0.74	1.0	0.014137	0.483	0.027202	1.651394	NA	5.825609	0.223446	0.022	0.436068	0.712829
1974	0.74	1.0	0.012230	0.525	0.024953	1.693626	NA	5.818253	0.232453	0.020	0.445463	0.749435
1975	0.89	1.0	0.018700	0.467	0.021827	1.486652	NA	5.815303	0.221461	0.032	0.420011	0.772604
1976	0.89	1.0	0.027366	0.483	0.020570	1.306708	NA	5.827316	0.220471	0.048	0.446548	0.749575
1977	0.90	1.0	0.027866	0.504	0.017865	1.280156	NA	5.837460	0.210391	0.051	0.463303	0.714409
1978	0.90	1.0	0.027320	0.504	0.017264	1.289000	NA	5.851995	0.207947	0.050	0.482291	0.715343
1979	0.89	1.0	0.027168	0.460	0.017464	1.325280	NA	5.863763	0.212194	0.046	0.486812	0.721024
1980	0.91	1.0	0.032558	0.460	0.014245	1.237437	NA	5.854195	0.206983	0.056	0.496605	0.738571
1981	0.88	1.0	0.056637	0.405	0.008975	1.030196	NA	5.848409	0.188480	0.088	0.498798	0.741430
1982	0.85	1.0	0.079280	0.253	0.010141	0.959806	NA	5.857405	0.190174	0.101	0.496816	0.722941
1983	0.80	1.0	0.085622	0.259	0.011056	0.927702	NA	5.872867	0.188828	0.108	0.481741	0.707699
1984	0.80	1.0	0.086502	0.258	0.014472	0.923281	NA	5.884314	0.200863	0.109	0.469095	0.713492
1985	0.79	1.0	0.089703	0.252	0.015591	0.909965	NA	5.899672	0.201505	0.112	0.441888	0.705183
1986	0.80	1.0	0.089600	0.250	0.015570	0.910014	NA	5.916756	0.201285	0.112	0.441701	0.714230
1987	0.79	1.0	0.084204	0.231	0.018818	0.948962	NA	5.936131	0.211274	0.103	0.432433	0.706916
1988	0.79	1.0	0.070630	0.214	0.024877	1.038770	0.905846	5.957453	0.230401	0.085	0.412936	0.708599
1989	0.80	1.0	0.059526	0.202	0.028172	1.122088	0.962283	5.967249	0.242061	0.071	0.398674	0.720291
1990	0.81	1.0	0.057878	0.199	0.023966	1.135258	0.832918	5.970621	0.229043	0.069	0.381192	0.729312
1991	0.81	1.0	0.071929	0.202	0.015505	1.033083	0.928396	5.964971	0.202120	0.086	0.381064	0.742627
1992	0.79	1.0	0.081664	0.211	0.012767	0.971775	0.841404	5.970558	0.187102	0.098	0.382629	0.738481
1993	0.78	1.0	0.085054	0.213	0.011492	0.952795	1.162050	5.985458	0.177599	0.102	0.364384	0.718511
1994	0.78	1.0	0.077331	0.216	0.013754	0.996663	1.128760	6.006455	0.180296	0.093	0.351840	0.684564
1995	0.80	1.0	0.070720	0.210	0.016302	1.038728	1.202518	6.021535	0.185795	0.085	0.330576	0.680720
1996	0.80	0.5	0.066107	0.204	0.017961	0.771640	1.414913	6.036439	0.187501	0.079	0.317912	0.665936
1997	0.83	0.5	0.056768	0.199	0.020691	0.841079	1.459123	6.054933	0.188897	0.068	0.317237	0.666588
1998	0.86	0.5	0.050718	0.196	0.026191	0.891035	1.624059	6.070155	0.201380	0.061	0.304489	0.682259
1999	0.87	0.5	0.048991	0.195	0.024840	0.906303	1.950641	6.082732	0.199443	0.059	0.301295	0.692605
2000	0.88	0.5	0.044971	0.190	0.023985	0.946593	1.746277	6.101276	0.196059	0.054	0.301806	0.703976
2001	0.89	0.5	0.041723	0.186	0.022521	0.981491	1.474576	6.110662	0.192448	0.050	0.295468	0.711386
2002	0.89	0.5	0.042603	0.185	0.022428	0.972492	1.163987	6.120518	0.192178	0.051	0.292781	0.701607
2003	0.89	0.5	0.041857	0.183	0.022637	0.981431	1.325703	6.137338	0.187070	0.050	0.295611	0.696956
2004	0.90	0.5	0.039471	0.178	0.023288	1.009383	1.281797	6.150904	0.189662	0.047	0.288630	0.694324
2005	0.89	0.5	0.040481	0.176	0.024548	0.999782	1.332051	6.164730	0.188168	0.048	0.284194	0.686987
2006	0.88	0.5	0.045874	0.171	0.025987	0.946182	1.546823	6.176533	0.192441	0.054	0.280552	0.689755
2007	0.89	0.5	0.045123	0.167	0.029304	0.954642	1.365588	6.191168	0.199225	0.053	0.278822	0.687757
2008	0.88	0.5	0.047820	0.166	0.025914	0.929501	0.699131	6.187814	0.187140	0.056	0.270838	0.684768

APPENDIX II - MODEL VARIABLES AND EQUATIONS

Abbreviations	Explanation	Source	Notes
accu	Capital Accumulation Rate	AMECO	Gorwth rate (Log difference) of net capital stock
accuc	Change in Accumulation Rate		
bpl	Bargaining Power of Labour	Own Calculation	
bplc	Change in Bargaining Power		
cap	Stock Market Capitalisation to GDP	World Bank, data.worldbank.com	
debt	Non-financial corporations' debt to gross operating surplus	OECD	
gr	Germany		
grgdp	Log of Gross Domestic Product of Germany	OECD	
inv	Investment Level	AMECO	Gross Fixed Capital Formation/Gross Value Added
Regression	bplc=c(1)+c(2)*accuc-c3*(bpl(-1)-u-accu(-1))		
uecov	Percentage of the labor force insured for unemployment risk	CWED	
uedur	Unemployment Insurance Duration	CWED	
uk	United Kingdom		
ukgdp	Log of Gross Domestic Product of United Kingdom	OECD	
unc	Unemployedness cost at macro level	Own Calculation	unemp-(urr*uecov*unemp)
unemp	Unemployment Rate	AMECO	
union	Trade Union Membership Rate	OECD	
urr	Unemployment Insurance Rate to the Salary	CWED	
ws	Wage Share	AMECO	

APPENDIX III - TEST RESULTS

Null Hypothesis: GRBPL has a unit root
Exogenous: Constant
Lag Length: 1 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.268831	0.0238
Test critical values:	1% level	-3.621023	
	5% level	-2.943427	
	10% level	-2.610263	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GRBPL)
Method: Least Squares
Date: 02/01/14 Time: 23:39
Sample (adjusted): 1972 2008
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GRBPL(-1)	-0.124948	0.038224	-3.268831	0.0025
D(GRBPL(-1))	0.330844	0.141007	2.346293	0.0249
C	0.140342	0.048838	2.873647	0.0069

R-squared	0.407253	Mean dependent var	-0.030092
Adjusted R-squared	0.372385	S.D. dependent var	0.090466
S.E. of regression	0.071669	Akaike info criterion	-2.355919
Sum squared resid	0.174638	Schwarz criterion	-2.225304
Log likelihood	46.58450	Hannan-Quinn criter.	-2.309871
F-statistic	11.68002	Durbin-Watson stat	1.824271
Prob(F-statistic)	0.000138		

Germany BPL I(1)

Null Hypothesis: GRACCU has a unit root
Exogenous: Constant
Lag Length: 1 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.974712	0.0475
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ACCU)
Method: Least Squares
Date: 02/06/14 Time: 20:35
Sample (adjusted): 1972 2008
Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ACCU(-1)	-0.142212	0.047807	-2.974712	0.0056
D(ACCU(-1))	0.421578	0.138664	3.040285	0.0048
C	0.002562	0.001078	2.377679	0.0238

R-squared	0.394616	Mean dependent var	-0.000932
Adjusted R-squared	0.355559	S.D. dependent var	0.002753
S.E. of regression	0.002210	Akaike info criterion	-9.307258
Sum squared resid	0.000151	Schwarz criterion	-9.172579
Log likelihood	161.2234	Hannan-Quinn criter.	-9.261329
F-statistic	10.10358	Durbin-Watson stat	1.541380
Prob(F-statistic)	0.000418		

Germany ACCU I(1)

Null Hypothesis: GRRESID has a unit root
Exogenous: Constant
Lag Length: 0 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.960922	0.0484
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(U)
Method: Least Squares
Date: 02/06/14 Time: 20:31
Sample (adjusted): 1971 2008
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
U(-1)	-0.164958	0.055712	-2.960922	0.0056
C	0.007966	0.010127	0.786664	0.4369

R-squared	0.204996	Mean dependent var	0.008515
Adjusted R-squared	0.181613	S.D. dependent var	0.067153
S.E. of regression	0.060749	Akaike info criterion	-2.710167
Sum squared resid	0.125477	Schwarz criterion	-2.622193
Log likelihood	50.78300	Hannan-Quinn criter.	-2.679462
F-statistic	8.767060	Durbin-Watson stat	1.561214
Prob(F-statistic)	0.005558		

Germany Residuals I(0)

Null Hypothesis: UKBPL has a unit root
Exogenous: Constant
Lag Length: 1 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.032874	0.2721
Test critical values:	1% level	-3.621023	
	5% level	-2.943427	
	10% level	-2.610263	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(UKBPL)
Method: Least Squares
Date: 02/01/14 Time: 23:44
Sample (adjusted): 1972 2008
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UKBPL(-1)	-0.119872	0.058967	-2.032874	0.0499
D(UKBPL(-1))	0.183664	0.157631	1.165150	0.2521
C	0.117370	0.065935	1.780103	0.0840

R-squared	0.139179	Mean dependent var	-0.017086
Adjusted R-squared	0.088543	S.D. dependent var	0.087084
S.E. of regression	0.083140	Akaike info criterion	-2.058985
Sum squared resid	0.235015	Schwarz criterion	-1.928370
Log likelihood	41.09122	Hannan-Quinn criter.	-2.012937
F-statistic	2.748597	Durbin-Watson stat	1.856216
Prob(F-statistic)	0.078256		

UK, BPL I(1)

Null Hypothesis: UKACCU has a unit root
Exogenous: Constant
Lag Length: 1 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.986863	0.0454
Test critical values:	1% level	-3.621023	
	5% level	-2.943427	
	10% level	-2.610263	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(UKACCU)
Method: Least Squares
Date: 02/01/14 Time: 23:46
Sample (adjusted): 1972 2008
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UKACCU(-1)	-0.228316	0.076440	-2.986863	0.0052
D(UKACCU(-1))	0.541513	0.145846	3.712910	0.0007
C	0.004515	0.001584	2.850009	0.0074

R-squared	0.347495	Mean dependent var	-5.26E-05
Adjusted R-squared	0.309113	S.D. dependent var	0.003010
S.E. of regression	0.002502	Akaike info criterion	-9.065812
Sum squared resid	0.000213	Schwarz criterion	-8.935197
Log likelihood	170.7175	Hannan-Quinn criter.	-9.019764
F-statistic	9.053453	Durbin-Watson stat	1.842409
Prob(F-statistic)	0.000705		

UK, ACCU I(1)

Null Hypothesis: UKRESID has a unit root
Exogenous: Constant
Lag Length: 0 (Fixed)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.554787	0.4954
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(UKRESID)
Method: Least Squares
Date: 02/01/14 Time: 23:47
Sample (adjusted): 1971 2008
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UKRESID(-1)	-0.082172	0.052851	-1.554787	0.1287
C	-0.017190	0.012052	-1.426262	0.1624

R-squared	0.062924	Mean dependent var	-0.017743
Adjusted R-squared	0.036894	S.D. dependent var	0.075672
S.E. of regression	0.074263	Akaike info criterion	-2.311217
Sum squared resid	0.198539	Schwarz criterion	-2.225028
Log likelihood	45.91311	Hannan-Quinn criter.	-2.280551
F-statistic	2.417363	Durbin-Watson stat	1.640561
Prob(F-statistic)	0.128745		

UK, Residuals I(0)

Heteroskedasticity Test: White

F-statistic	2.740795	Prob. F(5,30)	0.0373
Obs*R-squared	11.28829	Prob. Chi-Square(5)	0.0460
Scaled explained SS	9.917313	Prob. Chi-Square(5)	0.0776

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 02/12/14 Time: 19:24
Sample: 1971 2008
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001423	0.008682	0.163920	0.8709
GRACCUC	0.889090	1.066718	0.833482	0.4112
GRACCUC^2	-48.53843	80.42701	-0.603509	0.5507
GRACCUC*(GRACCU(-1)-GRBPL(-1)+GR...	1.274283	0.904772	1.408401	0.1693
GRACCU(-1)-GRBPL(-1)+GRRESID	-0.001342	0.012591	-0.106543	0.9159
(GRACCU(-1)-GRBPL(-1)+GRRESID)^2	-0.000643	0.004403	-0.146102	0.8848

R-squared	0.313564	Mean dependent var	0.002684
Adjusted R-squared	0.199158	S.D. dependent var	0.003936
S.E. of regression	0.003522	Akaike info criterion	-8.308459
Sum squared resid	0.000372	Schwarz criterion	-8.044539
Log likelihood	155.5523	Hannan-Quinn criter.	-8.216344
F-statistic	2.740795	Durbin-Watson stat	2.600090
Prob(F-statistic)	0.037288		

Germany, White Test

Heteroskedasticity Test: White

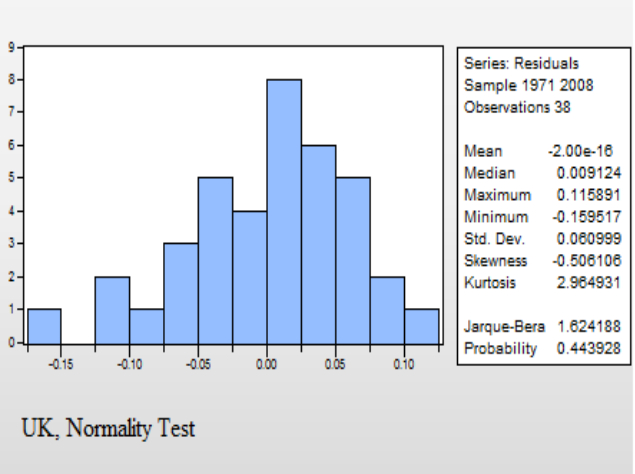
F-statistic	1.545865	Prob. F(5,32)	0.2036
Obs*R-squared	7.392886	Prob. Chi-Square(5)	0.1930
Scaled explained SS	6.161697	Prob. Chi-Square(5)	0.2908

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 02/12/14 Time: 19:20
Sample: 1971 2008
Included observations: 38

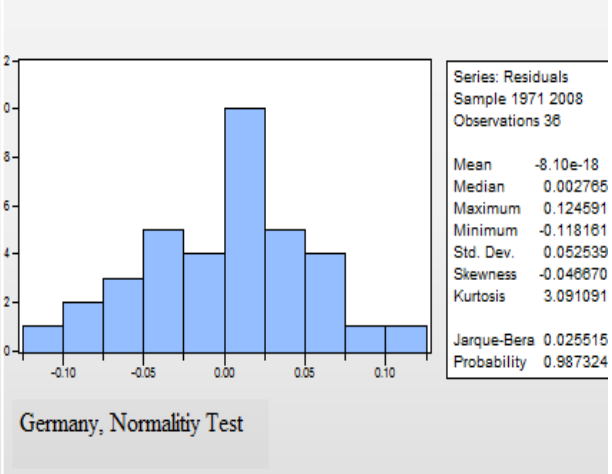
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.224668	0.117906	1.905483	0.0657
UKACCUC	-8.211501	4.990773	-1.645336	0.1097
UKACCUC^2	15.31152	65.29376	0.234502	0.8161
UKACCUC*(UKACCU(-1)-UKBPL(-1)+UK...	-7.329572	4.504859	-1.627037	0.1135
UKACCU(-1)-UKBPL(-1)+UKRESID	0.404736	0.209071	1.935880	0.0618
(UKACCU(-1)-UKBPL(-1)+UKRESID)^2	0.184211	0.092070	2.000765	0.0540

R-squared	0.194550	Mean dependent var	0.003623
Adjusted R-squared	0.068698	S.D. dependent var	0.005147
S.E. of regression	0.004967	Akaike info criterion	-7.628145
Sum squared resid	0.000789	Schwarz criterion	-7.369578
Log likelihood	150.9347	Hannan-Quinn criter.	-7.536149
F-statistic	1.545865	Durbin-Watson stat	1.382129
Prob(F-statistic)	0.203648		

UK, White Test



UK, Normality Test



Germany, Normalitiy Test

CURRICULUM VITAE

Personal Information

First Name / Surname: İlhan DÖĞÜŞ

Date of Birth and Place: 25.03.1983- Elbistan / Kahramanmaraş

Education and Training

Name of the High School: Istanbul Lisesi, Istanbul, 2003

Undergraduate Education: Istanbul Bilgi University, International Finance, 2011

Graduate Education: Akdeniz & Hamburg Universities, European Studies, 2014

Master's Thesis: Akdeniz University & University of Hamburg

Title of the Master's Thesis: Emeğin Pazarlık Gücünün 1970-2008 Arasındaki Düşüşüne Dair Post Keynesyen Bir Yaklaşım: Finanşallaşmanın Tetiklediği Sermaye Birikimindeki Düşüş- Almanya ve Birleşik Krallık'ın Karşılaştırması

A Post Keynesian Approach on the Decrease in Bargaining Power of Labour between 1970 and 2008: Financialisation-induced Decline in Capital Accumulation -*Comparison of Germany and UK*

Foreign Languages: English (fluent), German (upper-intermediate)

Work Experience

Date: 03/01/2013 – 05/31/2013

Occupation or Position Held: Trainee

Name and Address of Employer: The European Trade Union Institute-Brussel,

Type of Business or Sector: Research

Computer Skills: Microsoft Office Programs, E-Views

Awards:

- Special award of "Ege University, Faculty of Economics and Administrative Sciences", IX. Congress of International Economics Students, Izmir, 2006.

E-Mail: ilhandogus@gmail.com

Declaration of Authorship

I hereby certify that this thesis has been composed by me and is based on my own work, unless stated otherwise. No other person's work has been used without due acknowledgement in this thesis. None of the parts of this thesis has previously been submitted for a degree or any other qualification at this university or any other institution. All references and verbatim extracts have been quoted, and all sources of information, including graphs and data sets, have been specifically acknowledged.

The written document matches completely to the CD version

Place: Rostock Date: 17.04.2014 Signature: